Research on the Planning and Design of Forest Recreation Base Based on GIS and RMP Analysis -- Take the Example of Forest Recreation Base Above the Clouds in Heshun County, Shanxi Province

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Abstract. After the Novel coronavirus pneumonia, it is imperative to revitalize and restore the industry. Promoting the forest recreation industry in Heshun County to find the right positioning and integrating the local ecological and cultural connotation is the most effective channel and way. This paper uses GIS to spatially analyze the forest recreation base above the clouds and combines RWP analysis to analyze and summarize its current resources and development status, analyze the dilemmas and shortcomings in the process of base construction, and use it to make some suggestions on the path and benefits of integrating forest recreation and ecological culture in Heshun County. In this way, we can make reference to the integration of forest recreation and ecological culture in other regions and build a sustainable forest recreation industry in the new era.

1. Foreword
Forest recreation tourism is a tourism activity based on the excellent climatic and natural environmental conditions in the forest environment to promote the physical and mental health of tourists and enhance their happiness and well-being experience by means of tourism and recreation for the purpose of strengthening the body, cultivating the body, medical treatment, life extension and health care [1]. Foreign research and practice on forest recreation tourism is early, in the 1840s, Germany established the world's first "forest bathing" base in the town of Barth-Willishtern [2]. The forest recreation industry is based on comprehensive forest resources, health and wellness as the core link, and the integration of multi-industry ideas and concepts, therefore, not only has the natural function of physiological medical treatment, but also has a wide range of market economic functions [3].

In the context of better living conditions, people's social demand for higher quality of life and living environment has become a direct driving force for the development of forest recreation industry [4]. Based on the RMP theory proposed by Professor Wu Bihu [5], this paper takes the forest recreation base above the clouds in Heshun County as an example, combines the elements of forest recreation development with the actual local situation, conducts spatial analysis of the forest recreation base above the clouds through GIS software, and analyzes and evaluates the forest recreation base above the clouds from three aspects: Resource, Market, and Tourism Product. We analyze and evaluate the integration development of forest recreation and ecological culture in Heshun County, and propose a path and example for other regions to build a sustainable forest recreation industry in the new era by integrating forest recreation and ecological culture tourism development products.
2. **Overview of the study area**

Above the Clouds Forest Recreation Base is located in Dongdaiping, South Tianchi Village, Songyan Town, Heshun County, Shanxi Province, covering an area of 290.33 hectares, with geographical coordinates of 113°05'-113°56'E, 37°03'-37°36'N. Heshun County is located in the eastern border of Shanxi Province, the western side of the Taihang Mountains, the forest recreation base above the clouds is built on the mountain, 1500 meters above sea level, the planning area of nearly 5,000 acres, including flat land, mountain, woodland, alpine meadows and other different terrain.

3. **RMP analysis of forest recreation base above the cloud**

3.1. *Forest recreation base above the clouds forest recreation tourism R-ness (resources) analysis*

Above the clouds forest recreation base has rich forest resources and herbal resources. The base is adjacent to the scenic spot of "Cowherd and Weaving Maiden" (the legend of Cowherd and Weaving Maiden was officially announced by the State Council as the second batch of national intangible cultural heritage), and the surrounding forest hinterland covers 5,000 mu. Famous scenic spots within 10 kilometers include "Guya Temple Scenic Area", "Heshan Yiji Holy Mother Temple" (listed as the sixth batch of national key cultural relics protection units in 2006), "Haiyan Temple", "Taiyang Longkou Scenic Area" and "Heshan Yiji Holy Mother Temple". "Taihang Longkou Scenic Area". The natural environmental resources such as sunlight, temperature, air, water, forest and vegetation in the forest recreation base above the clouds can be called a pure land on earth and a recuperation paradise. With high-quality streams, villages, fields, lakes, mountains and other diversified and rich high-quality resources, the forest recreation resources are very superior.

![Figure 1 Elevation analysis diagram](image1)

![Figure 2 Slope analysis diagram](image2)

Combined with the above analysis, in the context of the national strategy of "Health China" and the revitalization of the recreation tourism industry of "Green for the People", the forest recreation base above the clouds has the basic resource advantages for developing forest recreation tourism, and the potential market demand in the recovery stage is also more broad. The potential market demand in the rebound stage is also more extensive.
3.2. Forest recreation base above the clouds forest recreation tourism M-ness (market) analysis

3.2.1. Forest recreation tourism product flexibility. Forest recreation tourism products are high consumption products with high elastic demand, when the price trend of forest recreation tourism products decreases, the demand will increase and vice versa. With the increasing demand for forest recreation tourism, the demand elasticity of forest recreation tourism is small compared with other kinds of tourism. The forest recreation tourism resources of Forest Recreation Base above the clouds are rich and have great potential, therefore, when developing forest recreation tourism, we should seize the market demand and selectively develop and design tourism products.

3.2.2. Forest recreation tourism market status. In recent years, Heshun County has been vigorously promoting the development of forest tourism, giving full play to the advantages of its forest landscape resources, and the scale of forest tourism has been expanding, and the number of forest tourism receivers has been gradually increasing, while the income from forest tourism has been steadily growing. However, the integration of culture and tourism in the development of natural ecological resources is not high, and the integration and manifestation of excellent local culture is not enough, and the cultural elements in the base are not systematically sorted out, which make the planning and development single and repetitive and tend to be homogeneous.

