

Sustainable Development Strategies of Eco-Tourism in the Third Pole Based on Environmental Carrying Capacity Assessment Study

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Abstract

The rich natural resources and multi-ethnic cultural characteristics of the third pole region have created a good foundation for its development of ecotourism. However, the sustainable development of the third Pole ecotourism still needs to be explored on the basis of environmental carrying capacity assessment. Starting from the perspective of tourism environmental carrying capacity, this paper takes the third pillar as the research area, adopts the methods of desktop research, survey and interview, literature search, etc. Based on the construction of environmental carrying capacity model, carries out data analysis from four aspects: ecology, resource space, residents' psychology and social economy. The results showed that the other three carrying capacity levels were higher except for the social and economic carrying capacity. Therefore, it can be concluded that the third pole region is suitable for the development of ecotourism, but due to the low socio-economic carrying capacity, the development of ecotourism should be guided and regulated to some extent, and it is necessary to formulate a strategy suitable for the sustainable development of ecotourism in the third pole.

Keywords: The Third Pole, environmental carrying capacity, ecotourism, sustainable development

1. Introduction

The development concept of "lucid waters and lush mountains are invaluable assets" aims to emphasize the harmonious coexistence between man and nature, developing eco-tourism is an effective way to practice this concept. Ecotourism is a kind of tourism that takes sustainable development as the concept, ecological environment protection as the premise, and harmonious development between man and nature as the criterion. It relies on good natural ecological environment and unique humanistic ecosystem, adopts an ecologically friendly way, carries out ecological experience, ecological education, ecological cognition, and obtains physical and mental pleasure. Ecotourism was first proposed by the International Union for Conservation of Nature (IUCN) in 1983. In recent years, the concept of ecotourism has developed rapidly and successfully, and it has become one of the fastest growing tourism methods in the tourism industry. As the pioneer of national parks, America's eco-tourism industry can attract a large number of tourists every year. Ecotourism in Kenya's natural parks has been its largest foreign exchange earner since the 1980s. Since 1992, China has been gradually committed to the construction of ecotourism. In October 2021, China set up the first five national parks, including Sanjiangyuan, which have achieved relatively significant results in terms of ecotourism and environmental impact. There is no contradiction between ecological environmental protection and regional economic development, and it is a dialectical and unified relationship, because ecotourism can effectively utilize existing resources and reduce the cost of tourism development. Ecotourism can popularize and educate people about relevant knowledge, so as to achieve the purpose of protecting regional ecological environment. Ecotourism can also stimulate tourism consumption and create economic benefits, which is an effective means to improve regional economic development. Therefore, the development of ecotourism is of great significance in environmental protection and economic development.

Known as the "roof of the world" and the "third pole", the Qinghai-Tibet Plateau is the largest and highest plateau in China. At present, many scholars have conducted relevant studies on ecotourism in the third pole region. For example, Sun Feida et al, analyzed the grassland ecotourism in Qinghai-Tibet region with SWOT method, and proposed reasonable zoning and graded protection of grassland. Wang Lanying took Yushu Tibetan Autonomous Prefecture as an example and analyzed the advantages and constraints of developing plateau eco-tourism cities. Wang Lili et al, analyzed the spatial structure of Qomolangma Nature Reserve in Tibet from the perspective of

territorial space planning. From the perspective of cultural and tourism integration, Chen Huihui discussed the practical approach to the construction of eco-tourism highland in Qinghai Lake, a 5A scenic spot on the Qinghai-Tibet Plateau. Jiang Guiyan et al, took the resource space carrying capacity as an indicator and pointed out that the eco-tourism environmental carrying capacity of Tibetan areas in the southern plateau of Qinghai was relatively small and the eco-tourism seasonality was prominent. At present, the researches related to ecotourism in the third pole region are more about qualitative analysis of "advantages" and "constraints", and a few quantitative analyses have a single dimension, especially lack the support of systematic quantitative results at present, the research on eco-tourism in the third pole region is more about qualitative analysis of "advantages" and "constraints", and still lacks some quantitative results to support. Therefore, on the basis of investigating the geographical environment of the third pole region, this paper introduces the assessment model of environmental carrying capacity. Based on the analysis results, this paper objectively evaluates the feasibility of developing ecotourism in this region, and explores the sustainable development strategy of ecotourism in the third pole region.

