

On the Landscape Sequence of Coastal Trail Nodes

-- Design of the Sea Trail in Sanshan Town

Mengjiao Zhang *

Quanzhou Normal University, Quanzhou Fujian, 10399, China

* Corresponding author: Mengjiao Zhang

Abstract: As a linear space connecting nature and humanity, the landscape sequence design of coastal trails directly affects the spatial experience and ecological efficiency. Taking the coastal trail in Sanshan Town, Fujian Province as an example, combined with the landscape sequence theory, this paper discusses the node design strategy from three aspects: "rhythm control, horizon guidance and function combination", and puts forward the design path of "mountain-sea symbiosis, context continuation and dynamic infiltration" in order to provide reference for similar projects.

Keywords: Coastal; Trail; Node; Upgrade; Landscape; Sequence.

1. The Theoretical Connotation of Landscape Sequence

1.1. Conceptual Analysis

1) the definition of landscape sequence

Landscape Sequence is a new concept put forward in the field of landscape design in recent years, which is often mentioned in books related to landscape design, but there is no accepted definition to elaborate it so far. Landscape sequence has two meanings. First, the objective scenery unfolds in an orderly way, which has the characteristics of space-time movement and is the entity combination of landscape space environment. Second, it refers to people's appreciation psychology, which responds instantaneously and diachronically with the spatial and temporal changes of the landscape. Its essence is the art of time and space compilation, and the landscape sequence is not a simple linear arrangement, but a dialogue system between people and the environment is constructed through the two dimensions of "spatial rhythm+time perception". Its core lies in: controlling the opening and closing of the visual field, the straightness of the path, the softness and hardness of the material and other elements in the spatial dimension, forming a spatial movement of "connecting the past with the future"; In the time dimension, variables such as day and night light and shadow, seasonal vegetation and active events are combined to create an immersive experience of dynamic evolution. Through the spatial layout and time dimension, the scattered landscape elements are connected in series into a rhythmic and narrative whole.

Landscape sequence is composed of several natural and human landscapes. A beautiful landscape sequence, like a touching piece of music, is composed of several parts, such as the beginning, the foreground, the main scene, the background and the ending. Some complex sequences also have orderly scenes and turning points. From this, the sequence constitutes a landscape structure with a master and a second time, which produces ups and downs, high-pitched and low-pitched views and interests, forming a rhythmic and rhythmic landscape tour route.

2) Types of landscape sequence

Landscape sequence can be divided into simple sequence, complete sequence and complex sequence according to the combination relationship of landscape scenery and the composition characteristics of landscape rhythm:

Simple sequence: leading (starting scene)-development (foreground)-climax (main scene)-ending (ending scene)

Complete sequence: overture (scene)-leading (scene)-development (foreground)-climax (main scene)-ending (background)-ending (scene)

Complex sequence: overture (scene)-leading (scene)-development (foreground)-small climax (main scene)-falling back (turning point)-brewing (big prospect)-climax (main scene)-ending (background scene)-ending (knot scene)

1.2. The Particularity of Coastal Trails

Coastal footpaths need to balance "mountain-sea relationship" and "human activity demand": natural interference factors: tidal erosion, salt spray corrosion, typhoon attack, etc. Cultural carrier function: the expression of regional symbols such as fishing village relics and Poseidon belief; Composite use scenario: Take into account the needs of sightseeing, leisure, popular science and emergency disaster avoidance.

2. Overview of the Marine Trail Project in Sanshan Town

2.1. Status Quo of the Base

1) Location characteristics:

Sanshan Town is located in the township under the jurisdiction of Fuqing City, Fujian Province, in the eastern coastal area of Fujian Province, in the south wing of Fuzhou, the central city of the provincial capital, and in the east of Fuqing City. It is also a town close to Taiwan Province in the China's mainland. Sanshan Town and Bachi Island have a total planned area of 116.5 square kilometers, with a registered population of about 124,000 and a permanent population of 89,000. In terms of transportation, the whole town has basically formed a highway network system with Yuping Expressway as the skeleton, G104 National Road as the main body, several county roads as supplements, and rural roads extending in all directions. Sanshan Town's coastal

scenery, energy research, hot spring recuperation, clam salt fields, traditional ancient buildings and other tourism resources are rich and varied, and the resource grade is good. Among them, it has the largest clam breeding base in China. Qinqian seawater hot spring is the only medical seawater hot spring in the province, and it has the national business card "Hualong No.1" for nuclear power to go global.

The scenic belt of waterfront greenway in this case is located in the north of Sanshan Town, which runs through five villages. The length of the greenway is about 10Km, and it has excellent natural tourism resources such as beaches, forests, farmland and wind power. If the scope of the greenway is extended by 300m, a coastal greenway scenic belt with a certain volume will be formed.

