

Investigation and Analysis of the Status Quo of Outdoor Sports along the Sichuan-Tibet Line of National Highway 318

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Abstract: This paper studies the outdoor sports along the Sichuan-Tibet Line of National Highway 318 by means of interviews and on-the-spot investigation respectively from such sports events as hiking, cycling, self-driving tour, mountain climbing, water swimming and rafting, ice and snow, etc., and figures out the shortcomings and existing problems, in a bid to upgrade the quality and influence of outdoor sports on Sichuan-Tibet Line and offer theoretical reference for future research on outdoor sports along the Sichuan-Tibet Line.

Keywords: National Highway 318; Sichuan-Tibet Line; Outdoor Sports; Cycling; Self-driving Tour

1. Introduction

The Sichuan-Tibet Line (i.e. the Sichuan-Tibet Section) on China's National Highway 318 is abundant in outdoor sports resources on land and water. A large part of the modern Sichuan-Tibet Highway is along the Ancient Tea-Horse Road in history, which is the collective name of Sichuan-Xikang Highway and Xikang-Tibet Highway. Built in 1930s, Sichuan-Xikang Highway was an inter-provincial highway from Chengdu to Ya'an, then the capital of Xikang Province. Under the special historical background conditions and for other reasons at that time, the Xikang-Tibet Highway from Ya'an to Lhasa began to be built in 1951, and the whole line was opened to traffic in 1958. After Xikang was withdrawn from the province, the two roads were collectively referred to as Sichuan-Tibet Highway. After Xikang was withdrawn from the province, the latter two roads were called Sichuan-Tibet Highway. The Sichuan-Tibet Line of National Highway 318 is the "most beautiful landscape avenue" in World Geographic magazine, also known as the "South Sichuan-Tibet Line" relative to the National Highway 317. National Highway 318 starts from Shanghai People's Square in the east, passes through Jiangsu, Zhejiang, Anhui, Hubei, Chongqing and Sichuan, then Chengdu, the gateway to Sichuan and Tibet, and ends at Youyi Bridge in Zhangmu Town, Niela County, Tibet in the west, with a total length of 5,476 kilometers. The Sichuan-Tibet Line is 2,142 kilometers long, and it is the longest national road in China at present; besides, it is a famous landscape corridor and cultural blending corridor with the steepest terrain, the richest landscape and the most diverse cultures in China and even in the world [1], as displayed in Figure 1 and Figure 2. The National Highway 318 spans the east and west, enjoying the favorable reputation of "different days in a hundred miles, four seasons in a day", and is rich in resources, such as glaciers, snow-capped mountains, forests, grasslands, exotic flowers and plants, mountains, rivers, lakes, birds and beasts, and cultural landscapes, which are chiefly concentrated on the Sichuan-Tibet Line, offering conditions for abundant species along the line.



Figure 1: Full Map of National Highway 318



Figure 2: Sichuan-Tibet Line Route Map

Currently, the research on National Highway 318 chiefly places emphasis on photography, tourists, tourism, leisure sports, road safety, geological and meteorological disasters, and the like, while it is obviously insufficient in terms of the research from the point of view of outdoor sports, principally concentrating on the travel notes of riding, hiking, self-driving tour as well as other aspects. However, there are abundant outdoor sports resources on the Sichuan-Tibet Line, so it is extremely urgent to launch more research on outdoor sports along the Sichuan-Tibet Line of National Highway 318. By deeply exploiting the outdoor sports resources of this section, the researchers probes into outdoor sports suitable for the Sichuan-Tibet Line and builds distinctive brands of outdoor sports to raise the popularity of the Sichuan-Tibet Line at home and abroad, with an ultimate view to stimulate the construction of spiritual and material civilization along the line and push forward the local economic development.

2. Status Quo of Outdoor Sports along Sichuan-Tibet Line

The whole journey of the South Sichuan-Tibet Line is about 2142 km, and the driving route is as follows: Chengdu → Ya'an → Tianquan → Luding → Kangding → Xinduqiao → Yajiang → Litang → Batang → Zhubalong → Mangkang → Zuogong → Banda → Basu → Ranwu → Shangchayu → Bomi → Tongmai → Linzhi → Bayi → Gongbujiangda → Mozhugongka → Lhasa → Zhangmu Town.

