

# Study on Ice and Snow Tourism Development Strategies in Changbai Mountain Nature Reserve\*

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**Abstract**—In recent years, the country has been vigorously advocating the ice-snow campaign and attaching importance to the ice-snow tourism industry. In response, the tourism has also become more and more popular with tourists. This paper expounds the development status of ice and snow tourism in Changbai Mountain Nature Reserve, applies SWOT analysis method, to put forward the strategy for the development of ice and snow tourism in Changbai Mountain accordingly.

**Keywords**—Changbai Mountain; ice and snow tourism; SWOT analysis

## I. INTRODUCTION

With the development of ice and snow tourism, the ice and snow tourism industry in some developed countries in Europe and America has established a perfect industry system and is in a mature period with very complete conditions. However, the development of ice tourism in China is still at an early stage of rapid development. Although there is still a gap from the world's advanced level, it has a promising future and is a sunrise industry. The snow and ice tourism resources in Jilin Province are unique, especially the snow and ice tourism in the Changbai Mountain Nature Reserve is second to none. How to use advantageous resources to promote economic development is worth studying.

## II. AN OVERVIEW OF ICE AND SNOW TOURISM

### A. The Concept of Ice and Snow Tourism

Ice-snow tourism belongs to the category of eco-tourism. It is a general term for all types of tourism activities that are based on ice-snow climate tourism resources as the main tourist attraction to appeal to experience the cultural connotation of ice and snow. At present, there is no strict definition of ice and snow tourism in the international

theoretical session. With English name of Ice and snow tourism", it can also be simply understood as a series of tourist activities that tourists carry out around the ice and snow.

### B. Characteristics of Ice and Snow Tourism

1) *Regionalism*: The essential tourist attraction for ice and snow tourism is ice and snow, while the formation of ice and snow is mainly affected by geographical factors. From the map, good ice and snow resources are mainly concentrated in the area between 40 degrees and 60 degrees. There are abundant ice and snow resources in the frigid zone, but the climate is extremely cold, which is not conducive to the development of leisure and holiday type tourism activities. Besides, terrain factors also restrict the development of ice and snow tourism. Even if there are abundant snow and ice resources, the area does not have suitable terrain conditions, for example, there is no slope suitable mountain, then it is impossible to develop ice and snow tourism.

2) *Seasonality*: Most tourists will choose ice and snow tourism in winter, and the best opening time for ice and snow tourism is also in winter. For example, the most suitable time for ice and snow tourism in the northern hemisphere is from November to January of next year. In addition, the seasonal fluctuation of tourist numbers will bring challenges to the reception and management of the scenic spots. The reception task in the busy season is heavy and the resources in the off-season are easy to be idle.

3) *Participatory*: This feature is determined by the origin of the ice and snow tourism, because the earliest people had to engage in daily activities in the snow and ice. Nowadays, in order to let tourists feel the fun of ice and snow tourism, the scenic spot will develop various ice and snow entertainment projects, such as ice slides, snow football, ice bikes, etc. to attract the participation of tourists themselves.

4) *Body building*: Skiing and skating is an indispensable part of ice and snow tourism. For people who have been

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living in a highly stressed and fast-paced environment for a long time, physical activity in a unique ice and snow environment can not only enhance physical fitness, strengthen physical fitness, but also achieve the purpose of relaxing and restoring physical strength and energy.

### III. OVERVIEW ON THE DEVELOPMENT OF CHANGBAI MOUNTAIN ICE AND SNOW TOURISM

#### A. *The Status of Ice and Snow Tourism Development in Changbai Mountain*

Changbai Mountain refers to the Changbai Ranges in a broad sense, spanning the three northeastern provinces and North Korea and Russia. The Changbai Mountains mentioned in this article are in the narrow sense, referring to the Changbai Mountain Nature Reserve in the southeast of Jilin Province. Changbai Mountain is located at 42 degrees north latitude, which belongs to the golden snow belt of the world. For the Winter Olympic Games, there have been 23 sessions, of which 14 were held in the golden snow belt. Therefore, the development of ice and snow tourism in Changbai Mountain has its inherent advantages. In addition, it has a long snowfall and the snowy days can reach for half a year with a large amount of snow. The depth of accumulated snow will be up to more than one meter while the number of snow days will be more than eight months. Second, the snow quality is good. The quality of snow in Changbai Mountain is almost optimal at home, and the ice and snow resources have already reached the international level of development. Finally, the mountainous landscape of Changbai Mountain is particularly suitable for the development of ski resorts with international standards.

