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ORIGINAL ARTICLE

Envisioning rural futures: Lishui and the *Future Shan-Shui City* competition

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(This article belongs to the *Special Issue: Reshaping Rural China*)

Abstract

This paper presents an international competition called *Future Shan-Shui City: Dwellings in the Lishui Mountains*, promoted by Lishui Municipality (Zhejiang Province) in 2020, and examines the three award-winning projects: *Future Super Shan-Shui Park* by the China Academy of Urban Planning and Design, *A Symbiotic Urban Change* by Olivier Greder Architects, and *Prosperous Lishui* by South China University of Technology and Politecnico di Torino. By investigating how policies are changing current planning activities, and how the themes raised and then addressed in urban projects, this contribution sheds light on the salient features of today's development in Chinese marginal areas and provides the opportunity to discuss new visions for rural futures that transcend the Chinese context.

Keywords: Urban-rural relationship; Future Shan-Shui City; Urban planning; Urban design; Agricultural modernization; Lishui

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1. Introduction

After three decades of strong economic growth, today's rural China is still characterized by economic and social inequities, environmental problems, and demographic imbalances. To address these issues, numerous policies and projects have been developed in recent years. Particularly, the Zhejiang Province has been a site of great experimentation: new facilities and accommodation for rural dwellers have been realized, villages have been restored, and new economic activities have been promoted thanks to programs such as the Building a New Socialist Countryside (BNSC), the Beautiful Countryside, and the Rural Revitalization Strategy. As part of this development strategy, the *Future Shan-Shui City: Dwellings in the Lishui Mountains* competition was launched by Lishui Municipality in 2020. The aim was to turn a 152 sqkm site south of Lishui city into a laboratory to experiment with new relationships between urban and rural while enhancing the environmental features of the area. This article presents the competition, its genesis, and its links with planning policies and then discusses the three award-winning projects. These materials invite us to reflect on three points: the efforts to slow down urban entrepreneurialism; the attempts to promote new plans and projects to redefine urban-rural relations; and the promotion of high-quality urban spaces and environmental wellbeing.

This research is the result of studies conducted from 2020 to the present, in which the author has been directly involved in the design activities, interacted with academics

and practitioners investigating the transformations in Chinese rural areas, and corresponded with the teams involved in the competition. These first-hand data have been combined with secondary sources, such as planning and policy documents, consultancy reports, and statistical information from official yearbooks. For a more detailed account of the methodology adopted and the activity undertaken, see the paper by Ramondetti *et al.* (2023).

The purpose of this paper is to investigate urban projects envisioning new ways of inhabiting rural and marginal areas, which are facing great upheaval. The displacement of the rural population and changes in patterns has provoked what Araghi (1995) and Ghosh and Meer (2021) termed global depeasantization. This problem goes side by side with the phenomenon of amenity migration (Abrams *et al.*, 2012; Matarrita-Cascante & Stocks, 2013), entailing the exploitation of the natural and cultural resources of the countryside, or other areas of significant environmental value. This issue has also been driving an expansion in suburbanization (Keil, 2017; Wu & Keil, 2020), with increasing land consumption and a redefinition of the relationships between core cities and hinterland areas. All these phenomena have profoundly characterized the development of rural China over the past three decades, raising issues that have been addressed mainly in terms of socioeconomic policies and governance programs (see for instance Zhang *et al.*, 2023). While these measures play an important role, planners and architects need to reflect on these issues from a design perspective (Koolhaas & AMO, 2020), that is, to engage critically with alternative spatial configurations that promote novel ways of inhabiting and practicing rural spaces. Since urban design plays a key role in contemporary China, this is a privileged realm to observe the most innovative trends and experimental projects. Urban competitions, such as *Future Shan-Shui City*, thus offer precious insights into methods and strategies for rural-urban development.

The paper is structured as follows: Section 2 briefly presents the main policies and initiatives undertaken to improve the living conditions in rural areas over the past few decades. Section 3 examines the planning activities in Lishui, Zhejiang Province, highlighting the shift from large-scale initiatives to boost urbanization, to new environmentally friendly and site-specific development strategies. Section 4 presents the competition *Future Shan-Shui City* instituted by Lishui Municipality in 2020 and describes the three awarded projects: *Future Super Shan-Shui Park* by the China Academy of Urban Planning and Design (CAUPD), *A Symbiotic Urban Change* by Olivier Greder Architects, and *Prosperous Lishui* by South China University of Technology (SCUT) and Politecnico di Torino. Finally, the concluding part summarizes the current trends in Lishui urban development, discusses the issues arising from the competition, and the strategies proposed by the projects examined.