2. Research Scope and Research Methods

2.1 Overview of the Third Pole Region

2.1.1 Geographical Profile of the Third Pole Region

The Qinghai-Tibet Plateau (FIG. 1) is located in the central part of Eurasia, within the range of 26°~39°N and 73°~103°E. Most of it is located in China, bordering Kunlun Mountains, Altun Mountains and Helan Mountains in the north, Himalaya Mountains in the south, Hengduan Mountains in the east, Loess Plateau in the west, Pamir Plateau and Karakoram Mountains. Covering an area of nearly 2.4 million square kilometers, the Qinghai-Tibet Plateau occupies all of Qinghai Province, Tibet Autonomous Region and a small part of Sichuan Province, Yunnan Province, Xinjiang Uygur Autonomous Region and Gansu Province. It is the largest plateau in China and the highest in the world. The Qinghai-Tibet Plateau is called the "world's third pole", because of its unique geographical location. Due to the special climate type and geological structure, the "third pole" region has formed a variety of ecosystems, unique geological geomorphic landscape and rich animal and plant resources. Based on the natural and geographical landscapes of the southern Tibet Plateau and the Middle Himalaya Mountains, the state has established a number of nature reserves for the purpose of protecting vegetation or precious species, providing tourists with high-quality natural experience.

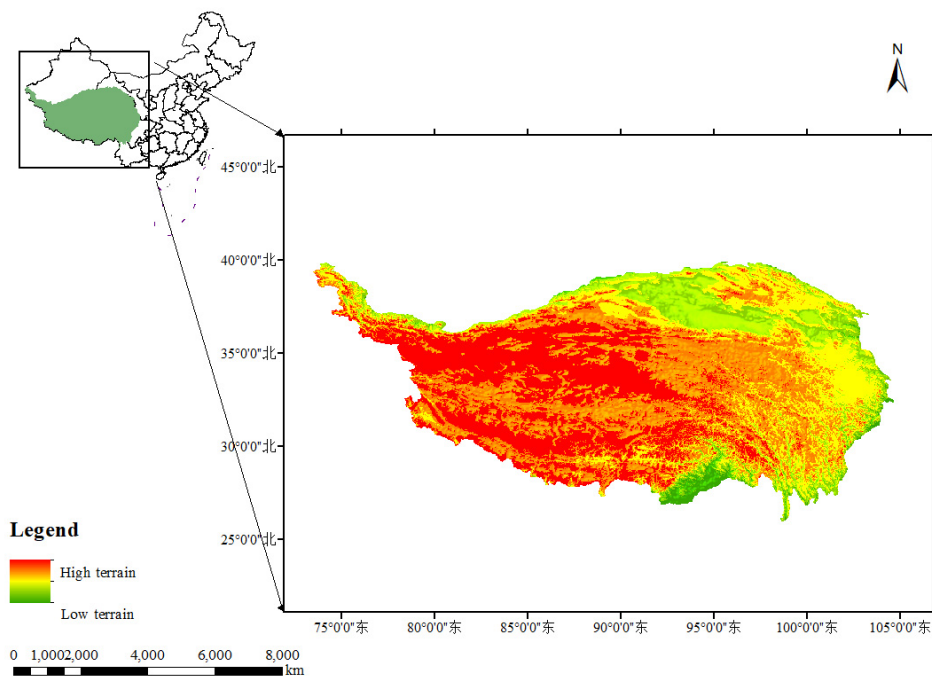


Figure 1. The profile map of The Third Pole region

2.1.2 Tourism Resources and Current Situation of the Third Pole Region

The third pole is not only rich in natural resources, but also rich in ethnic culture. It has many cultural landscapes,

such as the Potala Palace and Jokhang Temple, which are well known at home and abroad. Under the background of "One Belt and One Road", the state's investment in eco-tourism in Qinghai-Tibet region is still gradually increasing, and tourism has developed into one of the pillar industries in the third pole region. Up to now, about 300 tourist attractions have been developed in the Third Pole region, attracting a large number of tourists every year. Eco-tourism in the third pole region includes natural resources and human resources. Natural resources are mainly landscape, forest landscape, water scenery and nature reserves; Humanistic tourism resources are ethnic and religious landscapes, folk culture, Buddhist holy places and temple buildings with distinctive regional characteristics. These ecotourism resources have the characteristics of diversity, monopoly and so on, showing a strong vitality. The third pole has great potential for tourism development.

