RMP Analysis of Ecological Sports Tourism Development in Shanxi Section of the Yellow River Basin

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Abstract: 'Sports+' is a hot research field in academia. It is not only a new way of sports consumption, but also an economic development mode that takes into account the characteristics of sports and tourism. Sports tourism is being accepted by more and more people. Taking tourism as the basic condition of development and sports as the expansion of value added content, the concept of ‘sports+’ is comprehensively sublimated, which not only increases the connotation of tourism, but also further expands the research scope of sports. Based on RMP theory, this paper studies and evaluates the ecological sports tourism resources in Shanxi section of the Yellow River Basin through three paths of resource, market and product. The spatial pattern of sports tourism participants and their preferences and innovative products are analyzed to further study the compound training mode of sports talents. Suggestions for the high-quality development of the Yellow River Basin and the foundation for building the regional characteristics of the Shanxi section of the Yellow River Basin and cultivating global tourism. At the same time, it created the conditions for the integration of sports tourism resources, and provided suggestions from the perspective of sports science for the protection and development of ecological environment in Shanxi.

Keywords: The Yellow River, RMP Theory, Ecological Sports Tourism, Shanxi

As the mother river of China, the Yellow River has a very clear geographical and cultural concept. The Yellow River is the second longest river in China, with a total length of about 5464 kilometers and a basin area of 752443 square kilometers. The Yellow River originated in the Maqu of the Yueguzonglie Basin in the northern foot of the Bayankala Mountains in Qinghai Tibet Plateau. From west to east, it flows through Qinghai, Sichuan, Gansu, Ningxia, Inner Mongolia, Shaanxi, Shanxi, Henan and Shandong provinces, and finally flows into the Bohai Sea. The Yellow River basin spans nine provinces and regions. The total land area accounts for 37 % of the country and the regional population accounts for 31 % of the country[1]. The Yellow River enters Laoniuwan, Wanjiazhai Town, Pianguan County, Xinzhou City, Shanxi Province from the north, and flows slowly and rapidly. It flows to Fengling of Ruicheng County, and then turns eastward. It flows to Nianpangou of Yuanqu County, and flows through 560 villages in 19 counties of 4 cities in Shanxi Province. The flow within the region reaches 965 km (Figure 1). The Yellow River Basin in Shanxi Province has a broad and splendid connotation, a long history, rich cultural heritage and rich and colorful resources. It provides the basis and guarantee for the construction of the Yellow River national tourism base, building a global tourism demonstration point, promoting the integration and development of sports industry and tourism industry, cultivating sports tourism quality projects and routes and the development of various tourism activities. It provides the foundation and guarantee for the construction of national tourism base of the Yellow River, the construction of all-region tourism demonstration site, the promotion of the integrated development of sports industry and tourism industry, the cultivation of high-quality sports tourism projects and routes and the development of various tourism activities.

In recent years, with the rapid and stable development of China’s social economy and the continuous improvement of people’s living standards. The vigorous development of sports, people’s growing awareness of fitness, sports fitness, entertainment, watching all kinds of athletics and try to stimulate sports and challenges for the purpose of sports tourism activities are also developing, and gradually become a new highlight and focus. With the introduction of a series of documents such as ‘Guidance on Accelerating the Development of Fitness and Leisure Industry’[2], ‘Opinions on Further Expand Consumption in the Field of Health Education and Training for the Aged in Tourism Culture and Sports’[3], the General Office of the State Council, the National Tourism Administration and the General
Administration of Sport of ‘Guidance on Developing Sports Tourism’[4], the development of sports tourism has been greatly accelerated. The report of the Nineteenth National Congress points out that the principal social contradictions in our country have been translated into the contradiction between the growing needs of the people for a better life and unbalanced and inadequate development. At present, China has entered the decisive stage of building a moderately prosperous society in an all-round way. With the increasing demand for diversified sports and tourism and leisure of the people, sports tourism has become an important way of life. The industrial development has formed a certain market scale and achieved certain economic and social benefits. Based on RMP theory, this paper makes a comprehensive analysis of sports tourism resources, market and existing products, trying to provide feasible ideas for the development of ecological sports tourism in the Yellow River Basin of Shanxi Province.