The unique natural conditions of Changbai Mountain lays the foundation for the development of ice and snow tourism, and provides a natural venue for passengers to engage in skiing and ice-snow activities. Visitors to Changbai Mountain can experience the unique charm of ice and snow sports, as well as various kinds of ice and snow sculptures, and unique haze spectacle in the Northeast. In recent years, Changbai Mountain has firmly seized the opportunity of the times and built a large number of ice and snow tourism projects around Changbai Mountain. It has made it a goal to become a world-famous ice-snow tourist destination and has been vigorously promoting the development of ice and snow tourism in Changbai Mountain.

Wanda Changbai Mountain Resort has a total investment of 23 billion yuan. It was officially put into use in 2012 and has received collectively a total of 1.5 million domestic and foreign tourists. Among them, Changbai Mountain International Resort Ski Resort is a favorite place for many ski professionals. It is located at 41 degrees north latitude and is known as the gold latitude of entertainment snow. Because of its superior geographical environment and suitable temperature and humidity, the snow is loose and flocculent, making it a "windless and warm" bay-type ski resort. There are 43 ski slopes with a total length of 30 kilometers, and everything from the magic carpet experience zone to the wild snow senior road is fully available.

In order to improve the quality of winter ice and snow tourism in Changbai Mountain and enhance the experience and participation of winter ice and snow tourism in Changbai Mountain, the Mountain has completed a series of resources development around the core of the scenic area and perfected part of the supporting service facilities. In the north area, ice and snow art projects including ice and snow sightseeing, ice sculpture and snow sculpture exhibition have been carried out while in the west area, experience projects such as recreational snow parks and snowmobile crossings have been built. These measures have further enriched the content of ice and snow tourism in the major scenic spots of Changbai Mountain and also enhanced their competitiveness.

#### B. *Problems Existing in Snow And Ice Tourism in Changbai Mountain*

Changbai Mountain ice-snow tourism is still in its development stage. Although it has achieved certain results, it should still be noted that there are some problems in the Changbai Mountain ice-snow tourism.

1) *Unreasonable structure of tourism resources, lack of depth and cultural content of products:* Changbai Mountain's natural tourism resources are of good quality, but the travel products that rely on nature heavily have not deeply explored the cultural connotation of tourism, and have not integrated the culture of ethnic minorities with features into the ice and snow tourism. The lack of high-quality tourism and cultural products can easily lead to irrational development structure of tourism resources in Changbai Mountain. At present, there are still many distance from Changbai Mountain to become a mature tourist destination with the integration of ice, snow, sports, holidays, folklore and ecology.

2) *Insufficient propaganda, lack of brand maintenance, low brand awareness:* Changbai Mountain's propaganda on ice and snow travel brands is not enough, and it lack of corresponding brand maintenance in the later period. Moreover, the propaganda approach is simple. It does not cater to the trend, and fails to make good use of the network and other modern propaganda methods. In addition, the propaganda of the snow and ice tourism resources of Changbai Mountain does not highlight the characteristics and charm, which makes the image of the tourist project is not clear and lack of creativity, resulting in unsatisfactory publicity and higher alternatives of Changbai Mountain. Changbai Mountain's snow and ice tourism development time is not long, so that its ice and snow tourism brand is not well-known without very obvious advantages. There is still a long way to go for Changbai Mountain to become a well-known international ice and snow travel brand in China.

3) *Poor traffic restricts development:* Changbai Mountain is located in the southeastern part of Jilin Province, with a remote location and poor accessibility. At present, it is still not absolutely complete with multiple and convenient three-dimensional transportation networks. In the six major elements of tourism, food, lodging, transportation, travel, shopping and entertainment, transportation plays an important

role. The convenience and comfort of it will greatly affect the attractiveness of the scenic spot and the satisfaction of the tourists.

Taking the north area as an example, in the external traffic, tourists will choose land and airways from the starting point to the destination. Road traffic in the land has been greatly improved in recent years. The highway shortens the time for traveling by car. However, most of the ice and snow tourism is in winter, and the low temperature will lead to complicated road conditions. If you choose the railway way, you need to take the train to Baihe station. Not only does the station have fewer trains, but the comfort of the train is lower and the level of service staff on the train is not high. In addition, it takes a long time from Baihe Station to nearby cities such as Harbin, Changchun, Tonghua, and Yanji, and it often requires reversing cars. As for aviation, it is not as convenient as imagined. Changbaishan Airport is located in Songjianghe Town of Fusong County, about 120 kilometers away from the Changbai Mountain North Scenic Area. It is not convenient to choose a plane to visit the Changbai Mountain North Scenic Area. At present, Baishan Airport is already in the planning stage. After it is put into use in the future, it will be a good thing for passengers who fly to the North Slope to play.

