Journal of Architectural Research and Development, 2024, Volume 8, Issue 2
http://ojs.bbwpublisher.com/index.php/JARD
Online ISSN: 2208-3537
Print ISSN: 2208-3529

Integrating Salt Culture into Rural Revitalization: Planning and Design of a Thematic Creative Agricultural Garden in Jintan, Jiangsu, China

Chengwang Yang*

Shanghai Jiguang Polytechnic College, Shanghai 201901, China

***Corresponding author:** Chengwang Yang, 2336807568@qq.com

Abstract: This research establishes a strategic framework for developing a salt culture-themed agricultural garden in Jintan, Jiangsu to boost rural vibrancy and cultural tourism while honoring local salt heritage. It employs the Analytic Hierarchy Process (AHP) for a data-driven and structured approach to evaluate the sustainability and cultural significance of agricultural initiatives. This framework ensures a balanced blend of agriculture, culture, and tourism to foster a sustainable and culturally rich experience. The study highlights the value of structured methodologies in planning culturally impactful agricultural projects.

Keywords: Landscape garden; Rural revitalization; Theme creative farm; Salt culture; Planning and design

Online publication: March 27, 2024

1. Introduction

This study explores the strategic planning and design of a creatively themed farm that incorporates agriculture, tourism, and culture to offer urban residents a novel leisure experience. This farm is part of the rural revitalization strategy of China, aiming to enrich the agricultural economy and cultural diversity while preserving rural heritage [1]. The research advocates for innovative planning that facilitates nature engagement, agricultural heritage conservation, sustainable farming practices, and market expansion. With salt culture as the focal theme, the study explores interactive activities, including salt production experiences and museum tours to develop the educational and touristic value of the farm, thereby enhancing cultural legacy and tourism development.

2. Overview of the research area

The study area, situated at 31° 43′25.5″N in northern Jintan, Changzhou, Jiangsu, spans about 80 hectares of mainly arable land. Its strategic location near the Yangli Expressway allows access with a 25-minute drive from Jintan's city center and an 8-minute drive from Zhixi town. Bordering Maoshan, the site transitions from

mountainous to plain terrain, featuring a flat landscape with rice paddies, fish ponds, and rich underground salt deposits. This unique blend of agricultural and mineral resources fosters an ideal setting for the integrated growth of industry, agriculture, culture, and tourism.

3. Overall planning layout design

3.1. Comprehensive evaluation index system for the effectiveness of comprehensive construction

This research constructs a comprehensive evaluation model for the effectiveness of creative culture-themed farms, incorporating agriculture, creativity, theme, culture, and marketing. Utilizing a hierarchical analysis structure model, the study delineates a three-tiered evaluation index system (A, B, C), with weights assigned using the 1–9 scale method and expert scoring for impact factor evaluation. Six judgment matrices are formulated to assess construction effectiveness, and the YAAHP software is used to determine the eigenvalue λ_{max} and eigenvector for each matrix, yielding the total sorting weight value [2].

A consistency test is needed due to the inherent subjectivity of the expert scoring method that involves the calculation of the consistency indicator (CI) and ratio (CR) as shown in **Equations 1 and 2** to ensure the accuracy and reliability of the hierarchical order [3].

$$CI = \frac{\lambda_{max} - n}{n-1} \quad (1)$$

$$CR = \frac{CI}{RI} \quad (2)$$

The consistency of the judgment matrix is assessed using the consistency indicator (CI), where CI = 0 indicates perfect consistency, 0 < CI < 0.1 denotes satisfactory consistency, and CI > 0.1 signifies a failed consistency test [4]. For matrices of order greater than 2, the stochastic consistency index (RI) is applied to accurately gauge CI, as detailed in **Table 1**.

Table 1. Stochastic Consistency Indicator

n	RI
1	0.00
2	0.00
3	0.52
4	0.89
5	1.12
6	1.26
7	1.36
8	1.41
9	1.46

In **formula 2**, when CR ≥ 0.1, the matrix data is inconsistent, and the data elements must be adjusted to ensure that CR < 0.1. The final weight of each evaluation factor is shown in **Table 2**.

