



Cultural Inheritance and Green Tourism: The Belt and Road Initiative's Promotional Role in Sino-foreign Humanitarian Exchange and Sustainable Tourism Development

Na Yin^{1,*}

¹ School of International Education of Wuhan Business University Wuhan 430056, Hubei, China

SUMMARY: *With the in-depth advancement of the “Belt and Road” Initiative (BRI), the integration of cultural heritage and green tourism has become a key issue in promoting Sino-foreign humanistic exchanges and sustainable tourism development. Green tourism, which emphasizes environmental protection, cultural respect, and economic sustainability, has gradually occupied an important position in global tourism development, while cultural heritage plays an irreplaceable role in enhancing national identity and promoting cross-cultural exchanges. This study aims to analyze the BRI’s impacts on the development of cultural heritage and green tourism in countries along the route, explore the current status and challenges of their integration, and propose corresponding policy recommendations to provide a theoretical basis and practical guidance for tourism practices and cultural protection policies under the BRI framework. Adopting a mixed-methods approach of qualitative and quantitative research, it summarizes the theoretical framework through a literature review, collects data via field research, questionnaires, and in-depth interviews, and uses SPSS for quantitative analysis to evaluate green tourism’s effects on cultural heritage and its role in tourism sustainability. The results show that the BRI has effectively promoted their integration: green tourism projects in relevant countries have developed rapidly through policy support and infrastructure construction, providing new funds and platforms for cultural resource protection and inheritance, and green tourism not only boosts local economic development but also enhances tourists’ knowledge of and recognition for cultural resources, though some regions face issues like over-commercialization of cultural resources and insufficient ecological carrying capacity. The BRI provides new opportunities for their integration and contributes to cross-cultural exchanges and sustainable tourism, yet challenges such as inadequate policy support and unbalanced resource management remain; thus, policymakers should strengthen international cooperation, enhance community participation, and use digital technology to improve interaction between cultural preservation and tourism experiences, while future research could further explore the dynamic relationship between the two, especially how emerging technologies enhance green tourism’s sustainability and cultural value.*

KEYWORDS: *cultural heritage; green tourism; Belt and Road Initiative; Sino-foreign humanistic exchange; sustainable tourism development*

*yinna_2007@126.com

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1 Introduction

As the process of globalization accelerates, cultural exchanges and tourism have become an important means of promoting mutual understanding and cooperation among countries[1]. In particular, the introduction of the Belt and Road Initiative marks an important step in China's efforts to promote international cooperation and cultural heritage[2]. The initiative not only concentrates on infrastructure construction and economic cooperation but also emphasizes cultural interaction and sustainable development, especially in the field of tourism, which brings unprecedented opportunities and challenges[3]. Green tourism, as a tourism model focusing on environmental protection and sustainable development, has gradually become an important direction for global tourism development[4]. In this context, how to combine cultural heritage and green tourism to promote in-depth collaboration in the cultural sphere and tourism among nations that are part of the "Belt and Road" have become a hot issue of common concern in academic and practical circles.

By encouraging cultural interaction, the Belt and Road Initiative, economic, and human exchanges, has facilitated interaction among nations along the path with regard to cultural understanding, resource sharing, and ecological protection[5]. Meanwhile, with the rapid development of tourism, how to ensure cultural heritage while avoiding over-commercialization and environmental degradation has become a core issue in green tourism development[6]. The protection of traditional culture and ecological environment under the framework of the Belt and Road Initiative is not only the basis for sustainable tourism development but also the key to realizing multiple social, economic, and cultural benefits[7]. Therefore, this study aims to explore how cultural heritage can be combined with the concept of green tourism as part of the Initiative for The Road and Belt Highway collaboratively advance Chinese-foreign humanistic exchanges and sustainable tourism growth.

This essay looks at the background and objectives regarding the "Belt and Road" project, discusses its practical influence on cross-cultural communication and green tourism development, and provides theoretical support and practical experience for future policy formulation and practice. The following is how this document is structured: Section 1 is the introduction, which introduces the research background, research objectives, and research methodology, explains the Combining ecological tourism with cultural heritage under the "Belt and Road" Initiative, and clarifies the significance and objectives of the research. The second section is the research overview, reviewing the current research on cultural heritage, green tourism, and tourism development as part of the "Belt and Road" project, pointing out the gaps in the research and deficiencies in the existing literature, and providing theoretical support and references for the research of this paper. The research methods component is included in component 3, which introduces in detail the design framework, research objects, data collection, and analysis methods, and ensures the comprehensiveness and scientificity of the research results through the combination of multiple methods. Section 4 is the part on findings and discussion, based on the field research and data analysis, it discusses the status quo, achievements, and challenges of the "Belt and Road" project in order to advance the incorporation of cultural heritage and green tourism, and puts forward specific policy recommendations based on the case study. Finally, Section 5 is the conclusion section, this encapsulates the study's primary conclusions, clarifies the research conclusions of this paper, points out the shortcomings of the study, and proposes the direction of future research.

2 Research Review

2.1 Sustainable development of cultural tourism

Cultural heritage is an important carrier of national identity and historical memory, as well as one of the core resources for promoting tourism development. Numerous studies have shown that the in-depth combination of culture and tourism can enhance the attractiveness of tourist destinations and bring economic benefits to residents[8]. At the same time, cultural heritage can also be spread through tourism activities to promote the exchange and integration of multiple cultures. However, cultural tourism also faces challenges such as excessive commercialization, cultural homogenization, and unsustainable resources. In recent years, scholars have begun to emphasize green tourism as a framework in order to encourage sustainable growth and utilization of cultural resources[9]. Green tourism, also known as ecotourism, is a form of tourism that emphasizes environmental protection, cultural respect, and economic sustainability[10]. The concept emphasizes achieving a balance between humans and nature, economy and ecology by reducing damage to the natural environment and over-exploitation of cultural resources. Studies have shown that the promotion of the green tourism model can alleviate, to a certain extent, the negative impacts of traditional tourism, such as over-exploitation and environmental pollution[11]. In addition, green tourism is also seen as an important way to promote local community participation, helping to realize the symbiosis and win-win situation between the community and the travel and tourism sector[12]. One of the goals of the Belt and Road Initiative is main objective the dissemination of policies, facility connectivity, smooth trade, financial integration, and people-to-people exchanges, has provided a broad platform for cultural exchanges among countries along the route. Research shows that since the implementation of the initiative, cultural interaction and tourism among countries along the route have increased significantly, and cultural tourism cooperation has become an important area under the framework of the "Belt and Road"[13]. But some academics have pointed out that Cultural heritage's function and conservation in the "Belt and Road" tourism sector partnership still needs to be further strengthened[14]. For example, how to balance economic benefits and cultural protection, and how to realize equal cooperation among countries in cultural tourism still need to be solved. In summary, Cultural heritage is a significant foundation for tourism development, green tourism is an effective way to realize sustainable growth, together with the project known as "Belt and Road" offers a substantial chance for Chinese and foreign cultural exchanges and tourism cooperation, which are interrelated and jointly promote global cultural exchanges and sustainable development. The literature review is summarized in Table 1 below.