2.2 Environmental Carrying Capacity

2.2.1 Construction of Environmental Carrying Capacity Model

Tourism environmental carrying capacity refers to the maximum tourism activities that a tourist destination can bear. Some scholars have evaluated ecotourism from the comprehensive perspective of three factors: social, economic and natural factors. This study selected four main elements of tourism environmental carrying capacity, which includes ecological carrying capacity (*ECC*), resource space carrying capacity (*RECC*), residents' psychological carrying capacity (*IECC*) and socio-economic carrying capacity (*SECC*). On the premise of not destroying any factor, the value of tourism environmental carrying capacity is determined by the factor with the minimum threshold value. The calculation of tourism environmental carrying capacity refers to the calculation method given in "Tourism Environment (Sun Gennian)". Therefore, the calculation model of tourism environmental carrying capacity in a certain region can be written as:

$$TECC = \min(ECC, RECC, SECC, IECC) \quad (1)$$

In the formula, *TECC* refers to the overall tourism environmental carrying capacity of a certain region, which should be equal to the minimum value of the four elements of *ECC*, *RECC*, *SECC* and *IECC* in the formula.

(1) Ecological carrying capacity

Ecological carrying capacity (*ECC*) is the amount of tourism activities that a certain tourist destination can accommodate under the condition that the environment is not destroyed and the ecological balance is not broken. The expression of environmental ecological carrying capacity can be written as:

$$ECC = \min(AEC, WEC, SEC) \quad (2)$$

Where, *ECC* represents ecological carrying capacity, *AEC* represents atmospheric environmental carrying capacity, *WEC* represents water environmental carrying capacity, and *SEC* represents solid waste environmental carrying capacity.

Atmospheric environmental carrying capacity (*AEC*):

$$AEC = \frac{\text{Average Daily Air Self-cleaning Capacity}}{\text{Average daily waste Gas Production per Person}} \quad (3)$$

Taking carbon emission as the indicator of exhaust gas emission, this study mainly considers the daily amount of CO₂ produced by adults, exhaust emissions from tourism vehicles, and exhaust emissions from hotels and farmhouse fumes.

Water environmental carrying capacity (*WEC*):

$$AEC = \frac{\text{Average daily water pollutant purification Capacity}}{\text{Average daily sewage Production per Person}} \quad (4)$$

Solid Waste Disposal Capacity (*SEC*)

$$SEC = \frac{\text{Daily Solid Waste Disposal Capacity}}{\text{Average Daily Solid Waste Production per Person}} \quad (5)$$

The daily solid waste treatment capacity consists of the sum of the daily solid waste treatment quantity and the daily natural purification quantity of solid waste. The amount of solid waste manually treated is obviously much greater than the amount of natural purification, so only the amount of solid waste manually treated daily is considered in this study.

(2) Resource space carrying capacity

Resource space carrying capacity (*RECC*) refers to the maximum number of tourists that can be accommodated

by the resource space area of a tourist destination. Space carrying capacity of resources can be written as:

$$RECC = \frac{\text{Total Area Of Resource Space}}{\text{Standard Area Of Basic Space Per Capita}} \tag{6}$$

Where, the total area of resource space is the total area of a tourist scenic spot, and the standard area of per capita basic space is the area occupied by an average tourist.

(3) Psychological carrying capacity of residents

Residents' psychological carrying capacity (*IECC*) refers to the tourist destination population, folk customs, religious belief, lifestyle, social morality and other aspects of the local residents in the psychological perception can accept the number of tourists. The psychological carrying capacity of residents depends on the subjective attitude of residents.