![Figure 1 Flow chart of the Yellow River in Shanxi](image)

1. Research method

This paper mainly adopts the literature material method, questionnaire survey method. A field survey was conducted on key scenic spots in the Yellow River Basin of Shanxi Province, and a questionnaire survey was conducted on local residents and tourists. A total of 1600 questionnaires were distributed and 1600 questionnaires were recovered, of which 1545 were valid, with an effective rate of 96.5 %. There are multiple options in the questionnaire, and the total proportion of individual figures in the paper is more than 100 %, so use ‘frequency’ to express.

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Sports tourism resources are complementary and mutually beneficial to sports resources and tourism resources. It is a natural and social entity that takes sports tourism activities as the natural and social cultural factors to attract tourists, stimulates tourists’ tourism motivation and creates economic, social and ecological benefits for the development of sports tourism.

2.1. Resource Analysis

2.1.1. Shanxi sports tourism resources advantage

Shanxi Province is located in the eastern part of the Loess Plateau, between the Taihang Mountain and the middle reaches of the Yellow River valley, north across the Miannei Great Wall, west and south to the Tao Yellow River as the cutting, east adjacent to the Wei Taihang Mountain, has a long history,
long history, is the main birthplace of the Chinese nation. Shanxi has been known as the ‘situated at the foot of a hill and beside a river’ since ancient times. Almost all the provincial boundaries are surrounded by mountains and rivers. The natural tourism resources in Shanxi are deeply branded by mountains and rivers. From north to south, there are Hengshan Mountain, Wutai Mountain, Xizhou Mountain, Taihang Mountain, Taiyue Mountain and Zhongtiao Mountain in the east. From north to south, there are Caolai Mountain, Hongtao Mountain, Guancen Mountain, Lyliang Mountain, Yunzhong Mountain and Guandi Mountain in the west. There are many rivers in Shanxi Province, the process more than 65 kilometers concurrent from Shanxi about 40. In addition to the Yellow River flowing through the junction of Shanxi and Shaanxi, Shanxi and Henan, the famous rivers also include Fen River, Sushui River, Sanggan River, Zhang River, Qin River, Zhang River, Qin River, Hutuo River, and many large and medium-sized reservoirs. There are many well-preserved ancient Great Walls in the province. Datong’s ‘Five Castles with Side Walls’, Daixian Great Wall and Pingxiang Great Wall are both famous Great Walls outside the Great Wall. In addition, Yanmenguan Pass, Ningwuguan Pass, Pingxiang Pass and Nianziqian Pass are all famous Great Walls outside the Great Wall. They have many wonders along the way and unique folk customs. They are way and unique folk customs. Complicated geographical landforms, hydrology and meteorology, created a magnificent, fascinating natural landscape in Shanxi. The rich and unique folk sports customs, such as folk social fires, walking on stilts, rowing dry boats, prestige gongs and drums, and bright fat and back ice, condense and deposit the ancient sports culture. Wushu, Naiyang, Ai She and other sports with a long history have become the epitome of the ancient culture of Han nationality in northern China. Deep cultural heritage, rich and colorful resources and clear climate in four seasons are the basis and guarantee for the development of sports tourism in Shanxi Province. It also shows the advantages of diversity, ecology, extensiveness, ancientness, richness and potential of sports tourism resources in Shanxi Province. The ecological sports tourism resources in the Yellow River Basin of Shanxi Province are very rich and diverse. According to the resource distribution and classification methods, they can be divided into two categories: natural sports tourism resources and humanistic sports tourism resources, which are further subdivided into water resources, cultural resources, ice and snow resources, competition resources, venues resources, historic resources, folk resources, religious resources and revolution tourism resources (Figure 2 and Table 1).