Table 1: Summary table of the literature review

| Research Topics | Key findings | Continuing challenges and issues | Relevant recommendations and directions |
|--|--|--|---|
| Sustainable development of cultural tourism | The legacy of culture is a core resource of tourism, which can enhance the attractiveness of tourist destinations and bring economic benefits. The combination of culture and tourism promotes multicultural exchange and integration. | Over-commercialization, cultural homogenization, and unsustainable resources. | Emphasize the green tourism framework to promote the sustainable development and use of cultural resources. |
| Promotion of green tourism | The green tourism model can reduce the destruction of the natural environment and mitigate the negative impacts of traditional tourism (e.g., over-exploitation and environmental pollution). | How to balance the relationship between environmental protection, cultural respect, and economic benefits in green tourism. | Strengthen green tourism management to ensure sustainable use of resources and raise awareness of environmental protection and cultural respect. |
| Impact of green tourism on communities | Green tourism provides opportunities for local communities to participate and promotes a symbiotic relationship between communities and tourism. | There is still an imbalance in the participation and benefit-sharing of local communities in green tourism. | Strengthening cooperation between local governments and communities to enhance the participation of residents and ensure that the interests of the community are safeguarded. |
| "The role regarding the Belt and Road Initiative | "The Belt and Road Initiative has significantly promoted cultural exchanges and tourism cooperation, with an increase in cultural interactions and tourism exchanges among countries along the route. | The role of cultural inheritance and preservation in the tourism along the collaboration known as "Belt and Road" has not been fully emphasized. | Within the framework of the Belt and Road Initiative, cultural protection policies and measures should be strengthened to guarantee that cultural heritage is not neglected. |
| Preservation and cultural heritage issues | Cultural heritage and preservation are crucial to tourism cooperation, but in practice, cooperation faces the challenge of balancing economic interests and cultural preservation. | How to promote economic benefits while ensuring cultural heritage and resource sustainability. | Promote cooperation among countries on an equal footing and establish cooperation mechanisms that emphasize both cultural preservation and development. |

2.2 Research framework in an interdisciplinary perspective

From the viewpoint of existing literature, the research on cultural heritage and green tourism has strong interdisciplinary characteristics, involving many fields such as culture, ecology, economics, and management. At present, academic studies on cultural heritage and green tourism under the "Belt and Road" initiative focuses on the following directions: The first is the sustainable development of cultural resources, including the protection of cultural heritage and the dissemination and re-creation of intangible culture. The second is the promotion of green tourism models. This includes policy support, community participation, and environmental impact assessment[15]. Finally, it is the mechanism and impact of cultural exchange between China and foreign countries. This includes cultural identity, cross-cultural adaptation, and multicultural coexistence. The heat of specific research dimensions is shown in Figure 1 below, which demonstrates the relationship between different research dimensions and research directions (subcategories). The horizontal axis of the figure represents different research directions (subcategories), including intercultural communication adaptation, intercultural communication multicultural interpretation, cultural heritage fugacity, cultural heritage vulnerability, green tourism economic modeling, and green tourism environmental protection[16]. The vertical axis represents different research dimensions (subcategories), including policy support (local policies and international cooperation), environmental impacts (conservation and efficiency), and community participation (decision-making and benefit sharing). The number in each cell indicates the heat value of that research direction for the particular research dimension, ranging from 40 to 100. the color gradient from blue (low heat) to red (high heat) indicates the degree of heat. In particular, policy support for international cooperation has very high heat values across all research dimensions, especially for cultural heritage fragility (100) and cultural heritage vulnerability (83), indicating that there is a high demand for and emphasis on international cooperation in these areas. Local policies had relatively low heat values, the highest being Intercultural Communication Multicultural Interpretation (94). For environmental protection impacts, cultural heritage fragility (93) and cultural heritage vulnerability (83) had high heat values for environmental protection, indicating the importance attached to environmental protection in these areas. For the environmental impact (efficiency) dimension, the heat values were generally low, with the highest being cultural heritage fragility (90). The Community Participation (decision-making) dimension has a medium heat value, with the highest being Intercultural Communication Multicultural Interpretation (75). The lowest heat value and the highest was Cultural Heritage Vulnerability (65) on the level of Community Involvement (Benefit Sharing). Overall, the cultural heritage-related domains (Transience and Vulnerability) showed high heat values on several dimensions, especially on International Cooperation and Environmental Protection. This indicates that these areas have a high level of interest and demand in current research.

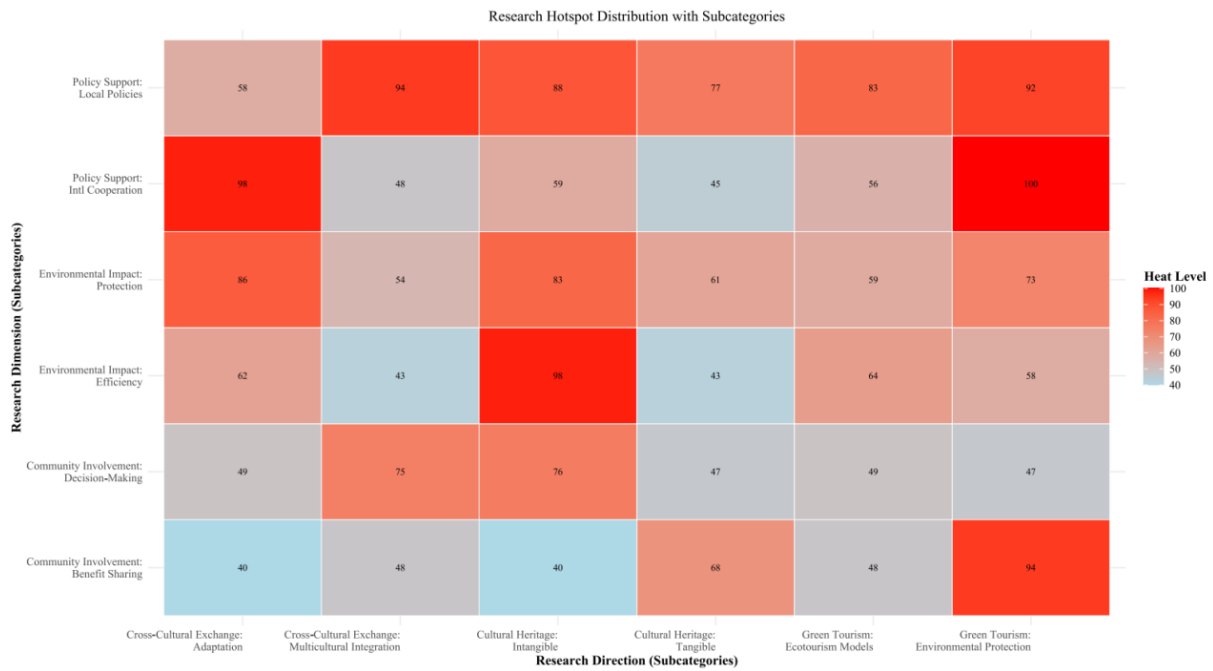


Figure 1: Distribution of existing research hotspots

2.3 Research gaps and innovations

Although existing studies have provided important theoretical support for cultural legacy as well as green tourism under Despite the Belt and Road Initiative, some research gaps. For example, there is a lack of comparative studies on the differences in cultural resources in different countries and regions; there is a lack of in-depth discussion on the interactive mechanism between the implementation of green tourism and cultural preservation; and there is a lack of quantitative data support and visualization analysis tools. Based on the existing literature, this study combines field research and data analysis, focuses on the synergistic mechanism of green tourism and cultural heritage the "Belt and Road" project's development, and tries to propose innovative development paths.