(4) Socioeconomic carrying capacity

Socio-economic carrying capacity (*SECC*) refers to the limit of local economic conditions carried in the development of tourist destination and tourism, including people's basic living conditions and infrastructure conditions. The calculation formula of social and economic carrying capacity can be written as:

$$SECC = \min(secc_1, secc_2, \dots, secc_n) \tag{7}$$

Where, *SECC* stands for social and economic carrying capacity, *secc₁, secc₂, ..., secc_n* represents the maximum number of tourists that service facilities such as beds parking Spaces and electricity can receive respectively.

2.2.2 Scoring of Environmental Carrying Capacity

The author believes that the calculation result of regional tourism environmental carrying capacity (*y*) can be compared with the actual reception volume (*x*). According to the ratio *Z* ($Z = \frac{y}{x}$) between the calculation result and the actual reception volume, each index of regional environmental carrying capacity can be rated and scored. The specific criteria are shown in Table 1.

Table 1. Classification of tourism environmental carrying capacity

Z value	Grade	Evaluation
≥ 3	A	Very good
$1 \leq Z < 3$	A –	Good
$0.5 \leq Z < 1$	B	Intermediate
$0.25 \leq Z < 0.5$	B –	Bad
$0.125 \leq Z < 0.25$	C	Very bad

2.3 Data Sources

Qinghai Province and Tibet Autonomous Region occupy the vast majority of the third pole, and the ecotourism areas are mainly distributed in these two regions. Therefore, the data from these two regions are sufficiently representative. This study refers to *Qinghai Statistical Yearbook 2021*, *Tibet Statistical Yearbook 2021* (hereinafter referred to as *Yearbook*), *Comprehensive Tourism Development Plan of Tibet Autonomous Region during the 14th Five-Year Plan Period*, *Notice of the General Office of Qinghai Provincial People's Government on Printing and Distributing the 14th Five-Year Plan for Culture and Tourism Development of Qinghai Province*, as well as data released by the National Bureau of Statistics, the Ministry of Culture and Tourism and other departments. The contents are shown in Table 2.

Table 2. Data required for tourism environment carrying capacity model

Index	Factor	Data required
ECC	Atmospheric self-purification capacity	Forest area Regional carbon emission
	Solid waste treatment capacity	Garbage disposal capacity
	Sewage treatment capacity	Total water resources
RECC	Maximum number of tourists per unit area	Tourist areas Number of tourists received
		IECC
SECC	Various tourist service facilities	Hotel and other service facilities Power consumption Number of parking spaces in scenic spots

3. Research Results and Discussions

According to the current situation of ecotourism development in the third pole region, the tourism environmental carrying capacity in the third pole region is evaluated by considering the main ecotourism scenic spots and service facilities. The evaluation process is as follows.

3.1 Assessment Results of Environmental Carry Capacity

3.1.1 Assessment of Ecological Carrying Capacity

Atmospheric environmental carrying capacity According to the official website of "Institute of Tibetan Plateau Research, Chinese Academy of Sciences", the average daily carbon emissions of Qinghai-Tibet region in 2020 will be 27400 tons/day. According to the Yearbook, the Qinghai-Tibet Plateau has at least 20 million hectares of forest, and one hectare of forest can consume one ton of CO₂ every day. Therefore, the forest can absorb 20 million tons of CO₂ every day. According to Equation (3), the atmospheric environment carrying capacity of the third pole region can reach at least 730,000 people per day.

Water environmental carrying capacity Qinghai Province is known as the "water tower of China". The total water resources in Tibet rank the first in China, and the total water resources in the two provinces (regions) are rich. Besides, the Qinghai-Tibet region has a high altitude and vast glacier area, so the total water resources theory should be far greater than the pollution caused by tourism. The carrying capacity of water environment can be considered as infinite (+∞).

Solid waste carrying capacity According to the Yearbook and the official website of the National Bureau of Statistics, the harmless disposal capacity of household waste in Qinghai and Tibet in 2020 will reach 1.154 million tons and 520,000 tons, respectively. Therefore, the average daily garbage disposal capacity in the third pole region is more than 0.49 million tons, and each person produces 1.2kg of garbage every day. According to Equation (5), the environmental carrying capacity of solid waste is about 4.08 million person-times per day.