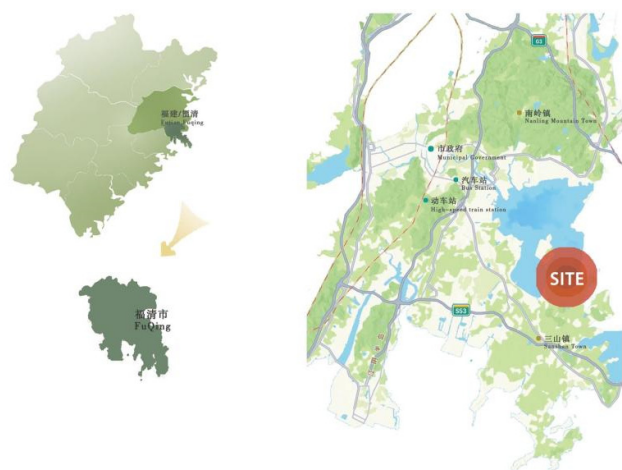


Fig 1. Project location analysis
(source: Author's self-painting)

2) The status quo

The project site is rich in historical and cultural resources, including ancient residence culture, She nationality culture and Haisi culture. Intangible cultural heritage resources such as bench dragon and Shang Yuan are valued and protected. The coastal greenway is rich in ancient architecture and trestle culture, with a total coastline of 4.2 kilometers. The hinterland includes mangrove wetlands, basalt geological parks and traditional fishing village settlements, and the tourism resources are rich and diverse.

Although the project site has unique natural advantages, there are still many disadvantages, such as: development disadvantages: trail fracture, vegetation simplification, lack of cultural signs and insufficient safety protection in tidal areas due to insufficient development and protection of tourism resources; With poor popularity, Sanshan Town is rich in tourism resources with high grade, and has unique tourism resources in China and the whole province. However, due to insufficient utilization of resources, it leads to disadvantages such as poor culture, weak leader and weak brand. The tourism competitiveness is weak, and the coastal tourism resources are similar to Pingtan and Changle, but they are not as attractive as the surrounding areas, failing to form core tourism products, resulting in the loss of market attractiveness and weak tourism competitiveness; Talent disadvantage, Sanshan Town needs a large number of professionals in the face of high-quality tourism development. At present, there is a shortage of talents in tourism culture, tourism development, tourism management and tourism management, especially in cultural research, tourism

management and cultural entrepreneurship industries, which cannot guarantee high-level tourism development.



Fig 2. Project green space analysis
(source: Author's self-painting)

3) Upper planning

Create a characteristic township community+ hot spring tourist resort; On the national policy level, the state has incorporated the development of culture and tourism into the rural revitalization plan, providing a new mode of thinking for the tourism development of Sanshan Town in Fuqing City. Global tourism construction, Fuqing city promotes global tourism development and construction. Support Sanshan Town to build a characteristic township community. Planning Donglongwan clam town to build a tourist resort. Promote the development and construction of Sanshan town hot spring project as soon as possible, promote the development of Sanshan nuclear power industry tourism and agricultural leisure tourism, vigorously develop the characteristic "coastal tour", build Fuqing Bay leisure tourism area, and realize the prosperity of the town through tourism. To develop the characteristics of the town, Sanshan Town plans to build a strong tourism town in the whole region and rely on existing resources to develop tourism. We will develop small towns with high quality, focusing on ocean hot springs, Donglongwan clam town tourist resort, Donglongwan clam town tourist resort, coastal customs tourism, nuclear power industry tourism, agricultural leisure tourism and popular science research tourism.

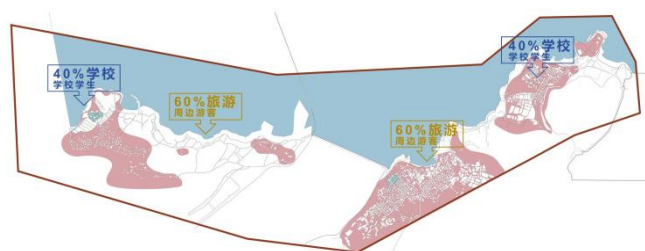


Fig 3. Analysis of people
(source: Author's self-painting)

4) Design objectives

Ecological restoration: building a tough coastal zone and restoring mangrove ecosystem; Cultural regeneration: reconstructing the historical narrative axis of "sea farming-fishing sacrifice-commercial port"; Vitality activation: Implant scientific and technological facilities such as space capsule camp, intelligent lighting and AR tour to enhance the economic value at night.

