China's Ecological Characteristic Towns under the Concept of “Sansheng Space”: Evolution, Distribution, and Path

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Abstract: Ecological characteristic towns are the extension of characteristic towns in the direction of green ecology, and also an important starting point for the implementation of ecological civilization. Based on the analysis of the formation mechanism and realistic connotation of “Sansheng space”, this paper analyzes the development process and distribution characteristics of ecological characteristic towns in China and finds that there are some problems in ecological characteristic towns, such as slow capital supply, lack of industrial chain, environmental damage and insufficient soft environment construction. Then, under the concept of Sansheng space, the development mode of ecological characteristic towns is optimized from four dimensions: strengthening and “digitizing” the industrial chain of production space, improving and upgrading the infrastructure of living space, and publicizing “characteristic IP”, protecting and developing “ecological carbon sink” of ecological space, and “whole season” of compound function space project. At the same time, we will establish a diversified and open governance operation, green innovation priority, classified characteristic assessment, and professional guidance mechanism to ensure the effective integration of the “Sansheng space” of ecological characteristic towns.

1. Introduction

The rapid development of China has led to the acceleration of urbanization and rural revitalization. As an innovative practice to promote urban-rural integration in the new era, characteristic towns have spread rapidly across the country. At the end of 2021, the National Development and Reform Commission and other ten ministries and commissions issued a notice on the issuance of guidelines for the standardized and healthy development of national characteristic towns, emphasizing that characteristic towns should be built and operated in strict accordance with the requirements of carbon peak and carbon neutrality, to ensure that the bottom line of ecological and environmental protection should be adhered to while developing. It can be seen that the development concept of ' lucid waters and lush mountains are invaluable assets ' is also implemented in the development process of characteristic towns. Building high-quality ecological characteristic towns meets the requirements of China's ecological civilization construction, and injects new forces into the green and low-carbon transformation of comprehensive economic and social development and the improvement of ecological environment quality from quantitative change to qualitative change. The green sustainable development of ecological characteristic towns is based on the rational planning and optimization of production-life-ecological space. Based on the concept of “Sansheng space”, this paper combs the development process of ecological characteristic towns, analyzes the distribution characteristics of China's national ecological characteristic towns by using ArcGIS, analyzes the difficulties encountered in the development of ecological characteristic towns, and takes “Sansheng space” as the entry point to optimize its development path and establish relevant guarantee mechanisms, to better promote the construction of ecological civilization in China and accelerate the process of urbanization and rural revitalization in China.

2. Related Literature Review

Characteristic towns are bred from the concept of small towns. Western countries began to study

small towns earlier in the last century. At the end of the last century, Michael E. Porter mentioned in his book “ National Competitiveness ” that geographically insignificant “ mosaics ” can determine the economic competitiveness of a country or a region. This “mosaic” is a characteristic town generated under the industrial agglomeration effect. Foreign scholars ' research mostly focuses on the characteristics and benefits of characteristic towns. Galina Williams (2016) studied the impact of the proposed development project of Emme Park, a coastal town in Queensland, Australia, on the regional economy[1]. Andrew Gorman-Murray (2012) studied the town of Daylesford, which is characterized by Australia 's largest ' gay rural festival ', and concluded that tourism marketing and festival effects promote rural urbanization[2]. Paola Salmon (2001) studied the town of Portofino, with its rugged coastline and steep seabed, and analyzed the balance between the tourism economy and ecological protection brought about by the coastal landscape[3]. Western small towns emphasize the core of ecological development while constructing characteristics. Alister Scott and Anna Bullen (2004) suggested that planners should use more comprehensive methods to protect special landscape areas[4]. Knox P and Mayer H (2009) mentioned that the sustainable development of the town requires the introduction of new energy and landscape protection[5].