2.1 Research on Outdoor Hiking

With the development of society and the improvement of people's awareness of fitness, outdoor hiking has become one of the ways for Chinese urban residents to realize low-carbon life and an important force for the sustainable development of building a harmonious society. Outdoor hiking, hikers are also known as "Backpackers" and have the passion to travel outdoors when they decide to travel. Outdoor hiking is different from outdoor walking. It belongs to the category of outdoor sports, while walking belongs to the category of leisure life. Outdoor hiking generally refers to the long-term and long-term sports in mountain areas, forests, highways, rivers, grasslands, etc., which need professional knowledge as support, have certain requirements for equipment, and require higher physical quality of participants than walking people. Walking is a kind of leisure way for the common people after tea and meals, with small amount of exercise and short driving distance. Generally, walking is mainly around the living area, and the requirements for equipment, body and professional knowledge are not high.

The field investigation on the Sichuan-Tibet Line of National Highway 318 demonstrates that the Sichuan-Tibet Line enjoys the laudatory name of "The Most Beautiful Landscape Avenue", and the roads along the line are smooth, which is highly suitable for hiking, such as the round-the-city race in Kangding. The participants of outdoor hiking along the Sichuan-Tibet Line are from northeast, north, east, central, south, southwest and northwest. Therein, a considerable number of participants come from East China, such as Zhejiang and Jiangsu provinces, which are close to the Yangtze River Delta and economically developed, followed by Sichuan in southwest China, with all of the participants along the Sichuan-Tibet Line, provided with unique geographical location. The occupation analysis is

detailed in Table 1: there are a large number of students, and the best time of outdoor sports along the Sichuan-Tibet Line is in June, July, August and September, among which July and August are the most suitable, which is one of the reasons for the large number of students. Despite that they are not well-off financially, they are determined to challenge themselves; moreover, they have plenty of time, excellent physical quality and can bear hardships and stand hard work. Then, the number of freelancers and retirees is the second largest, which also suggests that hiking along the Sichuan-Tibet Line takes a lot of time. Through interviews, it is known that with regard to organization modes, there are people who act alone, make appointments online, friends around them, organized by communities and clubs, among which friends around them are the majority.

2.2 Research on Outdoor Cycling

Outdoor cycling, also known as riding, is divided into two ways: motorcycle riding and bicycle riding, which is claimed to be the most low-carbon and environmentally friendly lifestyle. Walking on the Sichuan-Tibet Line, you will meet many cyclists along the way, mainly in two periods, the first period is from mid-May to the end of June, and the second period is from the end of August to middle of October. These two seasons have beautiful environment, pleasant climate, abundant products along the way and less geological disasters. During the period from the end of June to the end of August, although the scenery along the route is very beautiful and the river is very imposing, there is more rain in this period, and due to geological reasons along the route, mudslides and landslides are easy to occur and life is in danger at any time. Therefore, people taking part in outdoor sports are not concentrated in this period [2].

Through the investigation and visit to cyclists and cycling hotels, the researcher got the first-hand research materials. Most of the motorcycle riders come from Chongqing, Chengdu and the Yangtze River Delta along National Highway 318, followed by motorcycle cycling enthusiasts in other big cities; Participants not only have rich cycling experience, but also have a certain economic foundation and plenty of time. Most of the occupations are freelancers, leaders of enterprises and institutions, and some are retirees. These people have a higher level of culture. The starting point is to feel the beautiful scenery and cultural landscape of Sichuan-Tibet Line, challenge oneself, and be infected by the surrounding riders. Basically, it is an organized and disciplined trip, starting from the place of life and work. Cyclists: Some of them come from big cities along the Sichuan-Tibet Line, such as Chengdu, while Beijing, Shanghai and Guangzhou have more. Most of the students live and work as freelancers. The students are basically college students. They are not very well off financially, but they have plenty of time, as shown in Table 1. Their main starting point is to feel the beauty of the Sichuan-Tibet Line and the challenges on the way under the influence of the network. People in the cities along the route all started from their residence, and people who do not live along the route basically start from Chengdu.

Table 1: Questionnaire on Cyclists' Occupation (n=170)

Occupation	Number of people	Proportion
Student	48	28.2%
Civil servant	15	8.8%
Government-affiliated institutions	13	7.7%
Corporate	17	10%
Teacher	14	8.3%
Freelancer	21	12.4%
Retired personnel	24	14%
Other occupation	18	10.6%

Remarks: The chart comes from the current situation of Sichuan-Tibet Line cycling

Although there are differences between the two, they still have something in common, such as sufficient preparation, prior access to relevant information, consultation with relevant personnel, frequent outdoor cycling exercises, short-distance riding experience, purchase of professional riding equipments according to their own economic ability, and insurance for riding Sichuan-Tibet Line.