3 Research methodology

3.1 Research design and framework

This study aims to explore how Green tourism and cultural heritage can be promoted and integrated under the "Belt and Road" project, to encourage humanistic interactions between China and other nations Considering the growth of eco-friendly travel. In the process of the study, a combination of qualitative and quantitative research methods is adopted, aiming to comprehensively analyze the relevant data, reveal the interactive relationship between cultural heritage and green tourism, and put forward feasible policy recommendations. To ensure the comprehensiveness and scientificity of the study, the following research framework is designed as shown in Figure 2, which illustrates the research framework of a study on how the Belt and Road Initiative (BRI) encourages the synergistic effects of cultural heritage and green tourism. The framework begins with the research context and framework and then proceeds to methodology and data collection through a mixed-methods approach combining qualitative and quantitative research methods, including literature review, surveys, interviews, and field studies, and utilizing regression and path analyses. This is followed by data analysis

and hypothesis testing, defining key variables, developing hypotheses, and exploring relationships between variables through multiple regression modeling and path analysis. Then, the incorporating cultural heritage and green tourism and their combined impacts are analyzed, The initiative known as the Belt and Road's influence on the expansion of sustainable tourism is evaluated., the impacts of cultural heritage on tourists' behaviors and attitudes are examined, and ways in which green tourism can contribute to cultural heritage protection are explored. Finally, in the conclusions and policy recommendations section, key conclusions and feasible policy recommendations are presented based on the data analysis and theoretical framework.

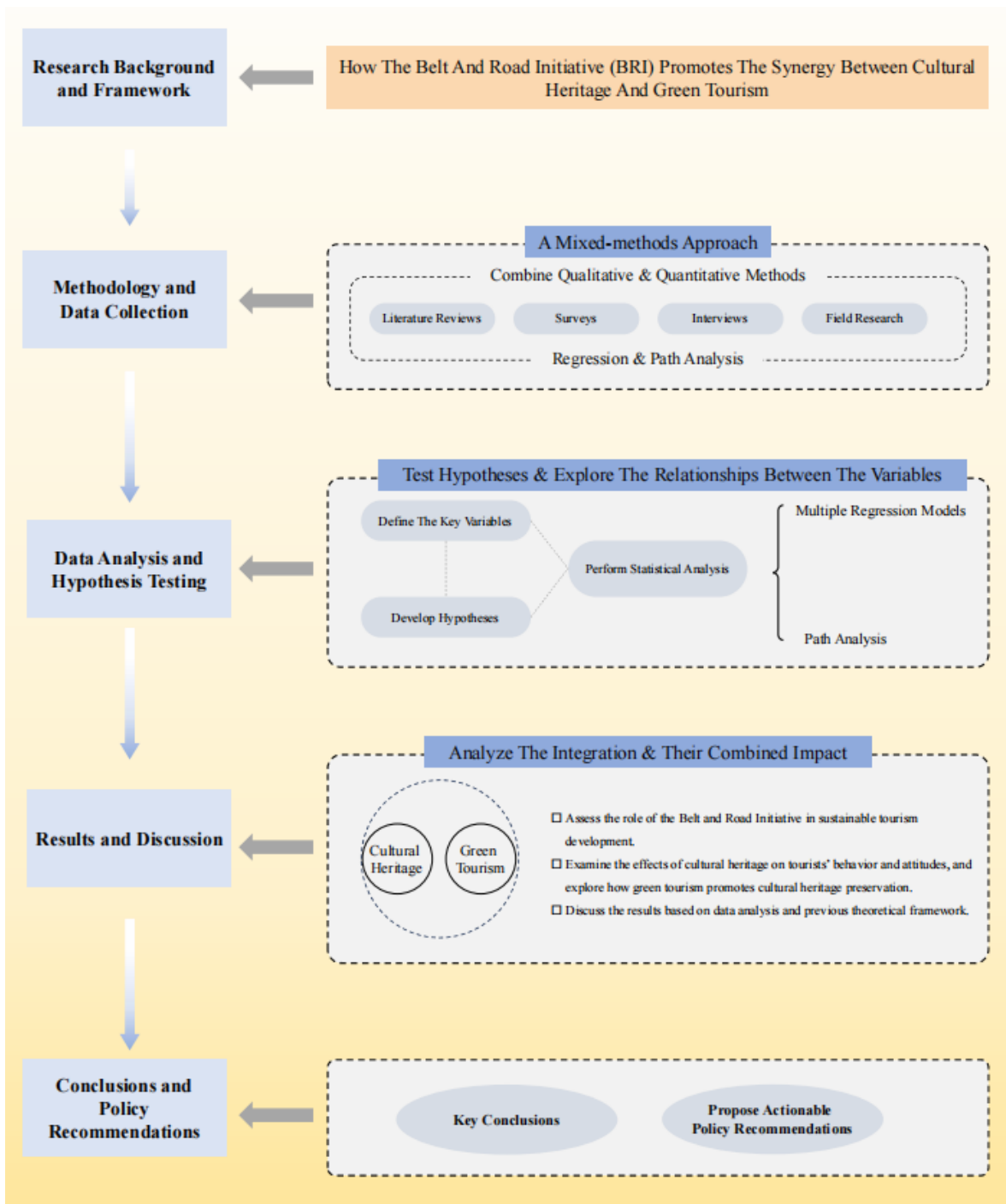


Figure 2: Thesis research framework diagram

3.2 Study population and sample selection

To comprehensively reflect the interaction as well as the growth of cultural heritage and green tourism under the "Belt and Road" initiative, the subject of this study research mainly includes the following three aspects. (1) Cultural resources of countries along the "Belt and Road". This research's primary focus is the "Belt and Road" nations, which have abundant cultural resources, especially areas with well-preserved cultural heritage, and areas with green tourism programs. (2) Green tourism projects and cultural tourism cooperation projects. These include green tourism demonstration projects and cultural exchange and cooperation projects carried out under the Belt and Road framework. These projects usually have a high degree of participation and influence and can reflect The marketing of the "Belt and Road" Initiative in the domain both cultural and tourism. (3) Relevant government departments and tourism enterprises. These include government departments responsible for cultural preservation and green tourism during the application of the Belt and Road Initiative, as well as related tourism companies and cultural exchange organizations.

In terms of sample selection, Countries included in China's "Belt and Road" plan is chosen for this study, Pakistan, Kazakhstan, Uzbekistan, and Kenya as the main research objects[17]. These countries have different cultural backgrounds and have achieved certain results in the development of green tourism and have rich practical experience.

