# Reflection

# Significance and Innovation

## Significance

Focusing on the traditional mulberry-dike fish pond system and its flooding control- irrigation infrastructure, this project emphasize the multiple values of this traditional production landscape in a contemporary environmental and social context. Its significance can be understood in the following dimensions:

First, the project emphasizes the ecological, cultural, and social values embedded in traditional water systems. In the context of highly intensified agriculture and rapid urban modernization in China, production landscapes are often reduced to a single productive function, leading to the degradation of ecological services and the loss of cultural connections. By reconstructing the spatial logic of traditional water systems and monocultural dike-fish ponds, this project aims to reawaken public ecological awareness and cultural identity, restoring interactive relationships between people and nature.

Second, the project provides a practical and sustainable response to the pollution problems found in the current dike-fish production landscapes. By integrating local knowledge and ecological design strategies, it offers effective solutions for water quality and soil restoration, creating a replicable model for other regions facing similar challenges.

Third, the project seeks to improve the livelihoods of local residents through a comprehensive approach. It addresses the Improvement of living spaces and public environments, improves food safety, restores ecological and leisure spaces, creates opportunities for local production-based employment, and re-empowers communities in the management of water system and landscape resources. This people-centered strategy strengthens the project's social resilience and long-term viability.

Finally, through a multi-scale landscape design approach, the project establishes a sustainable spatial system that links regional planning with localized interventions. This coordination across spatial layers offers a more adaptive and effective mode of operation, addressing the complex interplay between hydrological dynamics, ecological restoration, and human habitation.

In conclusion, this project goes beyond heritage preservation. It serves as a forward-looking spatial experiment that demonstrates how landscape architecture can integrate ecological regeneration, cultural continuity, and community participation to shape a more sustainable future.

## Innovation

### Resonance with the Concept of "Everyday Heritage"

Although this project did not explicitly adopt the concept of "everyday heritage" as its theoretical starting point, its design process aligns closely with this idea. "Everyday heritage" emphasizes that the value of heritage lies not only in its historical forms or non-human elements but also in its ongoing everyday use and continual reinvention of functions and meanings. This project does not strip away production activities for the sake of ecological restoration or cultural display. Instead, it regards "production" itself as an integral part of heritage value. Through the selection, renewal, and system reconstruction of the mulberry-dike fish pond system, the project strives to achieve a renewed internal synergy among ecological, productive, and cultural values in contemporary expression. This focus on how heritage is "used in the present" injects dynamic sustainability into traditional agricultural landscapes.

### From "Shallow Participation" to "Deep Empowerment"

In contemporary landscape design, public participation is often limited to formal information gathering, scheme consultation, or the provision of educational panels and recreational spaces—passively serving the "public use" demand. This project attempts to move beyond this paradigm of "shallow participation" by deeply responding to the real roles of community residents in production, daily life, and environmental governance.

By redesigning traditional water management systems and fishery spaces, the project renrew the local residents' agency and participation rights in water management, production planting, and spatial usage. \This deeper level of intervention is not merely "designing for the community" but "co-constructing with the community," highlighting new possibilities for landscape design in social negotiation and local autonomy.

### Addressing Water System Restoration from a Social Perspective

Traditional water system restoration designs tend to focus on ecological processes or natural recovery, such as improving water quality, rebuilding wetlands, or restoring habitats for flora and fauna. However, this nature-centered technical approach often overlooks the complex relationships formed by long-term interactions between water bodies and human societies and underestimates the direct impact of social behaviors on water environments.

This project starts from the interaction between society and water, emphasizing the positive role of productive activities, daily behaviors, and spatial management methods in promoting water system restoration. For example, whether residents can continuously use and maintain a particular water ditch or consider ecological spaces as part of their production and daily life directly affects the water system's ability to function ecologically.

Therefore, the project not only restores "healthy water bodies" in an ecological sense but also rebuilds the relationship between people and water and revitalizes the role of water system in social spaces. This focus on the "sociality of water" reflects a design-level response to the theory of the "sociology of water"—namely, that the sustainability of water system cannot be maintained solely through ecological engineering but must be achieved through the joint efforts of social structures and cultural practices.

# Research Limitations and Challenges

## Limitation

This project faces significant problems in data acquisition and information integration. The internal water system of the Sangyuanwei area is complex and has undergone multiple modifications and updates throughout history, which makes consolidating data particularly difficult. Although many studies have summarized aspects of the region, these works focus on different themes and vary in the detail of information provided, resulting in challenges for re-reading, comprehending, and integrating the literature comprehensively.

Consequently, existing spatial water management data are extremely fragmented and difficult to unify. Precise data on land use, waterbody distribution, and water quality lack a centralized public access channel; some of this information remains inaccessible due to private ownership, inevitably causing errors in spatial analysis. Furthermore, most existing water management records are available only at large scales, with a significant lack of detailed small-scale spatial data, leaving substantial gaps in understanding and reconstructing local water networks. While historical maps offer valuable references, the considerable differences between ancient cartographic techniques and modern mapping methods often result in large positional inaccuracies, further complicating data use and introducing uncertainty.