![Figure 2 Subordination map of ecological sports tourism](image)

<table>
<thead>
<tr>
<th>Category</th>
<th>Basic types and names</th>
<th>Suitable projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water body resources</td>
<td>Fenhe, Qicun Hot Spring, Hukou Falls, Yuncheng Salt Lake, Shengtian Lake Scenic Area</td>
<td>Boating, Kayaking, Waterplanes, Water motorcycles, Hot springs, Dragon boats, Running around the lake, Cycling around the lake, Drifting, Fishing, etc.</td>
</tr>
<tr>
<td>Land resources</td>
<td>Shanxi - Shaanxi Canyon, Lvliang Mountain, Guancen Mountain, Beiwudang Mountain, Lishan Mountain, Wulaofeng Mountain, Pangquangou, Zhongtiaoshan</td>
<td>Mountaineering, Hiking, Directional crossing, Rock climbing, Parachute jumping, Bungee jumping, Paragliding, Ballooning</td>
</tr>
<tr>
<td>Stadium resources</td>
<td>Xinzhou, Lvliang, Linfen, Yuncheng sports venues</td>
<td>Football, Badminton, Swimming, Basketball, Tennis, Table tennis, Yoga, Aerobics, goal</td>
</tr>
</tbody>
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### 2.1.2. Shanxi sports tourism resources shortage and constraints

Although Shanxi is rich in tourism resources, it is still relatively backward in the development concept of sports tourism industry compared with developed regions. The 5A level scenic spot in Shanxi is only 50 % of that in Henan. The same mountain, Shanxi Wang Mangling scenic investment than Henan Yuntai Mountain, but tourists can not reach 10 % of Yuntai Mountain. The same river, Shanxi Jiunuxian Lake scenic tourist less than 30 % of the Qingtian River scenic are in Henan. The same is Hukou waterfall, Shanxi tourists only 50 % of the other side of Shaanxi, and Shanxi this side of the tourists even more than half from Shaanxi. National tourism has changed from simple scenic spots to three-dimensional and diverse leisure experience tourism. The number of self-driving tours is also increasing year by year, and even some places do not need to spend a lot of money to build scenic spots tourism. For example, Mogan Mountain Homestay, Deqing County, Zhejiang Province, Anji County Tent Hotel, there are no attractions around, the hotel itself is a tourist destination. People’s pursuit is to stay away from the noise of the city, close to the natural experience, a night of expensive accommodation, occupancy rates are above 90 %. Shanxi Province in addition to the lack of coastal sports tourism resources, other sports tourism resources are all available, is a veritable province of sports tourism resources, but the development of sports tourism resources on the weak province. In addition, sports tourism attractions in Shanxi Province are scattered, and there is no multi-level, multi-channel, multi-form, cross-regional, cross-industry, cross-sectoral development, publicity, promotion network and linkage mechanism. The lack of scientific and rational utilization of abundant resources leads to insufficient market influence and attraction.

### 2.2. Market Analysis

At present, the average annual growth rate of the global sports tourism industry is about 15 %, which is the fastest growing segment of the tourism industry. According to the public data of the State Tourism Administration, China’s sports tourism market is growing at a speed of 30 %–40 %, far higher than the average growth rate of the global sports tourism market. In general, the proportion of China’s sports tourism market is 5 %, and that of developed countries is 25 %. There is a significant difference in the sports tourism market (Figure 3). It can be seen from the proportion of differentiation that sports tourism in China is still in its infancy. In the future, with the further deepening of sports tourism integration, the proportion of sports tourism market will continue to increase, and the intersection will become more and more big.
Actively Follow the New Pattern of Socialist New Era Construction of ‘Green Water and Green Mountain Is Gold Mountain and Silver Mountain’ and ‘Harmonious Coexistence of Man and Nature’. Shanxi should carry out regional linkage and effective integration of the existing developed tourist attractions in order to meet the needs of the development of sports tourism market. Through scientific planning and reasonable improvement of the scenic spots under construction and development, while strengthening the dominant factors such as resource utilization, hardware construction and market development, special attention should be paid to the influence of potential recessive factors such as the cognitive level of sports tourism participants, educational background composition, participation projects, selection categories and information acquisition channels on the sports tourism market.