Table 2. Weight distribution of comprehensive evaluation of the creative cultural-themed agricultural garden construction effect

Target layer A	Criterion layer B	Criterion layer weight	Indicator layer C	Indicator layer weight	Total weight
Cultural-themed creative farm construction effectiveness evaluation A	Farm elements B1	0.1205	Agricultural industry scale C1	0.2498	0.0301
			Agricultural science and technology level C2	0.6033	0.0727
			Agricultural operation C3	0.1469	0.0177
	Venue facilities B2	0.1113	Comfort C4	0.2929	0.0326
			Design rationality C5	0.3342	0.0372
			Theme creative C6	0.3729	0.0415
	Theme expression B3	0.2747	Theme brand creation C7	0.2155	0.0592
			Theme landscape expression C8	0.2344	0.0644
			Theme unique creative C9	0.3593	0.0987
			Theme activities to carry out C10	0.1908	0.0524
	Planning layout B4	0.1144	Functional comprehensiveness C11	0.3427	0.0392
			Spatial rationality C12	0.4327	0.0495
			Landscape richness C13	0.2246	0.0257
	Creative management B5	0.3791	Creative publicity level C14	0.1541	0.0584
			Multi-creative experience C15	0.3004	0.1139
			Product creative sales C16	0.1058	0.0401
			Creative place C17	0.2047	0.0776
			Creative brand image C18	0.2350	0.0891

In this specific planning and design, relevant departments should emphasize the planning of creative experience projects, the selection of the park's theme, and the setting of the theme landscape to emphasize the diversity of creative experience project types and artistic conception [5].

3.2. Overall performance design ideas

Utilizing the distinctive salt culture, agricultural strengths, and the cultural heritage of water towns, this study advocates for an immersive cultural experience that integrates supporting facilities to merge culture with tourism as shown in **Figure 1**. The design aims to showcase the historical roots, production techniques, and cultural significance of salt culture through landscape architecture while incorporating the local specialty of salt industry and Jiangnan water town cultural traits to create a landscape rich in regional and cultural essence. By fostering a throughout exploration of salt culture through creative experiences, the salt culture in the region can be effectively preserved and propagated.

The landscape design of the cultural-themed park is rooted in the regional salt industry history and culture, particularly the salt cave compressed air energy storage power station that acts as a technological anchor. This approach transforms traditional design elements into innovative symbols with careful placement of iconic structures and a unified design language to forge a landscape that encapsulates the cultural essence of the area as shown in **Figure 2**.