*4) The service level still needs to be improved, the supporting facilities are not perfect, and the supervision of scenic spots is not enough:* In recent years, with the rapid development of China's tourism market, the demand for tourists has become higher and higher, which has a higher demand for scenic spots. At present, there are still problems such as inadequate service facilities, non-standard service systems, and unmatched service personnel. The specific performances are: severe aging led by lacking of maintenance of facilities and equipment, management and maintenance; the quality of some service personnel is not high; the lack of professional management personnel leads to the overall quality of service is not satisfactory. If tourists are not provided with high-quality services during the tourism process, they will have low reduce satisfaction, causing bad word-of-mouth effects, and damaging the image of snow and ice tourism in Changbai Mountain.

#### IV. SWOT ANALYSIS OF ICE AND SNOW TOURISM IN CHANGBAI MOUNTAIN

##### A. Advantage Analysis

The main advantage of Changbai Mountain is its unique natural resources. Changbai Mountain is located at 42 degrees north latitude, which is belong to the golden snow belt of the world with abundant snow source in winter, the long ice season and the snow of good quality. Moreover, there is no pollution on ice rink. The conditions of the Changbai Mountain are suitable for skiing, especially the southern foothills of Changbai Mountain with the deep development conditions of the international skiing field. It belongs to the best ice and snow development area in China. Because of its latitude and altitude, Changbai Mountain is below zero for a long time, making winter ice and snow resources available for long-term preservation, which provides necessary conditions

for the development of ice and snow tourism, and prolongs the window period of ice and snow tourism.

In the Changbai Mountain region, including Baishan City and Yanbian Korean Autonomous Prefecture, the local people have long been accompanied by ice and snow for production and life, breeding a traditional national ice and snow culture with rich ethnic characteristics and Guandong customs, and forming a variety of ice and snow festivals and celebrations, such as photography art exhibition of ice and snow tourism theme, ice sports meeting, ice lantern garden party, ice sculpture and snow sculpture exhibition and a series of ice and snow entertainment activities. They attract people from all over the world to experience snow and ice culture in the Changbai Mountain area and carry out ice and snow tourism.

##### B. Disadvantage Analysis

At present, the products of Changbai Mountain's ice and snow tourism are not rich enough, and the sightseeing products still dominate. In addition, the artistic innovation of the product is not yet sufficient. It fails to dig into the unique cultural characteristics of Changbai Mountain. For example, ice lights mostly are just decorated by simple neon lights, ice sculptures are mostly common and famous buildings, and their contents and forms are far from innovation. If the unique cultural connotation of the Changbai Mountain area is not well exhibited, it will be very difficult for tourists to have a sense of cultural identity.

##### C. Opportunity Analysis

Under the background of the country's proposal for 300 million people to participate in the snow and ice sports, China's ice and snow sports have ushered in a good development window, which also provides ice and snow tourism with a good opportunity for development. In addition, Jilin Province has promulgated the first ice and snow industry document issued by China in the name of the Party Committee, the "Implementation Opinions on the Bigger and Stronger Ice and Snow Industry", which is also China's first document that comprehensively and systematically explains the ice and snow tourism industry. The document proposes that Jilin should be built into a world-class ice and snow tourism destination, so that the ice and snow industry will become a strategic pillar industry that will propel the rejuvenation of Jilin's old industrial base. In recent years, the state put forward the slogan of revitalizing the Northeast China and gave considerable support in policy. For example, the State encourages the northeast region to develop ice and snow tourism, improves traffic in Northeast China, and gives tax reduction. Thanks to the promotion and guidance of policies, ice and snow sports and ice and snow tourism have naturally become the "tuyere" of current investment, which provides tremendous opportunities for the rapid development of snow and ice tourism in Changbai Mountain.