2.3 Research on Outdoor Self-driving Tour

The Sichuan-Tibet Line of National Highway 318, which enjoys a good reputation both at home and abroad, is rich in outdoor sports tourism resources and is "a paradise for self-driving tourists" in China.

From the existing literature, the research on Sichuan-Tibet Line is mainly from the perspective of self-driving tourism. Most of the main research results rely on travel notes or feelings on network media, while others write some travel feelings, touches and notes through some network media, such as microblog, blog, etc. From the websites of relevant periodicals, it can be found that there are few studies on self-driving tours along the Sichuan-Tibet Line from the perspective of professional outdoor sports. This is because with the progress of the society, the development of China's economy, the prosperity of the people, the improvement of the quality of life, the popularization of leisure tourism awareness, the continuous increase in the number of private cars, and the implementation of the national policy of high-speed and free holidays, people have greatly promoted the tourism idea of travelling as they want [3]. This also shows that the awareness of outdoor sports is not very popular in people's life, and the self-driving tour is not involved as an outdoor sports project. It is urgent to study the self-driving tour along the Sichuan-Tibet Line from the perspective of outdoor sports. Through the research, it is found that: Self-driving tours come from a wider range and are not limited to major cities along the National Highway 318 Line, the Yangtze River Delta and the Pearl River Delta. Some participants are from provinces and cities in the north, such as the three northeastern provinces, Shanxi, Inner Mongolia, Shaanxi and other provinces, which are roughly consistent with the research data by Xiongshu [4], as shown in Table 2. According to the interviews, the main group participating in the self-driving tour are all aged between 23 and 60 years old. Male is obviously higher than female, with good economic foundation and ample time. Self-driving tour participants are highly educated and comprehensive, full of curiosity and desire to explore, braver and respect local customs and culture. The Sichuan-Tibet Line self-driving tour has the characteristics of travelling as the passengers want, who is not very familiar with the local tourism information, infrastructure, rescue situation, folk culture and so on. The preparation before departure is not sufficient, such as incomplete warm-keeping equipment, lack of oxygen tanks, carsickness drugs, altitude sickness drugs, etc.

Table 2: Regional Statistics of Self-driving Tourists on Sichuan-Tibet Line

Effective	Frequency	The percentag	Effective percent	Cumulative percentage
Yangtze River Delta region	15	30.0	30.0	30.0
Pearl River Delta region	3	6.0	6.0	36.0
The beijing-tianjin region	6	12.0	12.0	48.0
Other coastal areas	6	12.0	12.0	60.0
Sichuan local	10	20.0	20.0	80.0
In other parts of the	10	20.0	20.0	100.0
A total of	50	100.0	100.0	

Remarks: This Table comes from Xiong Shu's study on the characteristics of self-driving tourists on the Sichuan-Tibet Line of National Highway 318

2.4 Research on Outdoor Aquatic Events

Along the Sichuan-Tibet Line, the geological structure is complex and rises from east to west. Affected by monsoon and reservoirs along the line, there are abundant water resources with numerous mountains, streams, rivers, lakes, hot springs and reservoirs. However, not all water resources are suitable for carrying out outdoor water sports.

There are abundant mountains, rivers, streams as well as a reservoir along the Sichuan-Tibet Line, but most of the mountains, rivers and streams are steep, with many rocks in the streams and rivers and icy rivers, which is not suitable for related water sports. The reservoir covers a wide water area, and it belongs to alpine cold water, with complex bottom environment, insufficiently developed surrounding markets and weak specialized emergency rescue, so there are basically no outdoor sports at the reservoir water.

Hot springs are formed with special geological ability. The hot springs along the Sichuan-Tibet Line are rich in resources and are all located in active seismic zones, i.e. the junction of geological plates. The places having successful exploitation and utilization of hot spring resources include Hailuogou, Erdaoqiao and Zhonggu. They have complete infrastructure, convenient accommodation, convenient transportation and relatively wide swimming pool area, suitable for water polo, swimming games and other water projects.