Figure 1. Overall project planning

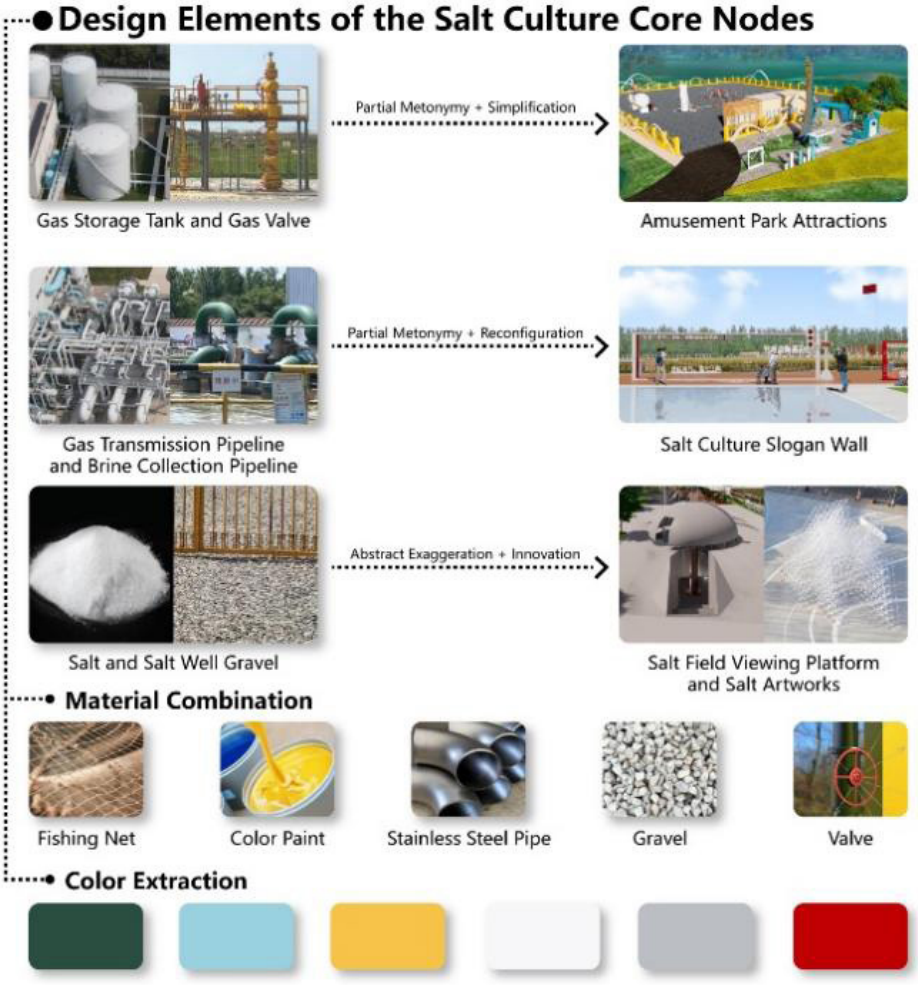

Figure 2. Node design elements refining analysis diagram

3.3. Overall planning layout

After comprehensive construction evaluation and strategic positioning, the landscape design of the project leverages agricultural and salt industry resources to outline functional road networks and nodes based on the salt mining and rice cultivation patterns there. This design fosters a synergy between rice field tourism, industrial

showcases, and salt culture, resulting in a holistic creative farm plan that encompasses inspection, conference facilities, lodging, retail, and recreational amenities as shown in **Figure 3**.

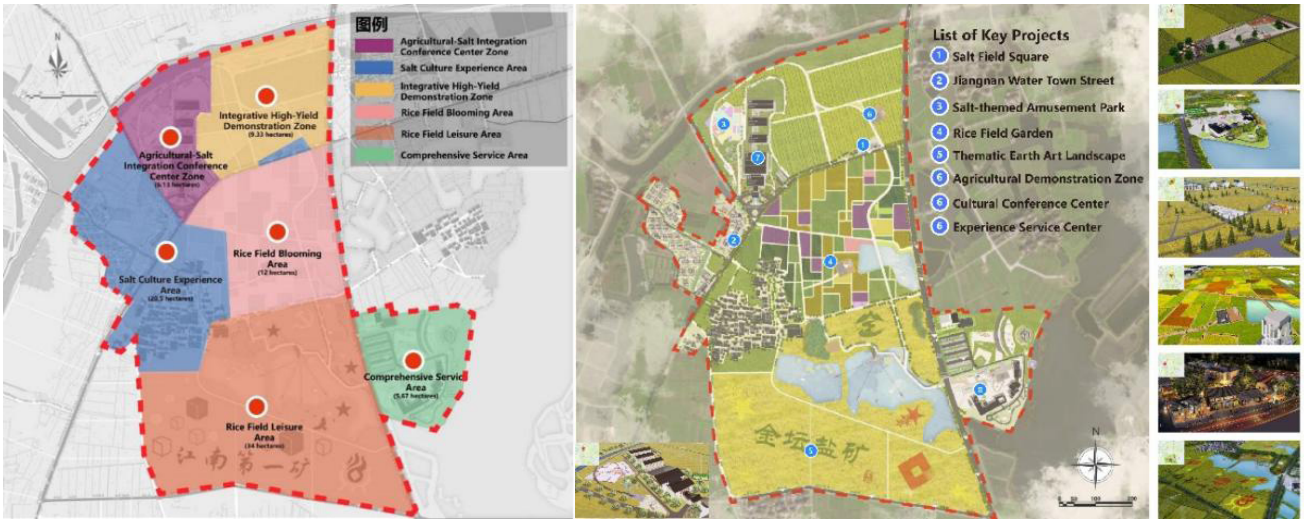

Figure 3. Functional partitioning diagram of the project (left) and key project layout diagram (right)

4. Special planning and design

4.1. Thematic landscape design

The entrance of the town features a cross-street bridge that symbolically unites the intangible cultural heritage of Jintan, the Zhixi Dragon, with the pristine white color of salt. Serving as both a pedestrian channel and a park emblem, this structure establishes a distinctive visual identity with a representation of the area and crafting an entrancing landscape imbued with cultural and natural symbolism as shown in **Figure 4**.