3.3 Data collection methods

This study adopts a variety of data collection methods, first of all, the literature analysis method. By combing through the literature of policy documents, academic papers, industry reports, and other documents Concerning the Initiative for the Belt and Road, we understand the objectives and implementation path of the Initiative for the Belt and Road, moreover its practical effects in the fields of green tourism and cultural heritage. This method provides the theoretical basis and background support for the subsequent research. Secondly, the field research method. This study conducted field research in China, Pakistan, and Kazakhstan, focusing on the implementation status of green tourism projects, the application of cultural assets, as well as the feedback of residents and tourists. During the research process, the researcher collected a large amount of primary data through questionnaires, in-depth interviews, and on-site observation. There is also a questionnaire survey. Through a combination of online and offline methods, questionnaires were distributed to tourists, tourism practitioners, local government officials, and other groups to understand their perceptions and attitudes towards cultural heritage and green tourism, as well as their opinions regarding the consequences of the "Belt and Road" program. Then, in-depth interviews were conducted. The interviewees included cultural heritage protection experts, green tourism program managers, government policymakers, and local community representatives. The interviews mainly focused on the combination of cultural heritage and green tourism, policy support, and the implementation and effectiveness of green tourism projects. And the case study method. In this study, several successful green tourism projects are selected as cases, including the Western Minority Cultural Tourism Project in China, the Greenway Tourism Project in Pakistan, and the Grassland Ecotourism Project in Kazakhstan. The "Belt and Road" program is being promoted, these projects not simply concentrate on cultural heritage but also emphasize the implementation of the green tourism concept, which provides valuable practical data and experience for this study. Finally, the statistical analysis method. By collecting a series of tourism data (including the number of tourists, tourism revenue, environmental protection inputs, etc.) and analyzing the data with statistical software such as SPSS, the effect of green tourism programs is evaluated, and the connection between tourism

and cultural heritage sustainability is analyzed. The statistical analysis method provides quantitative data support for this study, which helps to reveal the actual effects of Ecotourism and cultural heritage under the "Belt and Road" initiative.

3.4 Research variables and hypotheses

This study's objective is to deeply analyze the relationship between cultural heritage and green the Belt and Road Initiative's use of tourism. To this end, a series of research variables are set up to systematically explore the interactions and mechanisms between these variables.

First, three main independent variables were identified. The first independent variable is how Specifically, the Belt and Road Initiative is being carried out, which includes policy support, financial investment, and infrastructure construction. The second independent variable is the degree of cultural heritage, which covers the degree of protection of cultural heritage, the inheritance of intangible cultural heritage, and the development of cultural activities. The last independent variable is the level of green tourism development, which covers the quantity and quality of green tourism projects, the implementation of ecological environmental protection measures, and community participation. Next, two main dependent variables were defined. The first dependent variable is the sustainability of tourism, which includes aspects such as the growth of tourism revenue, tourist satisfaction, and the effectiveness of environmental protection. The second dependent variable is the effect of cultural exchange, which includes the frequency of Chinese and foreign cultural exchange, the enhancement of cultural identity, and cultural adaptability. Considering the aforementioned variables, three research hypotheses are proposed. The first hypothesis is that the stronger the implementation of the "Belt and Road" initiative, the higher the degree of integration of cultural heritage and green tourism, and thus the stronger the sustainability of tourism. The second hypothesis is that the development of green tourism can promote the defense and inheritance of cultural heritage and enhance the cultural identity of tourists. The third hypothesis is that the synergistic development of cultural legacy and green tourism can enhance the effect of cultural exchanges in countries along the "Belt and Road". Through the setting of these variables and hypotheses, this study aims to reveal how cultural heritage and green tourism interact with each other under the "Belt and Road" initiative, and the impact that this contact has on the sustainable development of the tourism industry and the effectiveness of cultural exchanges.

3.5 Data analysis and modeling

To explore the influence of cultural heritage-related factors on the development level of green tourism, a multiple regression model is constructed. This model aims to quantify how key indicators of cultural heritage affect the depth and effectiveness of green tourism development, providing a basis for understanding the synergistic mechanism between the two. The specific model is as follows:

$$Y_1 = \beta_0 + \beta_1 X_{11} + \beta_2 X_{12} + \varepsilon_1 \quad (1)$$

where Y_1 represents the development level of green tourism, which includes the quality of green tourism projects and the implementation effect of ecological protection measures. X_{11} denotes the input in cultural heritage protection, including funds and human resources invested in the maintenance and restoration of cultural heritage. X_{12} stands for the frequency of cultural heritage display, referring to the number of cultural heritage-themed activities or

exhibitions carried out in green tourism projects. β_0 is the constant term, β_1 and β_2 are the regression coefficients of the respective independent variables, and ε_1 is the error term. Through this model, the study can examine the extent to which cultural heritage protection input and display frequency drive the development of green tourism, and further clarify the role of cultural heritage in promoting the optimization of green tourism models.

To assess how BRI-related policy support and community participation jointly affect the protection effect of cultural heritage, a multiple regression model is established. This model focuses on the policy-driven factors of cultural heritage protection under the BRI framework, helping to identify the core elements that enhance the sustainability of cultural heritage. The specific model is as follows:

$$Y_2 = \gamma_0 + \gamma_1 X_{21} + \gamma_2 X_{22} + \varepsilon_2 \quad (2)$$

where Y_2 represents the protection effect of cultural heritage, which includes the restoration rate of tangible cultural heritage and the number of inheritors of intangible cultural heritage. X_{21} denotes the intensity of BRI policy support, referring to the number of special policies and the amount of special funds for cultural heritage protection under the BRI. X_{22} stands for the degree of community participation, which is measured by the proportion of local residents participating in cultural heritage protection activities. γ_0 is the constant term, γ_1 and γ_2 are the regression coefficients of the respective independent variables, and ε_2 is the error term. This model is used to analyze the contribution of BRI policy support and community participation to cultural heritage protection effect, and to verify whether the combination of external policy support and internal community participation can form a joint force to promote cultural heritage inheritance.

To measure the impact of green tourism project characteristics on the effect of Sino-foreign cultural exchanges, a multiple regression model is constructed. This model links the development of green tourism with the realization of cultural exchange goals under the BRI, providing a quantitative basis for evaluating the cultural value of green tourism. The specific model is as follows:

$$Y_3 = \delta_0 + \delta_1 X_{31} + \delta_2 X_{32} + \varepsilon_3 \quad (3)$$

where Y_3 represents the effect of cultural exchange, which includes the frequency of Sino-foreign cultural exchanges in tourism scenarios and the degree of tourists' cultural identity. X_{31} denotes the number of green tourism projects integrating cultural elements, referring to the count of green tourism projects that incorporate cultural heritage experiences. X_{32} stands for the proportion of tourists participating in cultural activities, which is the ratio of tourists who take part in cultural experience activities (such as traditional craft making and folk dance performances) in green tourism projects. δ_0 is the constant term, δ_1 and δ_2 are the regression coefficients of the respective independent variables, and ε_3 is the error term. Through this model, the study can determine how the scale of cultural-integrated green tourism projects and the participation of tourists in cultural activities affect the effect of cultural exchanges, and further confirm the role of green tourism as a carrier for cross-cultural communication.