Finally, according to Equation (2), the ecological carrying capacity of the third pole region is about 730,000 people per day.

3.1.2 Assessment of Resource Space Carrying Capacity

According to the National Ecotourism Development Plan (2016-2025), Yearbook and tourism statistics of Qinghai and other provinces, the total area of ecotourism on the Qinghai-Tibet Plateau is about 2.25 million square kilometers. In 2020, the number of tourists in the third pole region will be more than 68.1683 million, and the average number of tourists will be more than 186,800. At the same time, some scholars have shown that the standard per capita space area of natural parks is 60m² / person. According to Equation (6), the resource space carrying capacity of the third pole region is about 3.75× 1,060,000 people per day. It can be seen that the third pole region is sparsely populated, with a vast land area and a large resource space carrying capacity. Therefore, the resource space will not restrict the development of eco-tourism in the third pole region.

3.1.3 Assessment of Residents' Psychological Carrying Capacity

The location of the third pole ecotourism scenic spots is remote, most of them are natural tourist attractions, far away from densely populated areas, so ecotourism has little impact on local residents, and coupled with policy support, local residents generally accept the way of ecotourism, so the psychological carrying capacity of residents can be calculated as positive infinity ($+\infty$).

3.1.4 Assessment of Social and Economic Carrying Capacity

(1) Hotel carrying capacity

Hotel carrying capacity According to the number of hotels above the star level shown on the official website of the Department of Tourism and Culture of Tibet Autonomous Region, each room can accommodate 2 people on average, and then according to the number of rooms stipulated by the star hotel, the total number of tourists can be accommodated in Tibet and Qinghai (Table 2, 3). It can be calculated that the hotel carrying capacity of Qinghai and Tibet is about 42,000 people per day. Therefore, the total carrying capacity of hotels in the third pole area should be greater than 42,000 people per day. Therefore, the environmental carrying capacity of star hotels is not high, so it is speculated that the accommodation problem may have a certain impact on the development of ecotourism in the third pole region.

Table 3. Number and capacity of hotels above star level in Tibet Autonomous Region

Region	Number of hotel	Number of room	capacity
Lhasa	67	5990	11980
Shannan region	6	542	1084
Shigatse	27	1667	3334
Nyingchi	9	537	1074
Qamdo	4	331	662
Ali	1	36	72
Naqu	1	88	176
Total	115	9191	18382

Note. The Tibet autonomous region star above hotel and room number from the Tibet autonomous region tourism development hall's official website: <http://lyfzt.xizang.gov.cn/>.

Table 4. Number and capacity of hotels above star level in Qinghai Province

Hotel level	Number of hotel	Number of room	Capacity
Five-star	2	888	1776
Four-star	41	2050	4100
Three-star	116	7500	15000
Two-star	46	1000	2000
One-star	2	250	500
Total	207	7788	23376

Note. The number of star hotels in Qinghai Province is calculated according to the statistics of Ministry of Culture and Tourism, PRC, and the number of rooms is estimated by the author according to the standard of star hotels.

(2) Carrying capacity of power resources

According to *China Energy Statistical Yearbook*, the average daily electricity consumption in the third pole region is more than 226 million kw·h. After analysis, the electricity consumption of the third pole region tourism is about 10% of the total consumption of electricity. Therefore, tourism power consumption should be higher than 22.6 million kw·h/day, with an average of 8 kw·h per tourist per day, resulting in a power carrying capacity of at least 2.825 million people per day.

(3) Reception capacity of the scenic area

According to the *Yearbook*, from 2015 to 2019, the number of tourists in the third Pole increased year by year, which means that parking Spaces, transportation and other infrastructure must be sound enough, otherwise the growth rate of tourists would be contradictory. Under certain circumstances, parking space and traffic will not restrict the development of eco-tourism. According to equation (7), the socioeconomic carrying capacity is ultimately limited by the hotel accommodation carrying capacity.