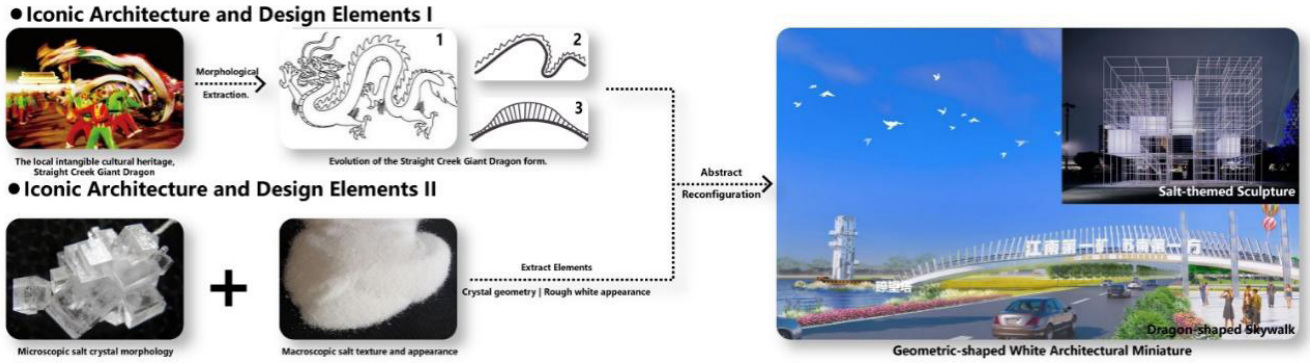

Figure 4. Analysis of design elements of the iconic Jintan Bridge architectural sketch

The rice field landscape of the park area can be utilized for its ecological assets and strategic positioning to act as a viewing platform. This area is enhanced with salt culture-themed landscape features and architectural elements, crafting a distinctive scenic destination as shown in **Figure 5**. By integrating creative art and slogans into the cultural landscape, the design aims to immerse tourists in a comprehensive salt culture experience, enabling them to observe, photograph, and engage with the heritage.

Figure 5. Rendering of the Jintan salt industry cultural background as a scenic spot for photo opportunities

4.2. Environmental education and guidance system design

The park incorporates a multifaceted environmental education system, encompassing signboards, app-based audio tours, guided tours, and radio broadcasts, thus catering to diverse visitor demographics, including those with visual or hearing impairments, the elderly, children, and foreign tourists [6]. The educational signboards utilize signage that encompasses direct and indirect guidance. The guidance system themed around the salt-making process features designs inspired by Zhongyan Jintan Company's gas pipelines and colors reflective of salt well equipment as shown in **Figure 6** to ensure visual appeal and thematic coherence.

To enhance the thematic identity and cultural ambiance of the park, the design incorporates the colors of black, brown, and gray-white, along with geometric forms reminiscent of salt crystals. These elements are utilized in the guidance system and cultural education display to reinforce the distinctive salt culture of the Jintan area as shown in **Figure 7**.