To verify the above hypotheses, this study will use statistical methods such as regression

analysis and path analysis to construct a multiple regression model to analyze the relationship between different variables. Specifically, by constructing the following regression model:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \tag{4}$$

where Y is the sustainability of tourism (including tourist satisfaction, income growth, etc.), X_1 is the Belt and Road Initiative's strongest point, X_2 is the level of the cultural heritage, X_3 is the degree Regarding the growth of green tourism, and ϵ is the error term. Through this model, the research will investigate the effects of each variable on tourism sustainability.

In addition, the study will further explore the direct and indirect relationships between cultural heritage, green tourism, and tourism sustainability through path analysis. Figure 3 below shows the impact of BRI Intensity, Cultural Heritage, and Green Tourism on tourism sustainability. Impacts of the BRI Intensity, Cultural Heritage, and Green Tourism on Tourism Sustainability Each regression line represents the predictive relationship of an independent variable on the sustainability variable [18]. It can be seen from the figure that the strength of the Belt and Road Initiative (BRI) positively impacts tourism sustainability, and the regression line shows a more significant effect, indicating that the stronger application of how the Belt and Road Initiative operates, the higher the tourism industry's sustainability will be. The level of cultural heritage also has a positive effect on sustainability, and the regression line shows that tourism sustainability is further enhanced in regions with higher levels of cultural heritage preservation and inheritance [19]. The relationship between the level of green tourism development and tourism sustainability also shows a positive correlation, indicating that places that pay more attention to green tourism have a better balance between environmental protection and resource utilization in their tourism industry, promoting sustainable development. Overall, these variables have a major favorable effect on travel sustainability, supporting the positive role of culture and green tourism in promoting sustainable development and reflecting the important role of the various aspects of the Initiative for encouraging sustainable tourism along the Belt and Road.

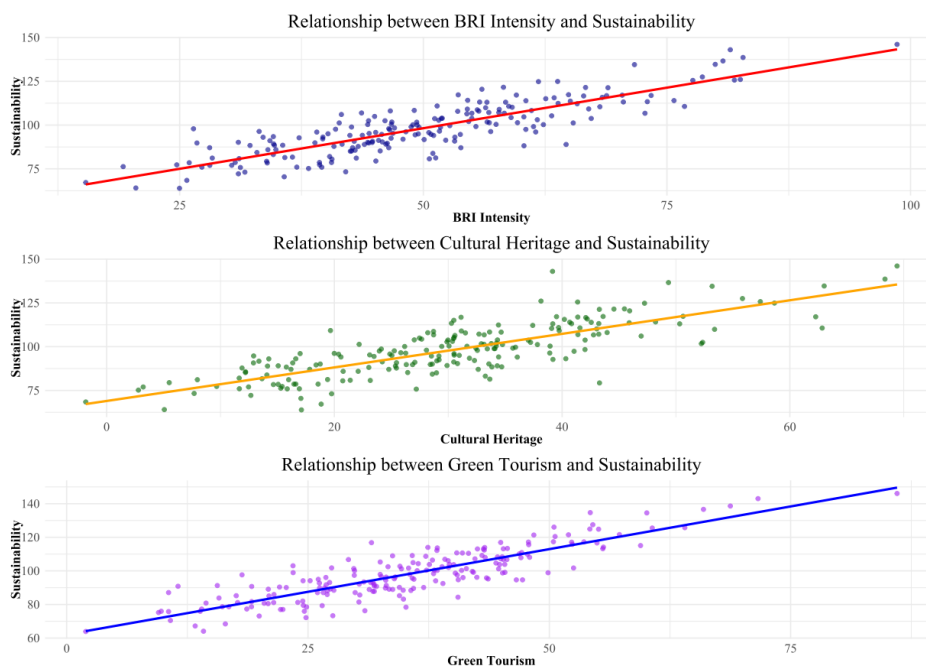


Figure 3: Regression analysis model diagram

3.6 Limitations and improvements of the study

Although this study took a variety of approaches to data collection and analysis and sought to be comprehensive and in-depth, there are still some limitations due to time and resource constraints:

(1) Sample limitation: The countries and regions selected for this study are only a few of the nations along the Belt and Road, and have not yet covered all representative countries and regions. Future research can expand the sample to cover more countries with different cultural backgrounds and stages of tourism development.

(2) Data availability: Data collection in some areas is limited by information asymmetry and poor statistical channels, which may affect the accuracy of some of the conclusions. Future research could obtain more authoritative and complete data through cooperation with international organizations.

(3) Variable control: The Initiative to Build a Belt and Road impact is the main topic of this study, but fails to adequately control for other potential influencing factors, such as changes in the global economy and sudden public events (e.g., epidemics), which may have an impact on the study's conclusions.

4 Results and discussion

4.1 Analysis of the current situation of the integration of cultural heritage and green tourism

Through the analysis of the field research and questionnaire data, it is found that (the results of the questionnaire data are detailed in Table 2 below), the table demonstrates the specific data obtained through the research, which can intuitively reflect the effectiveness and differences in combining cultural heritage with green tourism in each country. The indicator of integration of traditional festivals and green tourism reflects the degree of integration of traditional festivals and green tourism programs in different countries/regions, and the higher the score, the higher the degree of integration. According to the data, the integration degree is highest in the minority regions in western China. Tourist satisfaction measures the degree of satisfaction of tourists with the integration program, with a rating range of 1 to 5, with higher indicating better tourist satisfaction. The Cultural Transmission Effectiveness indicator reflects the effectiveness of cultural transmission, especially how the transmission and protection of traditional culture is realized in tourism projects. Green tourism program participation measures the enthusiasm and involvement of residents and tourists in green tourism programs. The Conservation of Intangible Cultural Heritage Effectiveness Indicator reflects the effect of green tourism projects Regarding safeguarding Cultural heritage that is intangible, especially the projects inside the Belt and Road Initiative's framework[20]. The growth in tourism revenue indicator shows the annual growth rate of tourism revenue after the implementation of green tourism projects. Countries along the "Belt and Road" have achieved certain leads to the incorporation of cultural heritage and green tourism. In China and Central Asian countries, for example, the combination of local traditional festivals and green tourism programs not only is a popular destination for travelers but also effectively inherits intangible cultural heritage. For example, green cultural tourism projects in ethnic minority areas in western China have achieved the win-win goal of cultural preservation and economic development.