With the deepening development of small towns with Chinese characteristics, the research on characteristic towns is also increasing, mainly focusing on the dilemma and development path of various small towns. Si Liang (2022) found that there are some dilemmas in the development of sports-characteristic towns in China, such as the deviation of development orientation, the replication of sports industry characteristics, and the improper operation of investment and financing. This paper puts forward the guaranteed path supported by the dual mechanism of government governance system, dynamic adjustment management mode, industrial coordination system, bottom line early warning, and risk management[6]. Zhao Ziqi (2020) found that there are some difficulties in the development of ice and snow sports and leisure characteristic towns, such as insufficient excavation of regional ice and snow cultural connotation, limited economic radiation, and insufficient driving force for sustainable development. It is necessary to form a global tourism product system, create differentiated characteristic products in various regions, and improve the public sports service system[7]. Xiong Zhengxian (2020) found that resource endowment dependence, planning team dependence, excessive administrative intervention, social capital intervention, and other reasons have led to the homogenization of tourism characteristic towns. It is necessary to optimize the spatial layout of characteristic towns, establish an ' inter-provincial dialogue ' mechanism, standardize the design of ' threshold conditions ', and make the level of characteristic towns and endowment levels[8].

In summary, from the research point of view, the overall distribution of characteristic towns is mainly analyzed from the macro level. In the concept of “ Sansheng space, ” more literature proposes to carry out Sansheng space integration in the optimization path, but it has taken over the specific “ Sansheng space” optimization. It can be found that there is a research gap in the optimization of the development model of ecological characteristic towns from the concept of ' Sansheng space '. This paper will start with the relationship between ecological characteristic towns and ' Sansheng space ', analyze the problems and obstacles faced by ecological characteristic towns, and optimize and guarantee the development mode of ecological characteristic towns, to promote the healthy development of ecological characteristic towns.

3. The Formation Mechanism and Realistic Connotation of ' Sansheng Space '

3.1 The Formation Mechanism of ' Sansheng Space '

The formation of the production-living-ecological space runs through the process of human social development and diversified changes in demand. As shown in Figure 1, the analysis of the formation mechanism of production-living-ecological space should start from the evolution of the demand and man-land relationship. The course of human progress can be divided into four major eras: the primitive era, the agricultural era, the industrial era, and the post-industrial era (information age). The survival of the primitive era is the basic demand. At this time, the “three living spaces” are mixed, and the original ecological space is built into all living space. After

entering the agricultural era, the relationship between man and land distinguished the spatial form, and the agricultural production space evolved with farming. At the same time, the rising population evolved into tribal groups and developed agricultural living space. With the advent of the industrial era and the post-industrial era, demand has been upgraded again. Especially in the post-industrial era, the population is more concentrated, and the boundary between urban and rural areas is gradually blurred. At this time, the original agricultural living space has expanded and developed into an urban living space. With the two industrial revolutions and the unlimited expansion of capital, the original agricultural production space and industrial development space are integrated to form an urban production space. The ecological space in the agricultural period was further artificially intervened and merged with the ecological function into the urban ecological space. According to different needs in different periods, various spatial functions are cross-linked and interrelated, forming a spatial layout pattern of production-life-ecology.

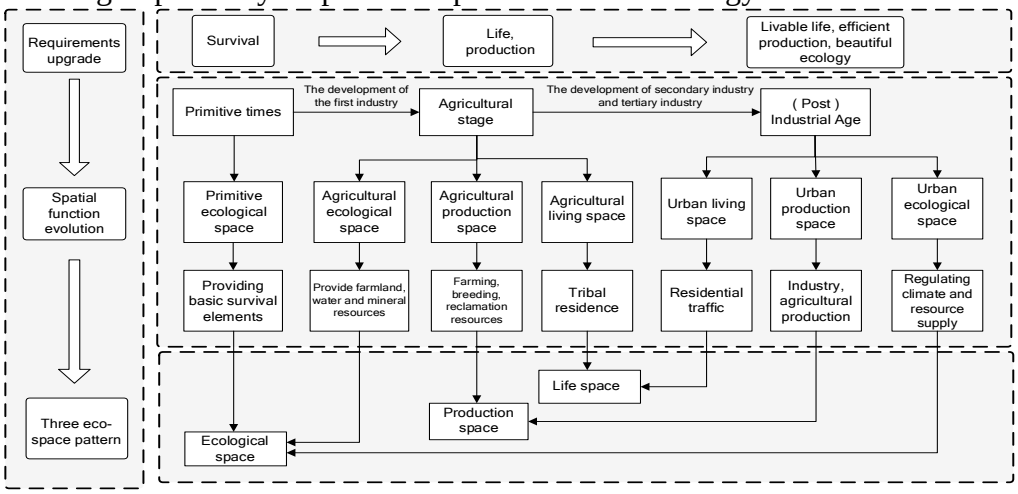

Fig.1 The Formation Mechanism of ' Sansheng Space '