2.2. Design Principles and Ideas

1) Design principles

Based on the design principle of "ecological adaptation,

people-oriented, harmonious development of integrity and individuality, and sustainable development", we will form a characteristic camp model, enhance in-depth experience and ocean interaction, pay attention to the integration of natural culture, and build a landscape sequence of coastal trails, so that nearby residents can truly integrate into nature and show the marine and rural features of Fuyang.

Fig 4. Design principles
(source: Author's self-painting)

2) Design conception

The coastal trail landscape is a continuous landscape, starting from Sanshanwan Wharf, and it has an organic connection with other trail landscape nodes. Together, they form an urban landscape sequence with clear priorities and mutual echoes. Therefore, the design of Sanshan Town's sea trail follows the logic of landscape sequence generation. Firstly, the spatial rhythm is controlled, taking Sanshan Bay Wharf as the starting point, a natural rest space is formed, and as the starting section of the trail, a hydrophilic leisure area for viewing and a coastal trail landscape area are added, with emphasis on experiencing marine culture and viewing places. The design emphasizes open vision and hydrophilic experience, linking the surrounding marine environment. The design of this area is inspired by whales and marine life, combined with the natural landscape of the beach. Create a sightseeing and interactive leisure space, suitable for friends, families and children, where tourists can experience activities, such as camping, bonfire parties, beach sports and barbecue by the sea. The middle section of the trail is the climax of the landscape sequence, which provides the function of cultural and creative space. Here, a cultural and artistic exhibition area and a folk activity experience area are set up to encourage artists and designers to show their works with the theme of the ocean, integrate public art and exhibition space, and stimulate creativity and cultural exchanges. At the same time, Fuqing local related folk activities and traditions, such as bench dragon, are displayed, and through the production process and live demonstration, traditional culture is continued and cultural understanding and participation are strengthened. The end of the trail enters the end of the landscape sequence, and the spatial rhythm gradually slows down. This area provides tourists with a space for leisure and entertainment. The design of the coastal trail is combined with the marine food area, where tourists can enjoy the natural beauty and tranquility brought by the ebb and flow of the tide. This place not only provides a relaxed and social environment, but also enhances tourists' understanding and respect for marine ecology. Using the sea to promote the development of local fisheries can also provide tourists with a real marine food experience.

3. Conclusion

The fragmentation of contemporary waterfront space weakens the deep dialogue between people and waterfront environment. In view of this phenomenon, the serialization design strategy with temporal and spatial clues in series shows its unique value. Through the integration and promotion of the nature of coastal trail land and the sense of historical space in different development directions, and the control of the layout, rhythm and meaning organization of sequential scenic spots, the life scene mode and landscape atmosphere in different sections of coastal zone can be integrated and reconstructed, and the coastal trail space with people-oriented, energetic affinity, regional spirit and urban characteristics can be created, which is of great significance for exploring the optimization of landscape space under the background of new urbanization. This kind of design practice breaks the traditional static display mode of waterfront space and creates a "coastal life" with metabolic ability. Its core value lies in making the ecological restoration process visible, the cultural heritage carriers interactive and the space use mode evolvable, which provides an innovative paradigm for the construction of high-toughness coastal zones.



Fig 5. Node design
(source: Author's self-painting)

References

- [1] Cheng Xiaoshan. On the sequence of urban entrance road green landscape-Yueyang Avenue green landscape design [J]. Guangdong Garden, 2003, (02): 19-22.
- [2] Sun Lai-zhong. Landscape sequence analysis of the Yellow River riverside-taking the landscape of Lanzhou riverside section of the Yellow River as an example [J]. Shopping Mall Modernization, 2011, (04): 66-67.
- [3] Kong Fanlei, Pan Ting. Landscape sequence design of urban road greenbelts [J]. Anhui Agricultural Sciences, 2013,41 (32): 12684-12685. DOI: 10.13989/j.cnki.0517-6611.2013.32. 079. 2009.
- [4] Wang Min, Cui Qianli. Study on Reconstruction of Regional Life Scenes in Urban Waterfront Space Based on Landscape Sequence Theory [C]// China Landscape Architecture Society. Proceedings of the 2014 Annual Meeting of China Landscape Architecture Society (Volume I). college of architecture and urban planning Landscape Department, Key Laboratory of High-density Human Settlements Ecology and Energy

Conservation, Ministry of Education; College of architecture and urban planning Landscape Department;, 2014: 5.

- [5] Yi Haiping. Study on the landscape reconstruction design of urban comprehensive parks based on landscape perception evaluation [D]. Jilin Agricultural University, 2023. DOI: 10.27163/d.cnki.gjlnu.20010.000000000003.