Table 2: Results of questionnaire data

| Home/Region | Integration of traditional festivals and green tourism (1-5) | Visitor satisfaction (1-5) | Effectiveness of Cultural Transmission (1-5) | Green tourism program participation (1-5) | Intangible Cultural Heritage Safeguarding Effectiveness (1-5) | Growth in tourism revenue (%) |
|--|--|----------------------------|--|---|---|-------------------------------|
| China (Western Minority Areas) | 4 | 4.5 | 4.7 | 4.6 | 4.8 | 18% |
| Central Asian countries (e.g., Kazakhstan) | 3.8 | 4.2 | 4.5 | 4.0 | 4.3 | 15% |
| Other Belt and Road countries | 3.5 | 3.9 | 4.0 | 3.8 | 4.2 | 10% |

In addition, the research also showed that Green tourism's growth can effectively contribute to the enhancement of cultural identity. In some ecotourism projects in Pakistan, tourists' interest in local culture significantly increased through their participation in local cultural activities such as traditional handicraft making and folk dance experiences (see Table 3 below for a summary of the interview results). The table further demonstrates the role of green tourism projects in promoting cultural identity through interview data, especially through participation in traditional cultural activities, which resulted in greater interest and identification of tourists with the local culture. The ecotourism program aspect lists typical ecotourism program types in each country (region), indicating the form of their integration with cultural activities. The cultural activity type attribute describes the specific types of cultural activities that are combined with green tourism, such as traditional handicraft production and folk dance experience. The enhancement of tourists' sense of cultural identity is the degree of enhancement of tourists' sense of local cultural identity obtained from the interviews, with a rating range of 1 to 5, with higher values representing a more significant increase in the sense of cultural identity. The attribute of participation in cultural activities is the percentage of tourists' participation in cultural activities mentioned in the interviews, reflecting the enthusiasm of tourists' participation. The Summary of Interviewers' Views, on the other hand, briefly summarizes the views of tourists and local participants on the integration of cultural heritage and green tourism based on the key views distilled from the interviews. However, there are large differences in the utilization and protection of cultural resources in different countries and regions, and the integration of green tourism and cultural heritage is low in some countries due to a lack of resources or insufficient policy support.

Table 3: Summary of interview results

| Country/area | Types of eco-tourism projects | Type of cultural activity | Increased cultural identity of tourists (1-5) | Participation in cultural activities (%) | Summary of interviewees' views |
|------------------------|--|--|---|--|---|
| Pakistan | Traditional handicraft making, folk dance experience | Handicraft making, folk dance experience | 4.6 | 80% | Visitors said that by participating in local traditional cultural activities, they increased their interest in Pakistani national culture and gained a deeper understanding of local traditional handicrafts. |
| China (Western Region) | Ecological and cultural tourism, ethnic cultural festivals | Traditional festivals, folk songs, and dances | 4.4 | 75% | Interviewees mentioned that the combination of green tourism and ethnic festivals made it easier for tourists to accept and respect the local culture, and enhanced their sense of cultural identity. |
| Kazakhstan | Ecotourism and cultural exchange programs | Ethnic traditional handicraft demonstration, traditional dance | 4.2 | 70% | Interviewees mentioned that tourists increased their identification with and respect for the local culture by experiencing first-hand the traditional crafts and dances of Kazakhstan. |
| Uzbekistan | Agro-ecological tourism, historical and cultural tours | Traditional craft making, historical site tour | 3.9 | 65% | Visitors develop an interest in Uzbek culture after visiting historical sites and participating in craft activities, although the rise in cultural identity is relatively slow. |

4.2 The role of the Belt and Road Initiative in promoting sustainable tourism development

Analysis of data shows that the initiative to build the Belt and Road Initiative has made a substantial contribution to the sustainable development of tourism in countries along the route. Taking infrastructure construction as an example, the implementation of the Initiative has improved transportation conditions in many remote areas, creating a favorable environment for green tourism projects [21]. Meanwhile, through policy support and financial investment, the number of cultural tourism cooperation projects in countries along the route has increased significantly. Figure 4 below shows the trend of the number of cultural tourism projects in the countries along the route during the implementation of the "Belt and Road" initiative. As can be seen from the figure, the number of cultural tourism projects shows a year-on-year increase, especially after 2019, the growth rate significantly accelerated. In 2015, the number of

projects was about 10, and by 2025 it is expected to reach close to 90, which shows the rapid growth of the industry of cultural tourism given the enormous potential of the Initiative "Belt and Road". This growth trend reflects the deepening and strengthening of cultural exchanges and tourism cooperation among countries along the route.

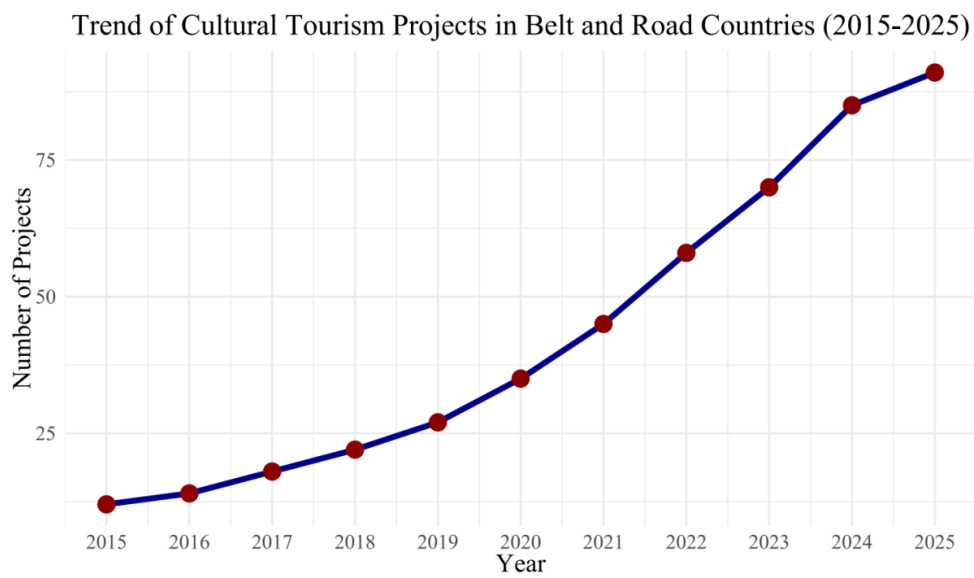


Figure 4: Trend of the Number of Cultural Tourism Initiatives in the Belt and Road Countries, 2015-2025

However, green tourism projects in some regions still face many challenges in actual operation, and the relevant statistics are shown in Table 4, which summarizes the challenges and achievements of green tourism projects in nations that make up the "Belt and Road", particularly with regard to tourist growth, environmental pressure, cultural inheritance, and economic benefits. Statistics. The chart shows detailed data on green tourism projects in six different countries between 2015 and 2020, including tourist arrivals, average annual growth rate, environmental pressure index, cultural heritage score, and economic benefits. The data shows that all programs have seen an increase in the number of tourists, with Malaysia's program combining tropical rainforests and traditional culture having the highest average annual growth rate of 11.2%. The Ethnic Minority Culture and Green Tourism Integration Project in Western China had the highest economic benefit of US\$500 million, and also excelled in the Cultural Heritage Score, earning a perfect score of 10. The grassland ecotourism project in Kazakhstan has the lowest environmental stress index at 5.2, showing better environmental sustainability. Overall, these projects have not only achieved significant economic benefits but also played a positive role in cultural heritage and environmental protection. For example, some grassland ecotourism projects in Kazakhstan have the problem of insufficient environmental carrying capacity, and the influx of too many tourists has caused non-negligible pressure on the grassland ecosystem. These problems show that in promoting the development of green tourism, policymakers need to balance the relationship between cultural heritage, ecological protection, and economic benefits.