3.2 The Realistic Connotation of ' Sansheng Space '

Production space is a space field with a production function, which can provide material and spiritual wealth for all kinds of material exchange, such as industry, agriculture, and service industry. Reasonable, efficient, and concentrated production space can ensure the strong extension of the industrial chain of ecological characteristic towns and create rich material conditions for production, life, and ecological space. Living space is a space field that can meet people's daily needs such as eating, wearing, living, walking, and entertainment. For ecological characteristic towns, dynamic and elegant living space is the key to the attractiveness of the town. Ecological space is a natural environment space field with ecological functions such as regulating ecosystem and climate or having ecological landscape value within China's territory. For ecological characteristic towns, ecological space is not only limited to viewing and mining but also can be combined with carbon sinks to seek more stable development on the premise of protection. Compound function space is the intersection of production, life, and ecological space. The space that can produce and bear ecological functions can be divided into production ecological space, such as the production of windbreak dual-use economic forests. In addition, such as in modern industrial parks, the space that integrates production and life is the production and living space. At the same time, the space with ecological and living functions, such as forest parks and other places of leisure and entertainment, is the ecological living space. The existence of the composite functional space will blur the definition of the production-living-ecological space, but fully exploiting and utilizing the composite functional space can maximize the use of existing resources to make up for the developmental defects of ecological characteristic towns and help their development and transformation.

4. The Development Status and Problems of Ecological Characteristics Towns

The ecological characteristic town is a multi-functional micro-industry gathering area that uses

its own excellent ecological resources to integrate and develop from tourism, health preservation, leisure, entertainment, and other aspects, excavates characteristic industries, develops ecotourism, and vigorously creates industrial innovation and agglomeration, development and life synergy, and peaceful coexistence between man and nature.

4.1 The Development Process of Ecological Characteristic Towns

Sightseeing tourism scenic area stage (-2014). Most of the ecological characteristics of towns were famous scenic spots in the early period. Such as the northernmost town of Heilongjiang Arctic, the earliest to the Northern Lights, night, and other unique scenery to attract countless Chinese and foreign tourists. In addition, Wentang Town, Jiangxi Province, with only two ' high selenium and low sulfur ' springs in the world, was rated as ' the hometown of hot springs in China ' in 2010. The predecessor of the ecological characteristic town mostly depends on the natural ecological elements. The main development relies on the benefits of tourism tickets and surrounding accommodation. There is no industrial support and the development model is relatively single. The formation stage of ecological characteristic towns (2014-2016). China's characteristic towns originated in Zhejiang. The new term ' characteristic town ' was first publicly mentioned by Li Qiang, the then governor of Zhejiang Province, when he investigated Yunqi Town in October 2014. Later, Li Qiang was committed to vigorously promoting the construction of characteristic towns and positioning characteristic towns as important carriers of industrial innovation in Zhejiang. In 2015, Zhejiang Province issued the “Guiding Opinions of the People 's Government of Zhejiang Province on Accelerating the Planning and Construction of Characteristic Towns,” which put forward opinions on the overall requirements, creation procedures, policy measures, and leading organizations of characteristic towns, and gave characteristic towns a unique meaning, that is, non-town non-district multi-functional innovation space. Since then, the concept of characteristic town has been formally formed, and the concept of ecological characteristic town has also been formed. Since then, all levels of the country have begun to cultivate characteristic town projects, among which ecological characteristic towns account for a large proportion due to their good tourism development foundation. At the same time, the characteristic town projects represented by Gubei Water Town and Nianhua Bay have begun to invest and operate. The comprehensive development stage of ecological characteristic towns (2016-). In January 2016, the Central Committee of the Communist Party of China and the State Council issued ' Several Opinions on Implementing the New Concept of Development, Accelerating Agricultural Modernization and Realizing the Goal of a Well-off Society in an All-round Way '. In July of the same year, the Ministry of Housing and Urban-Rural Development, the National Development and Reform Commission, and the Ministry of Finance jointly issued ' Notice on Carrying out the Cultivation of Characteristic Towns '. It is planned to build about 1,000 distinctive and dynamic characteristic towns such as leisure tourism, commercial logistics, modern manufacturing, education and technology, traditional culture, and beautiful livability in 2020. Since then, the characteristic town has been fully rolled out into rapid development. The follow-up policy also mentioned that the construction of small towns should continuously meet the increasingly urgent ecological well-being needs of the people. Under the guidance of the policy, the ecological characteristic towns have completed the transformation and deepened the development in an all-around way, and integrated with various industries. From ecological good to “ecological +,” the value of ecological resources has been re-evaluated and excavated in the new era.