Although there are many rivers and lakes along the Sichuan-Tibet Line, most of them are located in high altitude areas, or the current is relatively rapid, and many waters are not suitable for carrying out water rafting and other projects. At present, the two well-built rafting sites in Ganzi Prefecture are

Kangding River rafting and Kangding Pingwu River rafting (Kangding River Estuary rafting), which are comprehensive agritainments integrating leisure, food and entertainment. It has convenient transportation, beautiful environment, fresh air, lush vegetation and pleasant scenery. At the same time, they also provide chess and cards, tea tasting, barbecue, fishing, mountaineering, camping, bonfire parties, etc. At the same time, there are also some disadvantages. It is difficult to walk in winter. There is dark ice that is prone to traffic accidents. The river water is very cold all the year round and the freezing time in winter is relatively long.

2.5 Research on Outdoor Ice and Snow Mountain Climbing Project

On this high road, the vast snow-capped mountains and glaciers through the ages are basically marine glaciers, attracting professional mountaineering and ice climbing enthusiasts at home and abroad. Among them, Gongga Mountain, Midui Glacier and Namcha Barwa are the most famous.

Gongga Shan is located in Hailuoguo scenic area. Because the supporting facilities and landscape planning and development of the scenic area are very mature, there is the lowest altitude and most spectacular eternal glacier in camp 4 of the scenic area, which attracts the majority of tourists to visit. At the same time, it also creates favorable conditions for climbing Gongga Mountain, which has attracted people's attention for a long time. For climbers, Gongga Mountain has an unparalleled attraction, and therefore it has won the reputation of "King of Mountains". As a high-altitude technical peak, the main peak of Gongga Mountain is much more difficult than Mount Everest. From 1932, when Americans Terris Moore and Richard Burdsall first climbed Gongga Mountain, to 2002, when French Antoine and Laurent climbed the traditional route along the northwest ridge of the western slope, in 70 years, only 24 people successfully climbed the mountain, but 37 people died during and after climbing. This does not affect the impression of Gongga Mountain in people's minds at all. At the same time, Nama Peak, one of his side peaks, is 5,588 meters above sea level and is considered to be the easiest of the peaks above 5,500 meters in the Gongga Area, which is extremely attractive [5].

Midui Glacier is the most important marine glacier in Tibet, and it is also the closest glacier to the village. Because of the low snow line, there are animals such as frozen earthworms living there. The snow mountain has beautiful scenery and graceful shape. Tibetan residents live at the foot of the mountain with flocks of cattle and sheep. It has been rated as one of the "six most beautiful glaciers in China" by Chinese National Geography and is an ideal place to climb. Due to the difficulty in ensuring supplies at higher altitudes and the complex climate, it is difficult to attract professional climbers. It is indeed a good place for adventure tourism.

Namcha Barwa is very famous in the mountaineering field and is the yearning place of professional mountaineers. On October 30, 1992, 11 members of the Sino-Japanese joint mountaineering team successfully climbed Namcha Barwa, the highest mountain that mankind has never conquered. Although the snow mountain is indomitable, magnificent and extraordinary, it is limited by geographical location and other factors, and its development level is not high.

3. Existing Problems and Deficiencies

Although the scenery along the Sichuan-Tibet Line is beautiful, bountiful in natural resources and strong in humanistic atmosphere, it has the title of "The Most Beautiful Landscape Avenue" and enjoys a reputation at home and abroad, but it has great deficiencies in the characteristics promotion of Sichuan-Tibet Line tourism, outdoor sports, leisure sports, etc.

The positioning of brand projects is too single and the thinking is not broad enough. 318 Sichuan-Tibet Line is so famous because of its special geographical location. The Sichuan-Tibet Line has a long span from east to west, passes through multi-ethnic areas, and has rich natural and cultural landscapes along the line. However, there are not many people who participate in feeling the 318 Section of the Sichuan-Tibet Line. The public's understanding of the Sichuan-Tibet Line is mainly through watching the pictures of tourists on the network, and the purpose of the participants is mainly tourism. This clearly shows that tourism has become the main purpose of mass participation, while the purpose of outdoor sports, adventure tourism and leisure sports is obviously insufficient. According to the actual investigation, this is indeed the case, such as Hailuoguo, Mugecuo, Kangding City, Xinduqiao and Tagong Grassland, there are a large number of tourists coming to visit.