Table 4: Challenges and achievements of green tourism initiatives in nations along Initiative for the Belt and Road

| nations | Green Tourism Project Name | Types of tourism projects | Number of visitors in 2015 (million) | Number of visitors in 2020 (million) | Average annual growth rate (%) | Environmental stress index | Cultural Heritage Score (out of 10) | Economic benefits (millions of dollars) |
|------------|--|---------------------------|--------------------------------------|--------------------------------------|--------------------------------|----------------------------|-------------------------------------|---|
| Kazakhstan | Grassland Ecotourism Project | ecotourism | 50 | 80 | 12.5 | 7.8 | 6 | 150 |
| sino | Combined Western Minority Culture and Green Tourism Project | Culture + Ecotourism | 120 | 150 | 5.0 | 5.2 | 8 | 500 |
| Pakistan | Ecological and Cultural Tourism Project | ecotourism | 30 | 50 | 10.4 | 6.5 | 7 | 120 |
| India | Traditional Village Ecotourism Project in India | Culture + Ecotourism | 60 | 90 | 8.3 | 6.0 | 7 | 200 |
| Kenya | Ecotourism projects | ecotourism | 45 | 70 | 9.0 | 6.8 | 9 | 180 |
| Malaysia | Tropical Rainforest and Traditional Culture Combined Program | Culture + Ecotourism | 55 | 85 | 11.2 | 5.5 | 8 | 250 |

4.3 Influence of cultural heritage on tourist behavior and Attitude

The results of the questionnaire analysis showed that tourists' concern for cultural heritage significantly influenced their satisfaction with the green tourism program. Figure 5 below shows a Sankey diagram of the main motivations for tourists to choose green tourism programs, showing the various experiences and activities that tourists may engage in during tourism activities. Starting from "tourists" on the left, the map connects through different colored streams to a variety of tourism experiences on the right, including experiencing unique cultures, cultural heritage sites, traditional handicrafts, cultural festivals, environmental protection, sustainability, eco-friendly practices, wildlife preservation, supporting the local economy, community development, local products, job creation, adventure and exploration, eco-tourism, and local tourism. , adventure and exploration, ecotourism, outdoor activities, nature exploration, health and well-being, health tourism, physical fitness, and healthy lifestyles [22]. The width of the streams indicates the relative proportions of tourists participating in these activities, with 'experiencing unique cultures' and 'cultural heritage sites' being the most popular activities, indicating a strong interest in cultural experiences. Other activities such as "supporting the local economy" and "eco-tourism" also show a certain level of participation, reflecting tourists' interest in sustainable tourism and local community support.

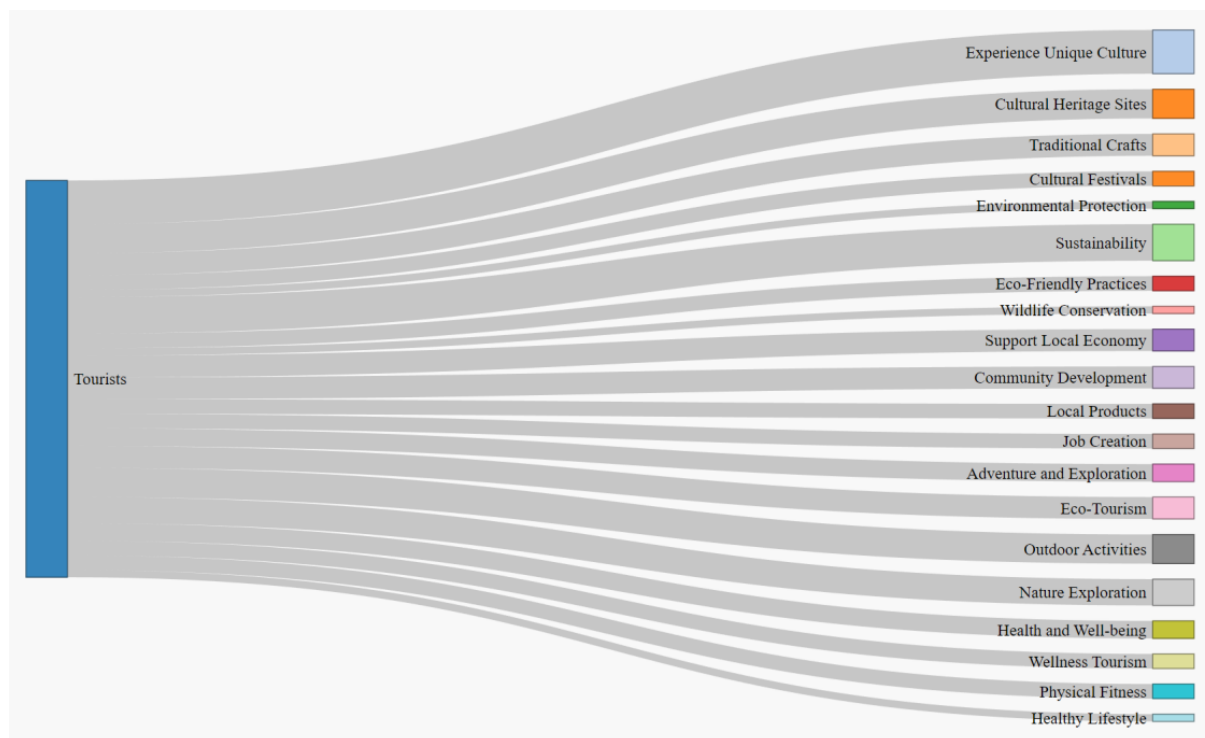


Figure 5: Sankey diagram of the main motivations for tourists to choose green tourism programs

In addition, the outcomes of the in-depth interviews indicate that the degree of importance residents attach to cultural heritage also directly affects the effectiveness of green tourism programs. In an ethnic minority area in China, the green tourism project successfully realized the symbiotic development of culture and ecology due to the high level of community residents' participation in cultural activities; while in some areas with lower participation, the development and protection of cultural resources faced certain difficulties.

4.4 Contribution of green tourism to cultural heritage

Green tourism projects provide new ideas for the preservation and transmission of cultural resources. Table 5 below shows the cases of green tourism projects' cultural heritage to cultural heritage, incorporating specific case data to systematically demonstrate how green tourism has contributed to cultural heritage in different countries, as well as the challenges they have faced and the measures they have taken to address them. The illustration of specific examples can aid in gaining a deeper comprehension of the role of green tourism in cultural preservation, and at the same time provide a reference for future policy formulation and project implementation. The table lists the countries involved in green tourism projects, such as Kenya, China, the West, and Pakistan, and briefly describes the specific green tourism projects or programs in each country, highlighting how green tourism promotes cultural heritage in each country, especially in the way it feeds back into cultural preservation through revenues. The cultural outcomes listed in the cultural outcomes are the cultural heritage outcomes that each green tourism program has successfully promoted, such as the continued transmission of intangible cultural heritage and the promotion of traditional festivals. However, it was also found in the research that some green tourism projects lacked systematic planning and over-exploited cultural resources, resulting in a gradual erosion of their uniqueness.