4.2 Distribution of Ecological Characteristic Towns

ARCGIS10.3 was used to analyze the distribution of existing national ecological characteristic towns in China. As shown in Figure 2, the distribution of ecological characteristic towns in China has the following two characteristics. First, from the scope, at present, China's national ecological characteristic towns are blooming everywhere. Compared with two batches of national ecological characteristic towns, the first batch of towns is distributed in 23 provinces, municipalities, and autonomous regions, while the second batch is expanded to 31, and the overall coverage extends to the southwest. Second, from the spatial aggregation degree, the overall distribution shows the

distribution characteristics of high density in the southeast and sparse in the northwest. Zhejiang and Jiangsu provinces cultivate characteristic towns earlier and have rich ecological resources, and then promote the construction of towns in the Yangtze River Delta region, so the distribution of the Yangtze River Basin shows a high aggregation state. Due to the advantages of marine resources and convenient port transportation, the coastal areas also show a sub-high aggregation distribution. In the northeast and southwest regions, due to the remoteness and inconvenient transportation in some areas, the distribution of small towns is low.

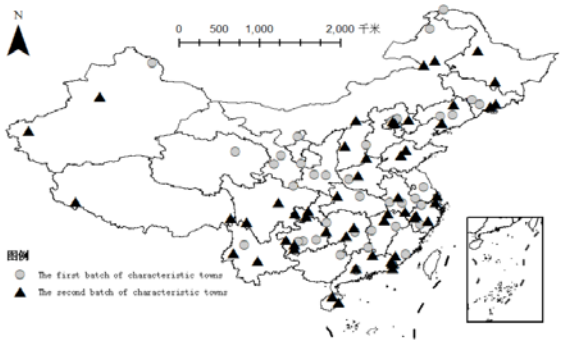

Fig.2 Spatial Distribution of National Ecological Characteristic Towns

4.3 The Dilemma of the Development of Ecological Characteristic Towns

Production space: lack of production factors, lack of industrial chain. The industry is the soul of the characteristic town. However, it is not only capital or management problems that prevent the development of small towns. The lack of production factors such as talent, labor, land, raw materials, and technology in the production space will also delay the development of small towns. The ecological characteristic towns are mostly remote and the infrastructure is not perfect, resulting in problems such as high-end talents cannot be retained and raw materials being difficult to transport. In addition, most characteristic towns are faced with the difficult reality of a lack of land use indicators. In addition, in recent years, ecological characteristic towns have been integrated with ' Internet + ', exposing the shortcomings of lack of technology and data under digitization. In addition, the industrial base is weak, the production space function is short, the industrial level is not high, and the relatively single industrial chain will also lead to the lack of production space function, unable to use a small town to promote regional economic development, unable to achieve the core of ' people-oriented '. The lack of an industrial chain also makes the development of “production, city, culture, intelligence, and tourism” unable to be realized. Strengthening the industrial chain and promoting digitization can not only make industrial planning but also expand the development platform.

Ecological space: overexploitation, environmental damage. The construction of characteristic towns itself contains green ideas, and keeping the bottom line of environmental protection is also a policy. However, environmental problems emerge in an endless stream during the construction of ecological characteristic towns. One is the uncontrolled development of ecological resources. Some ecological characteristic towns rely on rich ecological resources to build towns and continuously develop industry and tourism economy. However, some small towns have problems such as waste of resources and chaotic development order caused by excessive development. Second, production pollution. The development of industry and the extension of the industrial chain will inevitably cause problems such as waste gas emission pollution. Third, waste disposal is not perfect. A large number of tourists continue to challenge the original ecological carrying capacity of the town. Most of the towns ignore the imperfect infrastructure in the process of urbanization transformation, resulting in garbage accumulation, high treatment costs, and pollution of the original ecological environment.