Regarding fish pond management and the environmental impact of production wastewater, there is an absence of systematic direct monitoring data; existing information mainly comes from government-issued remediation announcements, news reports, and limited interviews, which means that the classification of fish pond types and assessments of ecological impacts based on these sources still have considerable room for improvement. In addition, the research area is covered by a wide range of academic and local literature with diverse and sometimes conflicting viewpoints, making it difficult for the researcher to fully and systematically grasp all available information. Many early local historical studies contributed little to spatial mapping, so maps inferred from these sources may contain omissions or inaccuracies. Conducting research from abroad has limited the possibility of sustained fieldwork, restricting the researcher's ability to deeply understand and experience the local residents' culture, social activities, and psychological perspectives, relying instead on indirect channels such as literature, audiovisual materials, and interviews. Finally, the vast majority of core materials are in Chinese, including classical Chinese texts, which pose significant challenges for a non-native speaker in accurately translating and synthesizing into English, thus hindering international dissemination and academic communication.

## Challenges

The project's design framework is highly complex, encompassing ecological restoration, social participation, production management, and economic sustainability, and therefore constitutes a multidimensional, interdisciplinary framework. This complexity requires the researcher to set clear objectives, balance diverse demands, and exercise effective planning and decision-making, so that effort does not become scattered and the core issues remain in focus. Design interventions occur at multiple spatial scales, from regional ecosystem restoration to the fine-grained management of individual production units; each scale therefore needs explicit goals, strategies, and implementation pathways, and the links between scales must be well articulated to prevent gaps, overlap, or vague solutions that fail to address concrete spatial problems.

During the research process, extensive early-stage literature review and data collection consumed considerable time, leaving the overall framework insufficiently refined and necessitating substantial revisions later—an especially acute issue given the limited timeframe of a master's thesis. Although the project prioritizes community social life and participation—emphasizing local residents' agency in water-management and day-to-day production—the researcher is not a native of the area and lacks direct experiential knowledge and cultural immersion. Consequently, it is difficult to attain a full understanding of residents' social behaviors and motivations, which inevitably constrains how precisely the design can meet authentic community needs.

Time and resource constraints pose an additional major challenge. As a master's-level study, it is not feasible to conduct prolonged fieldwork or engage in multiple rounds of community feedback, limiting both the depth and breadth of the investigation. In sum, the central difficulty lies in striking a balance between the project's many objectives and the limited resources available—focusing research priorities and advancing the project in a systematic, evidence-based manner. Meeting this challenge is not only essential to the project's success, but also a crucial test of the researcher's overall capabilities.

# Future Improvement

Firstly, there is considerable room for improvement in the acquisition and accuracy of spatial data. The current analysis of land use, water quality, and local water system structures largely relies on open-source data and satellite imagery, which limits the precision of spatial interpretations. Future efforts could focus on establishing collaborations with local government agencies, water management departments, and research institutions to obtain more detailed and authoritative datasets. Additionally, integrating advanced spatial technologies such as drone surveys and LiDAR, combined with on-site investigations and water quality monitoring, would significantly enhance the accuracy and relevance of spatial analysis and design interventions. Creating a unified geographic information database would also facilitate better integration and comparison of data across different temporal and spatial scales.

Secondly, deepening the understanding of the site's social and cultural context is essential. This involves systematically reviewing local gazetteers, historical records, policy documents, and supplementing these through visits to local museums and heritage sites to gather first-hand information. Where possible, conducting phased field studies with long-term observations of local production, daily life, and seasonal cycles would provide valuable insights into community rhythms and needs. Furthermore, increasing direct community engagement through participatory mapping, focus group discussions, and other inclusive methods can strengthen the responsiveness of design proposals to local voices and lived experiences.

Thirdly, there is significant potential to expand research on the classification and ecological assessment of fish pond systems. Current categorizations are primarily based on literature reviews and field observations but lack systematic empirical support. Future studies could develop a more refined classification framework by considering ownership structures, management practices, and pollution discharge patterns, supported by GIS-based modeling and visualization. Incorporating in-situ monitoring data such as effluent water quality and biodiversity indicators would improve the credibility of ecological assessments and provide more precise foundations for design interventions.

Finally, the project's implementation process could benefit from increased phasing and flexibility. Given the constraints of time, resources, and policy environments, dividing the project into short-term pilot phases, medium-term expansions, and long-term integration stages would facilitate gradual progress. Introducing regular evaluation and feedback mechanisms would enhance the project's adaptability to uncertainties such as climate variability and institutional changes. Concurrently, fostering community capacity building through training and knowledge exchange would support the sustainability and social impact of the interventions.

In summary, continuous improvements in spatial data acquisition, contextual knowledge deepening, systematic classification and modeling, and phased implementation will collectively enhance the academic rigor and practical relevance of this project, contributing to more targeted and resilient landscape strategies.