Table 5: Cases of cultural heritage to cultural heritage in green tourism programs

| Case countries | Green Tourism Project Name | Project Objectives | Results of cultural heritage | Problems encountered | cure |
|----------------|--|---|---|---|--|
| Kenya | Ecotourism projects | Promotion of local African savannah culture through ecotourism revenues in support of cultural preservation | 1. Promoting the continued transmission of grassland culture 2. Strengthening community recognition and protection of traditional culture | 1. Over-exploitation of some cultural resources 2. Lack of systematic planning of projects | 1. Formulate a more rational plan for the development of cultural resources 2. Increase community participation to ensure cultural authenticity and uniqueness |
| Western China | Ethnic Culture and Green Tourism Combination Project | Combining traditional ethnic minority festivals with green tourism programs | 1. Promoting the sustainable development of traditional ethnic minority festivals 2. Supporting local cultural activities through tourism revenues | 1. The combination of cultural activities and tourism programs sometimes lacks depth 2. Loss of cultural elements due to excessive commercialization | 1. Enhancing awareness of cultural heritage in local communities 2. Adopting a development model that pays more attention to ecological and cultural preservation |
| Pakistan | Ecological and Cultural Tourism Project | Enhancement of tourists' awareness and interest in Pakistan's local culture | Visitors increase their interest in local culture by participating in traditional handicraft making and folk dance experience | Some tourism activities Fail to effectively integrate with cultural heritage | 1. Enhance the design depth of cultural programs 2. Strengthening cultural education and interactive links to enhance visitors' sense of cultural participation |
| Malaysia | Tropical Rainforest and Traditional Culture Combined Program | Promoting Malaysia's traditional culture through rainforest ecotourism | Enhancing the visibility of Malay culture through eco-tourism programs | Tourism projects lead to the over-commercialization of some traditional cultural activities | Adoption of a non-profit management model to enhance cultural education and ecological conservation |
| Indonesia | Traditional Village Ecotourism Project | Promoting the sustainable development and cultural heritage of traditional villages | Traditional handicrafts and agricultural techniques have been effectively passed on | Failure to effectively control the number of tourists due to the rapid development of tourism projects | 1. Establishment of a cultural preservation fund 2. Increased control and management of visitor numbers |

The discussion reveals that green tourism has a double-edged sword effect in promoting cultural heritage. On the one hand, its revenue model can support the protection of cultural resources; However it may exacerbate the commercialization and destruction of cultural resources if there is a lack of reasonable regulation. Therefore, in policy and practice, more

attention should be paid to long-term planning and localization strategies for the use of cultural resources.

4.5 Discussion of results and policy recommendations

A comprehensive analysis of the findings suggests the Initiative for the Belt and Road has great potential to encourage the incorporation of cultural heritage and green tourism, although there is room for further optimization in this process. In response to these findings, a series of recommendations are made to promote continued progress in this area.

First, it is recommended that policy support be upgraded. This includes further improving policies related to green travel and cultural preservation and providing specialized financial support. Through these measures, the nations that make up the Belt and Road can include encouraged to carry out more green tourism demonstration projects, to explore and verify the effectiveness of these policies in practice. In addition, it is crucial to strengthen international cooperation. Through the collaboration of international organizations and governments, we can promote the exchange of experience and technical support in the fields between green tourism and cultural heritage among nations that are part of the Belt and Road. Such cooperation not only promotes knowledge sharing but also strengthens mutual comprehension and collaboration among countries. Thirdly, strengthening community participation is the key to ensuring that the development of cultural resources is in line with local interests. By actively mobilizing community residents in cultural preservation and tourism development, it can be ensured that these activities truly reflect and meet the needs and expectations of local communities. Finally, the introduction of digital tools offers new possibilities for the conservation and display of cultural resources. The use of digital technologies allows for the construction of virtual museums or the evolution of cultural tourism with guides applications, which not only enrich the experience of tourists but also allow for the preservation and transmission of cultural resources in innovative ways[23]. Through the implementation of these recommendations, it is expected that the Initiative for the Belt and Road will more effectively encourage the growth and incorporation of cultural heritage and green tourism, and contribute more to the sustainable growth of the nations along the way.

5 Conclusion

This research focuses on the role on the "Belt and Road" project in encouraging humane interactions between China and foreign countries and the development of sustainable tourism and conducts an in-depth analysis from the perspective of the integration of cultural heritage and green tourism. Through literature review, field research, case study analysis, and data statistics, this study draws the following main conclusions. First, the "Belt and Road" initiative provides an important opportunity for the development of cultural heritage and green tourism. Through policy support, infrastructure construction, and financial investment, the nations participating in the Belt and Road Initiative have made notable advancements in the protection and development of cultural resources. Green tourism not just encourages the ecological environment's sustainable development but also offers a fresh catalyst and route for the inheritance of cultural legacy. Secondly, the study finds that cultural heritage and green tourism show a high degree of synergy under the Belt and Road framework. Green tourism provides tourists with a window for cultural experience, and concurrently feeds the protection of cultural resources through tourism revenue, realizing a scenario that benefits both both economic benefits and cultural protection. For example, the successful implementation of the ecotourism program significantly improved tourists' knowledge and recognition of cultural

resources and built a platform for cross-cultural communication and understanding. Again, this research confirms the positive impact of the Belt and Road Initiative on the sustainable development of tourism through quantitative analysis. However, in practice, the integration of cultural heritage and green travel still faces problems such as imperfect policy planning and unbalanced resource management, which suggests the need to further improve the management mechanism, and enhance the participation of residents and the scientific planning of green tourism projects. Finally, this study puts forward a series of policy recommendations, including strengthening policy support and international cooperation, focusing on community participation, introducing digital tools, etc., which provide practical guidance for promoting the in-depth combining cultural legacy with green tourism. These recommendations not only help deepen cultural exchanges among countries along the Belt and Road but also provide a reference example for the development of sustainable tourism.

Although this study explores the interaction link cultural heritage and green tourism from multiple perspectives, there are still some shortcomings. Firstly, the data of the study mainly come from a few typical countries and regions, and the sample range is relatively limited, which may have some impact on the generalizability of the study's conclusions. Second, due to time and resource constraints, this study fails to conduct a long-term follow-up analysis of the dynamic relationship between green tourism and cultural heritage. Future research can further explore the synergistic development mechanism of cultural legacy and green tourism under the Initiative for the Belt and Road by expanding the sample scope, increasing cross-cultural comparisons, and combining long-term longitudinal research methods. Meanwhile, Given the quick development of digitalization and artificial intelligence technology, it is worthwhile to study how to utilize emerging technologies to protect cultural resources and enhance the green tourism experience more effectively.

About The Author

Na Yin was born in Wuhan, Hubei Province, P.R. China in 1986. She obtained a doctoral degree and is a lecturer. She graduated from Rajamangala University of Technology Tawan-OK in Thailand. She is employed at the School of International Education, Wuhan Business University. She main research direction are tourism management and Sino-foreign cooperative education. yinna_2007@126.com

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