Living space: real estate, soft environment construction is insufficient. The problem of real estate and the lack of a soft environment in the living space of ecological characteristic towns are also common problems in the development of most characteristic towns. Especially in recent years, the growth rate of the real estate industry has slowed down. The land use right of traditional real estate

projects needs to be obtained through "bidding, auction and listing". The small town project can not only use the land freely through government approval or allocation, but also obtain the land use right at a lower cost through transfer or lease, so the real estate enterprises transfer the investment target to the characteristic town, resulting in "real estate". In addition, more towns stay in the pipeline scenic spot mode in the soft environment construction of living space, which makes the town lose its characteristics and cannot increase the rate of return and retention. Only by constantly upgrading infrastructure, creating "characteristic IP", and making the town's personality vivid can we maintain the long-term vitality of the town.

5. Optimization of the Model of ' Sansheng Space ' in Ecological Characteristic Towns

5.1 Production Space: Strengthen the Industrial Chain and Promote ' Digitization'

If the ecological characteristic town stays in the single industrial development mode, it will not be able to transition the urban excess capacity to the villages and towns with demand and play a role in promoting urbanization. A complete characteristic town ecosystem needs to improve the three levels of the core industry, derivative industry, and supporting industry, and realize co-prosperity, symbiosis, and sharing from the inside out. As shown in Figure 3, the ecological characteristic towns should scientifically locate the core characteristic industries, expand the industrial chain, misplace the development of derivative industries, drive the surrounding areas to undertake the extended industrial chain, promote the cooperation modes of "ecology +" and "Internet +", introduce high-quality enterprises, and enhance the financing ability and profitability of the towns. And focus on the cultivation of supporting industries, to ensure the logistics, transportation, and other aspects of industrial support. In addition, it is necessary to promote the digitization of the ecological characteristic towns. Improve digital coverage, establish a digital management platform, carry out overall planning, and data supply, and build a bridge between industries. By introducing high-tech, the town's scenic spots, business parks, production workshops, and other intelligent empowerment. Deepen the level of cooperation between enterprises and e-commerce platforms.

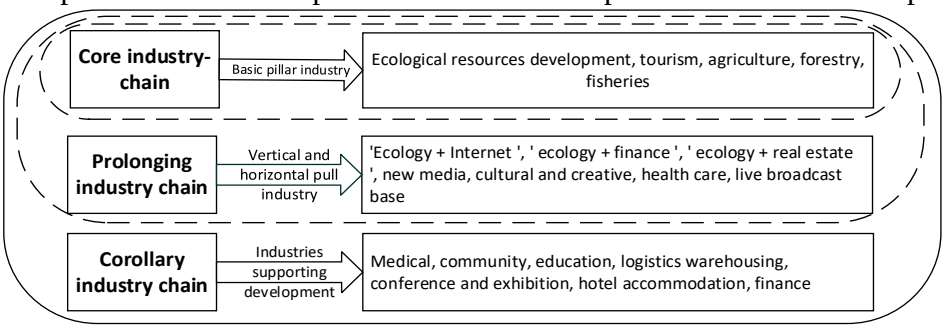

Fig.3 Ecological Characteristic Town Industrial Chain

5.2 Living Space: Improve and Upgrade Infrastructure, Strengthen the Publicity of ' Characteristic IP '

Using ecological endowments to create livable living space is the top priority of ecological characteristic town planning. First of all, we must improve infrastructure construction. According to the principle of moderate advance, comprehensive matching, and intensive utilization, we will accelerate the construction of infrastructure such as public roads, park greening, and garbage disposal, repair and eliminate old and damaged equipment in time, and upgrade the quality of basic services. Focus on the use of the ecological advantages of the ecological town itself to promote the construction of multiple living spaces such as ecological pension communities, scenic leisure areas, and characteristic commercial streets. Use the escalating living space to inject vitality into the town. To create a new form of living space that integrates ' business, learning, maintenance, rest, body and emotion ', while strictly controlling the planning of living space land to prevent ' real estate '. Create ' characteristic IP ', and strengthen publicity with new and old media. Increase network interaction, open publicity accounts on Douyin, Weibo, Baidu, and other platforms, share information on the

town's landscape, brand culture, and cultural customs, increase ' network search ', create ' fans ' groups, and promote ecological characteristic towns. Better create ' characteristic IP ' and move towards a greater development stage.