2.2.1. Cognitive analysis

People’s cognition, understanding and participation of Shanxi Yellow River ecological sports tourism have played an important role in the sustainable development of sports tourism market. In the 1545 valid questionnaires, the number of people who understand the Yellow River ecological sports tourism in Shanxi is 477, accounting for 30.88%. Less understanding of the number of 678 people, accounting for 43.88%. The number of people who do not know is 390, accounting for 25.24%. Thus, the respondents of Shanxi Yellow River ecological sports tourism less understanding and do not understand the proportion of 69.12% (Figure 4). This shows that people’s awareness of Shanxi Yellow River ecological sports tourism needs to be further improved, but also reflects the propaganda should be strengthened. The respondents believe that sports tourism can make their body and mind relaxed and satisfied, thus the number of healthy people reached 1537, accounting for 99.48% of the total (Figure 5). When the respondents answered ‘sports tourism will become an important part of healthy life in the future’, there are 1532 people agreed, accounting for 99.15% of the total, indicating that the respondents have a very high demand for health participation in sports tourism, but also indicating that the sports tourism market has great potential for improvement.
2.2.2. Education analysis

The analysis of the respondents’ educational background can help us to correctly understand the main participants of Shanxi Yellow River ecological sports tourism, and the targeted increase conforms to their sports tourism projects and meets their sports tourism needs. Figure 6 shows that the enthusiasm of participating in sports tourism is positively correlated with educational level. Those with higher education background have a higher degree of relative cultural accomplishment. They also have a higher understanding of the choice of life concept, leisure mode, consumption concept and aesthetic taste. Higher education often represents higher income. So this group is the main composition of Shanxi Yellow River ecological sports tourism.

2.2.3. Information acquisition channels

The analysis of the information acquisition channels of respondents can help sports tourism managers to carry out overall management. Help sports tourism enterprises to put advertising. Help sports tourists timely access to relevant information. To meet their sports tourism needs. It can be seen from Figure 7 that the Internet, television, micro-blog and micro-mail, other people’s introductions, newspapers and magazines ranked the top five in all information access channels, accounting for 48.03 %, 45.37 %, 40.84 %, 35.02 %, 19.81 %, respectively. These include new media such as the Internet, micro-blogs and micro-messages, and traditional media such as television, newspapers and magazines, among which the ‘Others’ option is also included. The analysis shows that the information acquisition channels of Shanxi Yellow River ecological sports tourism participants are multi-channel, comprehensive, and even ‘oral transmission’.
2.2.4. Participation in project analysis

Question ‘What types of sports tourism projects have you participated’ is a multi-choice question in the questionnaire, which shows that the most selected fitness sports tourism projects are 1115 times, accounting for 72.17%. Followed by leisure sports tourism projects, the selection frequency was 819 times, accounting for 53.01%. The third is sports tourism projects, the selection frequency is 365 times, accounting for 23.62%. Finally for stimulating sports tourism projects, the selection frequency is 172 times, accounting for 11.13% (Figure 8). The respondents chose more popular and safer items such as cycling, boating and swimming. The reasons for the less selection of projects such as bungee jumping, rock climbing, exploration, gliding and parachute jumping are analyzed. The first is that the project is not popularized. Second, the project has high risk. The third is the higher amount of project consumption.

2.2.5. Category selection analysis

The question ‘which items you are interested in in the following sports tourism projects in Shanxi Province’ is a multi-choice question in the questionnaire. The question ‘which items you are interested in in the following sports tourism projects in Shanxi Province’ is a multi-choice question in the questionnaire. Figure 9 shows that people’s choices are 44.72% of folk culture sports tourism, 44.21% of Taihang Mountain sports tourism, 38.51% of ice and snow sports tourism, 27.7% of event sports tourism, 27.51% of Yellow River hydrological sports tourism, and 24.92% of Great Wall Castle sports tourism.
2.3. Product Analysis