Table 1 Total number of tourists and total revenue of Heshun County during the 13th Five-Year Plan period

| Year | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|------|------|------|------|------|------|------|
| Total number of people received (10,000) | 98 | 118 | 130 | 143 | 157 | 172 |
| Total tourism revenue (billions yuan) | 9 | 10 | 11 | 12 | 13 | 14 |

3.2.3. Forest recreation tourism market selection. The tourism market of the forest recreation base above the clouds is mainly divided into key market, expansion market and opportunity market. Key market: more developed cities within 150 km straight line distance, including Taiyuan, Xingtai, Yangquan, Shijiazhuang, Handan, etc. with Jinzhong as the center. Expansion markets: Beijing-Tianjin-Hebei city cluster, Yangtze River Delta city cluster and the surrounding prefecture-level cities within 500 km. Opportunity markets: Northeast city cluster, Pearl River Delta city cluster, Yangtze River Delta economic zone, etc.
The target groups for the base are mainly urban sub-healthy people, middle-aged and elderly people, parent-child families, teenagers and students, with income levels mostly above middle income, and the mode of travel is self-driving, group tourists, etc.

**Table 2 Population targeting table**

| Crowd                                  | Features                                              | Demand Analysis                                      |
|----------------------------------------|-------------------------------------------------------|------------------------------------------------------|
| Urban sub-healthy people               | Natural deficiency disorder, presence of vision, blood pressure, depression and other sub-health conditions | Get close to nature and exercise for health          |
| Middle-aged and elderly vacation travel market | Retired, with plenty of time and money                | Long summertime summer retreats, convenient senior-friendly facilities and services |
| Parent-child family                    | Post 70/80/90 + children                              | Nature education and nature play products for fun and education |
| Primary and secondary school students  | School organization study activities                  | Large-scale accommodation and other reception facilities, study course design |

3.3. Forest recreation base above the clouds forest recreation tourism P-ness (product) analysis

There is no doubt that the resource background of the forest recreation base above the clouds has the ability to become a regional landmark tourist destination, but how to use the resources rationally, how to maximize the exploitation of market value at the same time can be fully recognized by tourists, to achieve sustainable development, it is necessary to find the right entry point. If the mountain ecological resources and green recreation culture can be cleverly integrated and developed and constructed under the right policy guidance and planning, the forest recreation base above the clouds can become the pearl on the forest recreation tourism industry in Heshun County.
Therefore, taking natural ecological resources as the skeleton, combined with cultural tourism as the soul, and seizing the market heights of recreation industry in the next period of overall recovery and revitalization of the industry after the epidemic, and misplaced development, is the sure way to develop forest recreation ecological and cultural tourism industry above the clouds.

### Figure 4 Space structure diagram

According to the above analysis, it can be concluded that the current problem lies in the lack of a cultural core of long-term vitality and core competitiveness in the planning and design process, and the development is too simple to form a sustainable attraction, thus unable to create a brand effect with wide influence. Therefore, in the planning and design process, we should pay attention to the

### Figure 5 Project layout diagram

#### 4. Problem analysis and suggestions

4.1. Problem Analysis

According to the above analysis, it can be concluded that the current problem lies in the lack of a cultural core of long-term vitality and core competitiveness in the planning and design process, and the development is too simple to form a sustainable attraction, thus unable to create a brand effect with wide influence. Therefore, in the planning and design process, we should pay attention to the
integration of ecological and cultural tourism. Culture is the core driving force for the sustainable development of forest recreation industry, and we should pay attention to the excavation and creation of forest recreation and ecological health culture, so as to realize the harmonious and win-win sustainable development of human and nature under the premise of protecting and reasonably developing and utilizing forest resources.

4.2. Recommendations
The planning and design should be oriented to explore the cultural connotation and promote industrial integration, fully explore the cultural connotation of the natural resources of the forest recreation base above the clouds according to local conditions, break the status quo with the representative product system and core brand that have wide social concern and ecological and economic integration, and become the highland of forest recreation industry.

Do a good job of promoting the brand of forest recreation industry and ecological culture integration, and increase the publicity of the base to form a large-scale and lasting influence. This can drive social progress and rapid economic development, but also play an important role in building ecological civilization and guiding people toward a healthy life under the major impact of the epidemic.

5. Conclusion
In summary, the forest recreation base above the clouds will be built into an international forest recreation tourism resort destination, should strengthen cultural excavation, focus on the integration of culture and tourism, further excavate and sort out the local history and culture, clarify the cultural lineage, demonstrate the cultural heritage, and accelerate the deep integration of cultural tourism. Take cultural experience as the leading role, focus on the integration of cultural elements in tourism project development and scenic spot construction, and expand the interactive tourism experience function.

Strive to stand in the height of human history, dig the depth of Chinese civilization, develop the breadth of modern tourism, create a tourism and cultural brand industry with Chinese characteristics and world influence, avoid homogenization, misaligned development, lead with ecological and cultural tourism integration, accelerate the promotion of the integration of forest recreation industry and ecological culture, and create a sustainable forest recreation industry in the new era.

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