5.3 Ecological Space: Keep the ' Environmental Protection Bottom Line ' and Develop an ' Ecological Carbon Sink '

The ecological space carries and maintains the development of ecological characteristic towns. Creating an ecological space that maintains green mountains and rivers and develops ' green carbon sinks ' is also an important part of sustainable development. First of all, we must adhere to the bottom line of ' environmental protection ' and abandon the wrong approach of competing for the first place. The ecological space zoning planning of ecological towns is sorted according to the ecological protection level, and the areas that need key ecological protection are strictly supervised. Strengthen ecological restoration and protect important ecological systems and biodiversity. In recent years, China's carbon sink detection technology has also entered the era of space-based remote sensing, and the carbon sink trading market and rules are increasingly perfect. There are many ecological resources such as forests, ocean and cultivated land in ecological characteristic towns, which can develop forestry carbon sinks, marine carbon sinks and soil carbon sinks. The development of ecological carbon sinks can not only maintain the diversity of the ecological environment and organisms but also bring carbon sink projects to a certain extent and alleviate the shortage of funds. Based on the current goal of “ carbon peak, carbon neutralization, ” we will promote the production and living space from “ low carbonization ” to “ zero carbonization, ” increase the carrying capacity of ecological space, improve the efficiency of ecological functions, accelerate the supply of ecological products, and further promote the development of production and living space.

5.4 Compound Function Space: Project ' Whole Season ', Activity Innovation

Under the composite functional space generated by the integration and collision of production-living-ecological space, we will break the traditional constraints and explore innovative development models. Some ecological characteristic towns have seasonal characteristics. Therefore, it is necessary to promote the ' whole season ' of the ecological characteristic town project, so that the composite function space can promote the industrial chain to radiate to the surrounding areas and drive the overall regional economic growth. Agricultural ecological parks, ecological nursing homes, cultural and tourism museums and other projects can be developed to maintain stable population flow and profit income in the off-season. In today 's fast-consumption environment, ecological characteristic towns should innovate their activities. Bold cross-industry cooperation. Cooperative live broadcast platform, cultivating live broadcast industrial base, and cooperating with film and television companies to shoot film and television works or variety shows in ecological characteristic towns can not only drive the flow of ' fans ', but also increase the popularity of the town. Different ecological characteristic towns can carry out innovative practices according to their characteristics, enrich the diversity of the town, and keep the town fresh.

6. Mechanism Guarantee for Ecological Characteristic Towns to Practice the Sansheng Space Concept

6.1 Establish ' Diversified ' Governance and ' Open ' Operation Mechanism

At present, the government's governance mechanism for ecological characteristic towns is biased towards a large package, resulting in some responsibilities, procedures, and other issues blurred. The town is a project of co-creation, co-construction, and sharing, and the governance mechanism should be diversified. The government should assume the responsibility of overall guidance while weakening administrative authority. And strengthen the provincial departments according to the situation of the provinces themselves to the town of the elements of the policy tilt, urge the local government to the precise implementation of the town policy, to prevent the 'kickball' situation

hindering the ' last kilometer ' through. Strengthen the town's sense of ownership, enhance the awareness of self-management and autonomy, and hire enterprise professionals, investment company experts, and members of social organizations as “town mayors” to enhance the subjective initiative of town governance. Explore the governance mechanism that can be coordinated, coordinated, and guided by the multi-participation of governments, enterprises, and communities at all levels. In terms of operation mechanism, we should also break the mode of “government investment, investment attraction” and be more open and integrated. Let the government focus on promoting the improvement of infrastructure and supporting industries in the operation of small towns, introduce investment companies into the operation of small towns, attract private capital to participate in the construction of small towns, and make the road of small town governance and operation wider and wider.