3.2 Final Results

To sum up, the index values of tourism environmental carrying capacity in the third pole region are shown in Table 5. According to the *Yearbook*, a total of 90.8 million tourists visited Qinghai Province and Tibet in 2019, with an average of 249,000 tourists per day. Therefore, the environmental carrying capacity of the third pole region can be classified according to the score calculated based on this value and the environmental carrying capacity of various indicators (Table 6). According to the grade score, it is found that the level of *EECC* in the third pole region is quite optimistic, which is A-, indicating that natural ecological factors will not cause too much restraint on eco-tourism in the current situation, but the *SECC* level is very low, indicating that the restrictive factor is social and economic factors, which will cause certain constraints on the development of tourism in the third pole region.

Table 5. The result of environment carrying capacity in the third pole region

Index	Outcomes
Ecological capacity (ECC)	73 million people/day
resource space carrying capacity (RECC)	3.75×10^6 million people/day
residents' psychological carrying capacity (IECC)	$+\infty$
social and economic carrying capacity (SECC)	4.2 million people/day

Table 6. Classification of tourism environmental carrying capacity in the third pole region

Index	x (million)	y (million)	Z value	Grade
ECC		0.73	2.93	A-
RECC	0.249	3.75×10^4	150602.41	A
IECC		$+\infty$	$+\infty$	A
SECC		0.042	0.17	C

4. Suggestions on Sustainable Development of the Third Pole Eco-Tourism

Based on the accounting results and classification of the environmental carrying capacity of the third pole region, it is found that the ecological carrying capacity of the third pole region is at a higher level, which indicates that at present, the natural ecological environment will not cause great constraints on the development of eco-tourism. However, due to the fragile ecological environment of the third Pole region, when formulating the strategy of sustainable development of eco-tourism, The protection of the natural environment should also be given priority; The level of social and economic carrying capacity of the third pole region is not optimistic, social and economic factors may cause certain constraints on the development of tourism, so the development of tourism planning, should increase investment in infrastructure and other aspects. In conclusion, to ensure the coordinated development of the third Pole ecotourism and the ecological environment, we should proceed from the perspectives of reserve planning, infrastructure construction, community support, laws and regulations, etc., so as to achieve the sustainable development goal of ecotourism.

4.1 Relying on the Planning of Protected Areas, Construct a Barrier for the Sustainable Development of Eco-Tourism

The results show that the third pole has a high environmental ecological carrying capacity, which indicates that the third pole has a great potential for ecotourism development. Good ecological environment is the premise of developing ecotourism. Ecotourism can also bring economic benefits to environmental resources. Tourism areas should be developed on the basis of environmental protection. Careful investigation should be carried out first, reasonable planning of tourism areas should be carried out, accurate delineation of tourism development zones,

moderate development zones, restricted development zones and prohibited development zones. For key protection areas, the strictest "red line" for ecological protection must be drawn to coordinate the development of ecological environmental protection and ecotourism, so as to achieve the sustainability of ecotourism.

4.2 Create a Tourism Market and Optimize the Business Environment for High-Quality Development of Ecotourism

Based on the analysis of the social and economic carrying capacity of the third pole, the infrastructure of the region is not perfect, the development is relatively backward, there may be a shortage of hotels; In addition, the management level is slightly low, and the quality of tourism services needs to be improved. In order to improve the quality of ecotourism, first of all, we should increase the capital investment, follow the investment principle of "whoever invests benefits", attract investment, strengthen regional cooperation, and further expand the sources of investment. Secondly, to strengthen the construction of infrastructure, improve the hotel, hotel, supermarket, parking, toilet and other service facilities, in the scenic spot also to improve the level of service; In addition, we should seize the important opportunity of the second Qinghai-Tibet scientific survey, promote the application and transformation of scientific survey results in the tourism field, explore and promote the survey of tourism resources in the whole region^[10], rationally allocate the total amount and structure of tourists, guide and promote green consumption, and optimize the environment suitable for high-quality development of eco-tourism in both supply and demand.