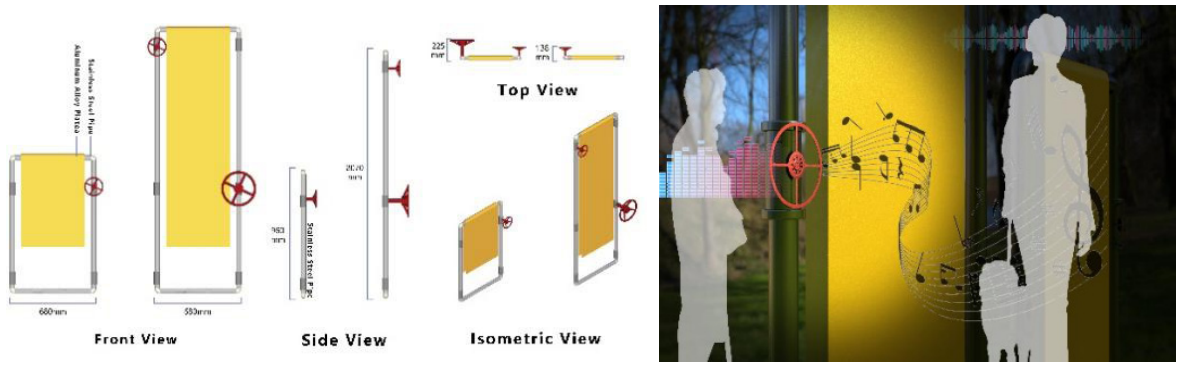

Figure 6. Salt-making process themed environmental education and guide system

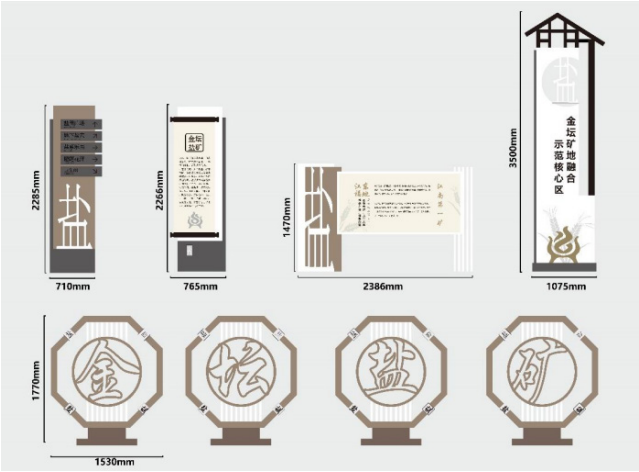

Figure 7. Salt-themed guide system design

5. Conclusion

This study integrates the Jintan salt culture theme with a creative farm project, conducting site-specific field research to develop a comprehensive design framework. The design emphasizes the psychological behaviors of visitors to craft seamless visit routes and diverse cultural displays that synchronize visitor actions with emotional engagement.

The planning of the farm prioritizes three key experience scenarios, which are the salt culture, agriculture, and broad services to cater to a wide demographic. The design strategy integrates thematic elements with experience-based planning to implement various methods that evoke emotional responses and foster a positive and interactive visitor experience.

Funding

This project is supported by the Chenguang Program of the Shanghai Education Development Foundation and the Shanghai Municipal Education Commission.

Disclosure statement

The author declares no conflict of interest.

References

[1] Evans EE, 1946, The Origins of Irish Agriculture. Ulster Journal of Archaeology, 1946(9): 87–90.

[2] Rehman R, Aslam MS, Jasińska E, et al., 2023, Guidelines for the Technical Sustainability Evaluation of the Urban Drinking Water Systems Based on Analytic Hierarchy Process. Resources, 12(1): 8.

[3] Dou Y, Xue X, Zhao Z, et al., 2018, Multi-index Evaluation for Flood Disaster from Sustainable Perspective: A Case Study of Xinjiang In China. International Journal of Environmental Research and Public Health, 15(9): 1983.

[4] Yang GK, Chouhuang WA, 2010, A Study on Two-Stage Budget Planning by Fuzzy Quantifying Analysis. Proceedings of Second International Conference of Computational Collective Intelligence: Technologies and Applications (ICCCI 2010), Springer-Verlag, Berlin, 230–242.

[5] Wu LC, Wang DP, 2013, Ultrasonic Fatigue Performance of Welded Joints in 16 Mn Steel. Applied Mechanics and Materials, 2013(251): 392–396.

[6] Canning AHM, O'Reilly SA, Wressell LRS, et al., A Survey Exploring the Provision of Carers' Support in Medium and High Secure Services in England and Wales. The Journal of Forensic Psychiatry & Psychology, 20(6): 868–885.