With the growing needs of the people for a better life, sports tourism in Shanxi Province has developed rapidly. The State Tourism Administration and the State General Administration of Sport have established the Shengtian Lake Scenic Area in Ruicheng City, Yuncheng City as the establishment unit of the National Sports Tourism Demonstration Base. The national walking activity around the ancient city of Datong is the ‘national sports tourism quality competition’. Shanxi Province has the advantages of developing ecological sports tourism products of the Yellow River. It is located in the central region of China, connecting the south and the north, connecting the east and the west, adjacent to the Beijing-Tianjin-Hebei metropolitan area, convenient transportation and obvious geographical advantages. The unique location advantages create conditions for accepting the radiation of tourism market in developed economic areas and the input of tourism source in underdeveloped economic areas. Sports tourism has the characteristics of extroversion and openness. It is a highly relevant network industry, which determines that the development and innovation of sports tourism products are difficult to be completed independently. It needs the coordination and cooperation of relevant departments, especially the cooperation between tourism and sports departments. The more income individuals can freely allocate, the greater the current demand for tourism products[5]. In 2015, the per capita disposable income of urban residents in Shanxi Province was CNY 25,828, and that of rural residents was CNY 9454[6]. Strong location advantage and tourism consumption ability provide favorable market space for the development of ecological sports tourism in Shanxi. At the same time, the questionnaire analysis showed that 1150 respondents chose sports tourism as the first choice in Shanxi Province, accounting for 74.43 % of the total (Figure 10). Shanxi sports tourism travel characteristics to the provincial market, taking into account the surrounding provinces. In recent years, the number of domestic and foreign tourists attracted by Shanxi Province has increased year by year, and tourism income has also increased significantly. The abundant tourist market also provides a strong foundation and guarantee for the development of Shanxi Yellow River ecological sports tourism.

Positive and favorable policy guidance will also make Shanxi Yellow River ecological sports tourism get strong promotion and development. Shanxi Province makes full use of its resource advantages in the new round of transformation and development, and strives to build three major tourism brands of the Yellow River, the Great Wall and Taihang. Relying on the unique topography, climate, diet, folk sports culture, medicine and health culture in our province, a number of healthy health tourism cities, sports
towns, health industry parks and resorts are constructed to create cultural sports tourism towns and villages and strengthen the integrated development of cultural sports tourism. Different sports tourism products are constructed according to different needs of sports tourism projects at different ages.

‘Tourism development, traffic first’. Continue to increase the construction mileage of poverty alleviation tourism highways along the Yellow River in Xinzhou City, Lvliang City, Linfen City and Yuncheng City of Shanxi Province, expand the scope of radiation areas, and facilitate transportation, so that the ecological sports tourism of the Yellow River in Shanxi Province will continue to be improved and adjusted in the development process. At the same time, the natural landscape resources, historical and cultural resources along the Yellow River in Shanxi are fully integrated with healthy sports, which makes the Yellow River culture more prominent and actively constructs the ‘Shanxi sports tourism belt along the Yellow River’, Create similar to ‘Qinghai Lake Bicycle Competition’, ‘Car Rally’, ‘Extreme Challenge Drift’ and other large events. The starting point of Xinzhou section of poverty alleviation tourism highway along the Yellow River is located in Wanjiazhai Yellow River Bridge in Pianguan County, covering 31 villages and 19 towns in Pianguan, Hequ and Baode counties. The Luliang section of the poverty alleviation tourism highway along the Yellow River covers four counties of Luliang, among which Xing County, Lin County and Shilou County are deep poverty counties. These three counties contain rich tourism resources. The Linfen section of the poverty alleviation tourism highway along the Yellow River can not only meet the self-driving tour, but also plan to build 13 km walking route and 80 km cycling route to meet the diversified sports fitness travel needs. From Hejin County to Yuanqu County, the Yuncheng section of poverty alleviation tourism road along the Yellow River passes through more than 60 administrative villages in 28 towns of 8 counties. Make full use of more than 1200 kilometers of Shanxi Province along the Yellow River poverty alleviation tourism highway, not only series up a number of sports tourism attractions, led to the rapid economic development of Shanxi along the Yellow River, but also solve the problem of difficult travel of local farmers, to promote poverty alleviation and transformation development is of great significance. However, there are also problems such as the lack of high-quality sports tourism routes, the lack of sports tourism rescue support system, and the lack of construction of characteristic sports towns.