6.2 Establish ' Green ' and ' Innovation ' Priority Mechanism

'Green ' and ' innovation ' are the main themes of the development of ecological characteristic towns. If we want to promote the green and innovative development of small towns, we need to establish a green and innovative priority mechanism. The top-level design and overall planning of the town are mostly comprehensively evaluated by governments at all levels. However, the current market activity is relatively large, and the opportunities are fleeting. If the traditional rigid model is adopted, the implementation cycle of ' green ' and ' innovative ' projects is too long. To highlight the development concept of green innovation, it is necessary to allow small towns to try first, report first, implement first, and make breakthroughs first. Priority is given to the funding, land indicators, technical support, talent introduction, and other needs of the ' green ' and ' innovative ' projects in the town. In the process, we abandon the traditional layer-by-layer approval mechanism, establish a priority simple process, make the project approval flexible and streamlined, and fully mobilize the enthusiasm of small towns or related enterprises to apply for investment in ' green ' and ' innovative ' projects.

6.3 Establish ' Classification ' and ' Characteristics ' Assessment Mechanism

The main industrial model of ecological characteristic towns have a large gap compared with other types, and the assessment standard of “one size fits all” is slightly rigid. An assessment mechanism of ' classification ' and ' characteristics ' should be established. 'Classification ' means to formulate a flexible assessment in line with industrial characteristics for small towns with large gaps in core industries and derivative industries. For example, in the assessment cycle, for agricultural-based towns, the creation time of towns can be set between 2-3 years, while for towns with long-term return industries as the core, it can be appropriately extended to 7-8 years. The ' characteristic ' assessment mechanism mainly helps to cultivate small towns with characteristic industries, such as carbon sinks and health care. The development foundation, experience, and resources are relatively weak, and the assessment indicators should be appropriately adjusted. Some rigid standards can be appropriately reduced, and the development trend, the degree of “three integration”, the degree of carbon reduction, and the ability of industrial innovation can be included in the assessment criteria. Explore a more open assessment mechanism, so that the development of the town is not afraid.

7. Conclusion

In general, as an extension of the ecological direction of characteristic towns, ecological characteristic towns are not only an important node to promote rural revitalization and urban-rural integration, but also an important link for China to practice green China and the “two mountains theory.” Under the concept of “production-living-ecological space,” the ecological characteristic towns should optimize their development. Under the guidance of high-quality top-level design, they should strictly abide by the red line of ecological protection, promote industrial innovation and development, improve service supply, coordinate the distribution of production-living-ecological space, and promote the integration of production, life, and ecological space. Promote the integration

of small towns and create a comprehensive town integrating ecotourism, leisure and entertainment, and old-age vacation. And then promote the realization of national strategies such as building an ecological civilization, sustainable development, and rural revitalization.

References

[1] Williams, Galina. “Economic Impacts from Development of the Coastal Town in Queensland on Tourism and Regional Economy”. Resources, vol.5, no.4, pp.48, 2016.

[2] Gorman M A, Waitt G, Gibson C. “Chilling out in cosmopolitan country: Urban/ rural hybridity and the construction of Dayles ford as a lesbian and gay rural idyll”. Journal of Rural Studies, vol.28, no.1, pp.69-79, 2012.

[3] Salmona P, Verardi D. “The marine protected area of Portofino, Italy: A difficult balance”. Ocean & Coastal Management, vol.44, no.1-2, pp.39-60, 2001.

[4] Scott, Alister, Bullen, Anna. “Special Landscape Areas: Landscape conservation or confusion in the town and country planning system”. The Town Planning Review, vol.75, no.2, pp.205-230, 2004.

[5] Crowhurst Lennard, Suzanne H. “Small town sustainability: Economic, social, and environmental innovation”. Urban Design International, vol.15, no.3, pp.189-190, 2010.

[6] Si Liang, Chen Miao. “The connotation, dilemma and guarantee path of the healthy development of sports characteristic towns in China”. Journal of Shenyang Sport University (in Chinese), vol.41, no.5, pp.124-130, 2022.

[7] Zhao Ziqi, Cui Jiaqi, Xing Jinming. “Research on the development of ice and snow sports leisure characteristic towns from the perspective of global tourism”. Sports and Culture Guide (in Chinese), no.05. pp.92-97, 2020.

[8] Xiong Zhengxian. “The dilemma of homogenization of tourism characteristic towns and its solutions - A case study of Yunnan, Guizhou and Sichuan”. Journal of Jishou University (in Chinese), vol.41, no.01, pp.123-130, 2020.