The development of natural landscape and cultural landscape along the Sichuan-Tibet Line is much too concentrated and deviated. This is chiefly embodied in the line from Ya'an to Kangding, such as

Kangding Love Song City and Luding County, a famous red city, which are dominated by cultural landscapes, all on the Line 318, and besides, Hailuoguo, Zheduo Mountain and nearby Tagong Grassland and Xinduqiao are also on the Line 318, without deviating from the line, provided with convenient and complete facilities such as transportation, accommodation, catering and mobile payment, and it has been developed to a high degree. These scenic spots are relatively concentrated, with convenient traffic and adjacent to the expressways and airports. Some areas, such as Litang, Yajiang, Bomi County, Linzhi, Basu County, etc., also enjoy superior natural and cultural landscapes. However, for the reasons of high altitude, poorly-developed economy, weak infrastructure, and remote distance from highway and airports, it is obvious that natural and cultural landscapes have not yet been developed to an insufficient extent, which seriously influences the development of tourism, outdoor sports and leisure sports.

The personal safety, road safety, emergency rescue and safeguard measures along the Sichuan-Tibet Line cannot keep up with the development of the times. With the development and progress of social economy, due to the quickening pace of life in big cities and the great pressure of people's work and life, more and more people will go out of the big cities and take outdoor activities, which brings opportunities for the development of Sichuan-Tibet Line. Due to the negative effects of many well-known scenic spots, such as blackmail of customers and exaggerated publicity, the development of Sichuan-Tibet Line has also been challenged. However, due to the large span between the east and the west, the Sichuan-Tibet Line passes through different geological areas, and its geological structure is complex. Along the line, there are often geological disasters such as falling rocks, landslides, collapses, mudslides and so on. Although the protection of roads along the route is strengthened, unpredictable disasters are difficult to ensure road safety and seriously affect the personal and property safety of tourists. The Sichuan-Tibet Line is also characterized by relatively large surface, more narrow bends, too sharp turns, large ups and downs, and a large number of vehicles. In addition, due to its high altitude, it is easy to generate hidden ice in winter, which is easy to cause traffic accidents.

Enormous differences exist between ethnic culture and regional economy, and obstacles are visible in language communication. National Highway 318 spans east and west, with a total length of 5,476 kilometers, while the Sichuan-Tibet Line is 2,142 kilometers long. It is the longest national highway in China. Currently, a famous landscape corridor and cultural blending corridor with the steepest terrain, the richest landscape and the most diverse cultures in China and even in the world. Besides, it is also a region with highly developed social economy and culture in the east that transitions to a region with lagging economic and cultural development in the west, and a region with a gradual transition from a gathering place of Han people to a gathering place of Tibetan people. There exist enormous differences in the understanding of economy, society and culture, national customs and living habits, as well as religious beliefs, and in even more serious cases, differences in languages, ranging from common areas of Putonghua to areas of local dialects and then to areas of pure Tibetan. This has severely impeded the communication between participants and local people, particularly with respect to language, and tremendously influenced the economic and cultural development along the line, especially along the Sichuan-Tibet Line.

4. Conclusion

The Sichuan-Tibet Line of National Highway 318 is in extremely bountiful supply of outdoor sports resources, and enjoys the reputation of "The Most Beautiful Landscape Avenue" and "the Paradise of Self-driving Tour Enthusiasts". However, outdoor sports resources along the Sichuan-Tibet Line are not developed or utilized to a full degree, and there are serious deficiencies in the development and research of outdoor sports such as hiking, cycling, self-driving tour, mountain climbing, water swimming and drifting, snow-ice. Apart from that, the positioning of brand projects is biased, regional development is too concentrated, related security facilities are not able to keep up with the development of the times, and the economic and cultural differences between the east and the west are wide, which are also the principle reasons that restrict the development of the Sichuan-Tibet Line. Only by addressing the above-mentioned problems and making overall plans can we develop outdoor sports along the Sichuan-Tibet Line, enhance the popularity of National Highway 318 and boost the stable development of economy, society and culture along the Sichuan-Tibet Line in a more efficient manner.

Acknowledgements

This paper is the phased achievement of Sichuan University for Nationalities' 2019 self-organized

scientific research project named Research on the Value and Transformation of Sports Tourism Resources Development in Ganzi Tibetan Areas in the Revitalization of Regional Villages (Project No.: XYZB19033SB).

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