3.1. Building brand image and intensifying publicity

Public health needs to participate in sports tourism is very high, but the awareness of sports tourism is not high. It is necessary to establish a special system organization responsible for the management of, design, promotion, evaluation and evaluation of ecological sports tourism brand in the Yellow River Basin of Shanxi Province. Using new media and traditional media and other information means, aiming at the feedback information of sports tourism participants and sports tourism market on product brands and services, combined with new trends, new ideas and new means to improve the marketing strategy of ecological sports tourism brands in the Yellow River Basin of Shanxi. To form a healthy theme, distinctive features, cultural highlights, easy to participate in the new image of sports tourism. It should not only reflect the characteristics of the Yellow River culture and nature, but also conform to the sports tourism fashion. Both inheritance and innovation and development. Both to meet market demand and easy to spread. It is necessary to highlight the theme and three-dimensional multi-faceted, vigorously expand domestic and foreign tourist market.

3.2. Strengthen regional cooperation and create high-end quality

Taking the sports tourism of the Yellow River as the theme and main line of cooperation, we can carry out cross-regional sports tourism cooperation with Shaanxi, Inner Mongolia, Henan and other neighboring provinces, and rationally allocate the distinctive sports tourism resources along the Yellow River in Shanxi Province. Shanxi should implement complementary advantages, through resource sharing, source transfer, line mutual promotion, policy reciprocity and other ways, to better meet the requirements of sports tourism law, more effectively overcome the limitations of each place, to produce better economic, social and ecological benefits. High-quality sports tourism products are not only the driving force for the healthy development of ecological sports tourism in the Yellow River Basin of Shanxi Province, but also the link to guide the potential market demand into reality to participate in consumer behavior. Avoid low-level duplication of construction, resulting in similar projects, consistent, lost characteristics and lost the market. The development of ecological sports tourism in the Yellow River Basin of Shanxi Province should fully combine the local resources advantages, create landmark sports
tourism events, highlight characteristics and improve quality.

3.3. Project scientific refinement to meet different needs

Sports tourism projects are not only difficult and challenging, but also leisure and entertainment as well as ornamental and personal interaction. Different types of sports tourism activities can meet the different needs of the vast majority of. In the development of ecological sports tourism products in the Yellow River Basin of Shanxi Province, we should pay full attention to the needs of participants. According to the attributes of sports tourism resources, the uniqueness of sports tourism resources, the function of sports tourism, and the intensity of sports tourism, scientific and detailed classifications are carried out, and stimulating sports tourism projects such as rafting, bungee jumping, rock climbing, and rapid drop are launched to meet the needs of young people and special tourism enthusiasts. Launch fitness walking, fitness running, fishing, hiking, health and other sports tourism projects for the main purpose of fitness, to meet the needs of the elderly happy and quiet and high safety factor of sports tourism. Sports tourism projects such as golf, polo and low-altitude flight are launched to meet the high-end sports tourism needs of some people. Launching sports tourism projects such as golf, polo and low-altitude flight are launched to meet the high-end sports tourism needs of some people. Relying on the Yellow River culture, folk culture and revolution culture, actively organize various events, so as to meet the needs of sports viewing tourism crowd. The flow of sports tourism participants affects the development of sports tourism and guides the development of sports tourism products.

3.4. Reduce security risks and enhance personnel training

The ecological sports tourism in the Yellow River Basin of Shanxi Province not only has the commonness of general tourism risks, but also has the different characteristics of sports and tourism. It mainly reflects the particularity of strong professionalism, low safety factor, strong timeliness, high cost and large social effect. For high-risk projects such as drifting, diving, bungee jumping, rock climbing, exploration, and low-altitude flight, we should actively and fully do a good job in risk prediction and management, find out the existing security vulnerabilities, make careful summary and analysis, and formulate and improve safe and reliable security plans and measures. At the same time, we should adhere to the Yellow River culture as the core, strengthen the construction of cultural connotation, improve the quality and taste of ecological sports tourism products in the Yellow River Basin of Shanxi, and reduce the social risk of regional culture extinction caused by sports tourism development. In recent years, with the rapid development of China’s sports industry, the demand for sports tourism compound talents has also increased significantly. There is a phenomenon of ‘ human resources oversupply and human resources undersupply ’. In particular, the instructors of some high-risk participatory sports tourism projects, such as bungee jumping, hot balloons, parachuting and mountaineering, must undergo strict pre-job training and systematic learning before reaching the required qualifications to be licensed to serve. Actively promote interdisciplinary, avoid tourism professionals do not understand sports, sports professionals do not understand the embarrassing situation of tourism.

References