##### D. Challenge Analysis

Although ice and snow tourism are increasingly favored by tourists, the competition in the ice and snow market is also becoming increasingly fierce. The first challenge is from the



province of Harbin and Liaoning. Today, the three northeastern provinces are vigorously developing ice and snow tourism. Changbai Mountain will more or less compete with the snow and ice tourism project in Harbin and Liaoning. With the advancement of science and technology, some domestic economically developed cities have begun to create artificial snow field tourism projects indoors to attract tourists. For example, Guangzhou and Shenzhen are planning to build indoor ice and snow entertainment facilities, breaking the geographical and climatic constraints, which will, to a certain extent, reduce the attractiveness of ice and snow scenic areas in other places. Secondly, Chongli has been chosen as the main ski venue for the Winter Olympics because of the successful bid for the Beijing Olympic Winter Games. Therefore, its ice-snow sports facilities are relatively high-end and internationalized. What's more, its ice and snow infrastructure has gradually improved, the degree of traffic access is relatively high and the traffic accessibility is better than Changbai Mountain, making the ice and snow tourism market in the region more attractive. Inner Mongolia, Xinjiang and other places in the western region also have conditions for ice and snow tourism development. However, due to their lack of market influence and ease of tourism, the scale and passenger flow of tourism development are small, but they also have great potential for development.

#### V. THE STRATEGY OF DEEP DEVELOPMENT OF ICE AND SNOW TOURISM IN CHANGBAI MOUNTAIN

##### *A. To Innovate and Integrate Products, and Add Cultural Elements*

Ice and snow tourism products need to be diversified. The development of tourism resources must be accompanied by innovation. It's necessary to make use of the existing resource conditions of Changbai Mountain to carry out integrated development. While creating innovative products such as ice and snow plus hot springs, ice and snow plus sports, can integrate the ancient ginseng culture, wine culture, and hunting culture of Changbai Mountain can be integrated and then, the local ethnic minority cultures such as the Manchu Koreans also can be added, which not only can enrich tourism. product content, but also enhance the participation and interests of ice and snow activities; not only allow visitors to fully experience the fun of ice and snow activities, cultivate temperament, and enhance taste, but also allow visitors to experience the rich folk culture and ethnic customs in the ice tour; not only infuse cultural elements and enrich the tourism connotation, but also increase the irreplaceability of Changbai Mountain.

In the future development, Changbai Mountain Scenic Area should constantly improve the comprehensive tourism and leisure product system. It should mainly promote ice and snow deep holiday products, make ice and snow plus hot spring health care products fine, innovate ice and snow sightseeing products and create integration products of ice-snow and folklore-historical culture. It will be better to introduce high-end ice and snow products such as ice-snow hot balloons, high mountain extreme skiing, and helicopter skiing, allowing visitors to play healthily, play with cultures and play comfortably, which help to guide tourism products to a

quality-oriented road, turn Changbai Mountain into a high-end ice and snow destination in the world.

##### *B. To Create Famous Brands of Ice and Snow Tourism and Do Brand Promotion Well*

Changbai Mountain, first of all, should form a distinctive brand image with Changbai Mountain branding in its brand positioning. Changbai Mountain is not only the holy mountain of Manchu, but also the birthplace of the Songhua River. If these historical and cultural elements are integrated into the brand image of the ice and snow tourism, it will not only increase the mystery and attraction of ethnic minorities, but also avoid the appearance of similarities. The ice and snow tourism brand built into the culture is distinctive and unique, and it can also create the independent IP brand for Changbai Mountain Ice-Snow Tourism. At the stage of brand promotion, the scenic spot must adopt a variety of propaganda tactics and make full use of various propaganda resources. It is right to reduce the proportion of traditional methods such as newspapers, magazines, television advertisements, and broadcasting and make more use of Internet communication methods, such as WeChat and Weibo, which are in line with current trends of young people. In addition to airing advertisements and promotional videos of Changbai Mountain Ice and Snow on the TV network, it can also cooperate with reality TV shows of well-known TV stations and invite them to Changbai Mountain to use the star effect for publicity. In addition, the computer mobile game market is very hot today, Changbai Mountain can cooperate with the game party to design the ice and snow scenic spots with characteristics in Changbai Mountain to play in the game and propagate with soft implants. Finally, related parties should do a good job of brand maintenance and brand crisis management, and establish a public relations department that specializes in maintaining Changbai Mountain ice and snow tourism brands. For example, after an incident occurs, the public relations department will handle the incident in the least costly manner and maintain the image of the scenic spot immediately.

##### *C. To Promote Ice-snow Tourism through Festival Events*

Changbai Mountain can undertake a series of ice-snow sports events and use it as a vehicle and medium for propagating ice-snow tourism. This can not only successfully combine sports events with the development of ice and snow tourism, expand the visibility of snow and ice tourism in Changbai Mountain, and achieve publicity purposes, but also can stimulate the enthusiasm of ice and snow enthusiasts and attract the majority of ice and snow sports enthusiasts to participate. Changbai Mountain Scenic Area can actively create ice and snow festival celebrations in conjunction with local folk customs, such as the Ice and Snow Carnival, Ice Sculpture Festival, Ice and Snow Photography Exhibition, Hot Spring Festival, Ice Lantern Festival, Ice Waterfall Festival, and Ice Fishing Festival.