4.3 Strengthen Community Support and Lay a Solid Foundation for Psychological Carrying Capacity of Residents

Although the assessment results indicate a positive *IECC* situation in the third Pole region, the development of tourism can have local impacts and, if not properly developed, community support for local ecotourism may decrease. Because all protection is local. Residents of the third-level areas, especially herdsmen, have accumulated "local knowledge" of local animal husbandry production, grassland, animals and plants, climate, environment, etc. in their long-term production and life, which is a kind of ecological wisdom. In order to do a good job in conservation, the policy-making department must first get the support of the local community, so that the community residents can see and give full play to their advantages in "local knowledge". Especially in the decision-making of ecotourism, the suggestions of the community residents should be widely accepted, and the residents should be personally involved in ecological protection as far as possible. At the same time, employment opportunities should be provided for residents in the ecological protection area, and residents should be encouraged to invest as investors, so as to jointly safeguard the development of ecological tourism, so that community residents can gain the benefits of ecological protection, and build a complete ecological protection system from top to bottom.

4.4 Improve the Construction of Laws and Regulations to Provide Legal Protection for the Unique Ecology of the Third Pole Region

Ecotourism emphasizes the sustainability of tourism destination development, and its core is ecology. The wild growth of tourism behavior is bound to cause certain impact and damage to the environment. In view of the special geographical environment of the Qinghai-Tibet Plateau, legislation on ecological protection in this region should not only follow the threshold of the local ecological environment carrying capacity, but also prevent damage to the ecological environment caused by excessive tourism activities, and take into account the geographical location of the third pole region in ecotourism management. Strengthen its water conservation, soil conservation, windbreak and sand fixation, carbon fixation, biodiversity protection and other effects, the development of ecotourism and ecological environment protection complement each other. In September 2022, the Qinghai-Tibet Plateau Ecological Protection Law (second review draft) was submitted to the NPC Legal Affairs Commission. In the next stage of legislative discussion and implementation rules for eco-tourism on the Qinghai-Tibet Plateau, the requirements for enhancing the diversity and sustainability of the ecosystem will be specified in detail, and the entry list system for travel agencies will be implemented. Those who violate the third Pole eco-tourism rules and cause ecological damage should be held responsible for ecological protection and restoration and for improving biodiversity protection measures according to the circumstances. Illegal acts that damage the ecological environment should be investigated and dealt with seriously, and strict legal rules should be adopted to promote the construction of an ecological security barrier on the Qinghai-Tibet Plateau.

5. Research Conclusions

Tourism environmental carrying capacity can be used to measure the potential of tourism development in a certain area to a large extent. Based on the evaluation model of environmental carrying capacity, the research results of this paper show that the ecological carrying capacity of the third pole is large, but the socio-economic carrying capacity is limited, so the eco-tourism in the third pole region may be restricted by socio-economic factors. Considering the current situation of tourism environment carrying capacity in the third polar region, we should take nature protection as the premise, strengthen the construction of tourism market, obtain the support and

recognition of the residents of the reserve, and further improve the construction of corresponding laws and regulations. It requires the cooperation of relevant decision-making departments of the government, local residents and common people to build the sustainable development pattern of the third pole ecotourism.

6. Research Prospects

Environmental carrying capacity is an important indicator to measure the coordination between human social economic activities and the environment, as well as an important approach and method to evaluate sustainable economic development. At present, the research of environmental carrying capacity has not formed the recognized theoretical system, the lack of objective, scientific and systematic comprehensive evaluation model. This paper studies the sustainable development of eco-tourism in the third pole only from the perspective of environmental carrying capacity, which is insufficient for the practical application of how to coordinate the relationship between social economic development and environment. In the future, with the more perfect research theory system, the application of computer, geographic remote sensing technology, environmental carrying capacity research will be operable and practical development, better guide human social and economic activities. As human beings attach importance to the ecological environment, with scientific environmental carrying capacity system guidance, the sustainable and high-quality development of ecotourism in the third pole region.

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Note

Note 1. According to the author's statistics, the total area of Qinghai Province and Tibet Autonomous Region reaches 1.9494 million square kilometers, accounting for 81.23% of the entire Qinghai-Tibet Plateau. Major 5A scenic spots on the Qinghai-Tibet Plateau, such as Qinghai Lake, Potala Palace, Jokhang Temple, Basongtsok Temple, and Tar Er Temple, are equally located in the two provinces.

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