#### D. To Take the Road of Scientific and Sustainable Development and Build A Group of Townships with Ice and Snow Characteristics

Changbai Mountain must adhere to the principles of ecology and protection in the process of developing ice and snow tourism. Under the guidance of the overall planning, the development of scenic spots should be carried out by scientific overall planning and avoid blind exploitation. At the same time, it is necessary to strengthen supervision and management and enforce ecological protection measures to take a sustainable road of ice and snow tourism development and create a green and ecological ice and snow tourism brand. In addition, the development of scenic spots should respect the natural conditions and environmental status of Changbai Mountain and highlight the local culture and history of Changbai Mountain itself. By introducing social capital, integrating characteristic resources and exploring the integration of Changbai Mountain ice and snow town through the market operation to create a unique ice and snow tourist town group in Changbai Mountain district, the identification of ice and snow tourism in Changbai Mountain can be improved. It is possible to build a ring-shaped town group centered on Tianchi. Among them, there are a number of small towns that incorporate ice and snow characteristics into each of them to build each town's design into a boutique ice and snow specialty town with different characteristics. Then, through the highway around the mountains, these points will be connected in series. These points will turn into a line, then a plane, forming a town tourist area with the most beautiful ice and snow features.

#### E. To Strengthen Management and Reserve of Talents and Improve Service Quality

The key to the overall improvement of the level of tourism reception services lies in the training and reserve of professional talents. Therefore, if Changbai Mountain Ice and Snow brand wants to be competitive, it must have a group of high-quality professional management innovation talents. On the one hand, Changbai Mountain can establish cooperation mechanisms with colleges and universities to directionally train tourism professionals. On the other hand, scenic spots can employ domestic and overseas ice and snow tourism professionals to provide tutoring for existing tourism professionals in Changbai Mountain. Through the study and communication, they will strengthen their ability to accept new things such as advanced theories, and keep their service concepts and service levels closely in line with international standards. In addition, it is also possible to recruit a large number of ski professionals trained in professional courses to take charge of the security work and to strengthen the protection of visitors during snow and ice activities. For grassroots service reception staff in Changbai Mountain, it is necessary to actively conduct business training for them and improve their overall service level. At the same time, the upgrading and maintenance of the existing facilities and equipment in the scenic spot should be strengthened, and the transportation infrastructure in the area around Changbai Mountain as well as a series of supporting facilities such as hospitals and hotels should be improved.

## VI. CONCLUSION

Under the premise that the snow and ice tourism development in Changbai Mountain has achieved certain results, through the further integration of the existing ice and snow tourism resources and the in-depth development of ice and snow tourism, it is believed that visitors who come to experience ice and snow tourism can get a better ice and snow tourism experience. It is expected that Changbai Mountain will become an ice and snow tourist attraction both inside and outside China in the future, realizing its economic Value.

## REFERENCES

- [1] Jiaqian Zhang. Study on the Management of Ice and Snow Tourism Brands in Jilin Province[J].Statistics and Management,2017(05) 张佳倩.吉林省冰雪旅游品牌的管理研究[J].统计与管理,2017(05)
- [2] Mingju Liu, et al. Study on the Sustainable Development of Tourism in North Changbai Mountain Scenic Area [J].Tax and Economy, 2015 (5) 刘明菊等.长白山北景区旅游可持续发展研究[J].税务与经济, 2015 (5)
- [3] Mingju Liu, et al. Study on Changbai Mountain North Scenic Spot Tourism Development Status and Countermeasures [J].Green Technology, 2015 (1) 刘明菊等.长白山北景区旅游发展现状及对策研究[J].绿色科技, 2015(1)
- [4] Mingju Liu, Yuan Fang.Some Reflections on the Study of Tourism Resources [J].Tax and Economy, 2016 (1) 刘明菊, 袁方.关于旅游资源研究的几点思考[J].税务与经济, 2016 (1)
- [5] "White Snow for Silver" Jilin Province Promotes the Development of Ice and Snow Industry at Full Speed [N].China Tourism News,2016-10-10(A06). "白雪换白银" 吉林省全速推进冰雪产业发展[N]. 中国旅游报,2016-10-10(A06).