2. Reshaping rural China

Over the past two decade, most of Chinese urban policies and projects have progressively shifted their focus from large urban centers toward what Rozelle & Hell (2020) defined as the "invisible China:" rural, internal areas impacted only slightly by the development that came after the economic reform. Addressing the challenges of this part of the Chinese territory, it means to deal with what President Hu Jintao and Prime Minister Wen Jiabao already defined in 2006 as the "three rural issues:" the fall in agricultural production, the widening income gap between urban and rural populations, and the lack of infrastructures and services (Hsing, 2010; Chen *et al.*, 2021). Agricultural production as a percentage of total GDP has declined by 30% over the last 20 years, mainly due to the gradual disappearance of arable land, which has diminished by about 60,000 sqkm (National Bureau of Statistics of China, 2022). Not only has this triggered a problem of food security (Hong, 2016) but it has also sparked a wave of migration toward the large urban centers at a rate of about 16 million people per year (Miller, 2012). Even though there has been improvement in rural standards of living, data from the National Bureau of Statistics (2022) showed that the average income in rural areas was nearly three times lower than that of urban areas; 7% of the rural population had no access to running water, while 2.6% had no access to hospital facilities, and the infant mortality rate in rural areas was 10%.

To address these problems, various initiatives were put in place to improve rural living conditions since the 2000s. At first, fiscal measures were employed: price floors for agricultural products, the abolition of most agrarian taxes, and the introduction of subsidies for farmers (Ye, 2009). In parallel, about 400 billion CNY was invested by the national government in agriculture, and the fiscal expenditure of local administrations in the primary sector rose by 20% (Su, 2009). This policy led to farmers' incomes growing from 45 to 126 billion CNY (Ye, 2009). Alongside these economic measures, urbanization programs were also implemented. The most important one was the BNSC program, introduced in 2006 and is still ongoing (Ahlers, 2014). The program's main objectives are to improve services and standards of living in rural and suburban areas and to preserve farmland and boost agricultural production in response to the growing demand for food. This program, like many others, has been implemented through major infrastructural investments that have led to a radical reorganization of constructed spaces and productive

sites in rural areas (Bray, 2013). In continuity with these initiatives, the National New Type of Urbanization Plan and the Rural Revitalization Strategy Plan have been launched in 2014 and 2018, respectively, with massive resources for improving agricultural production, new policies to address governance difficulties, and novel programs for improving the standards of living in rural areas (Wang & Zhuo, 2018; Chu, 2020; Liu *et al.*, 2020a). Furthermore, since 2019, the State Council has established an inter-ministerial joint conference system with the National Development and Reform Commission (NDRC) to foster the coordination between these many initiatives and better integrating urban-rural development (Han, 2019).

While these many initiatives have been promoted by the national government, forms of grassroots urbanization involving local administrations and private players have led to a rise in independent projects to improve rural areas. In particular, the Zhejiang Province has been a place of exceptional experimentation (see Commerell & Feireiss, 2020; Sun *et al.*, 2022; Lin & Jia, 2023). Already in 2002, the Provincial Government launched the Green Rural Revival program to supply services in rural areas and to improve agricultural production. Following this strategy, local cadres implemented specific projects, which have resulted in important achievements. Particularly, the government of Anji County enacted policies for the preservation and renewal of villages and traditional crops, strongly promoting slow tourism centered on well-being and health in 2008. This initiative known as Beautiful Countryside had a great success, which prompted the regional government to adopt it in other parts of its territory. Five years later, the national government launched the Beautiful China Initiative (BCI), extending this strategy for the recovery of rural areas nationally (Weller & Hands, 2021). In parallel, the Zhejiang Province also hosted one of Alibaba's pilot projects, the Qingyanliu Taobao Village in Yiwu Municipality, where 10% of the families and over 100 stores are active in e-commerce through the Taobao Marketplace platform (Li, 2017; Wang *et al.*, 2021). The success of this experiment, which generated strong growth, has led this model to be adopted in the less developed areas of the Coastal and Central Regions, with a boom in the number of Taobao Villages, from 212 in 2014 to 7,023 in 2021 (Ali Research Institute, 2022).

These initiatives are summarized in Figure 1, together with the projects undertaken by Lishui Municipality to promote development.

3. The development of Lishui Valley

Initiatives for promoting novel patterns of development in rural spaces have sprung up since 2015 as a result of both administrative cadres and private corporations. While these projects have improved the living conditions of rural citizens, they also emphasize the tension between the goals of environmental conservation of land on one hand and the modernization and improvement of productive activities on the other. This tension is reflected in today's urban and architectural competitions, which require the protection of the environment, the reduction of land consumption, the increase in agricultural production, and the preservation of traditional rural characters. In Zhejiang Province, the attempt to reconcile these demands is evident in the initiatives recently implemented by administrative bodies such as Lishui Municipality. These evidence a shift from urban and industrial development to a more environmentally friendly approach.

The Lishui Municipality extends over 17,298 sqkm and has a population of about 2.7 million people (Lishui Bureau of Statistics, 2020). Due to its marginal status and the difficult orography of the area, it is one of the poorest in the Zhejiang Province: It has the lowest per-capita GDP, less than half of that of the more developed areas, and the lowest annual per-capita income, an average of 30,000 CNY (Yue *et al.*, 2014). Furthermore, access to education and healthcare is poor, and the migration rate toward the Coastal Regions is the highest in the province (Zhejiang Province Bureau of Statistics, 2022). To address these issues, the local government has promoted many initiatives to develop this area over the past 30 years. These schemes have centered on Liandu District: A mountainous territory that extends over 150,000 hectares, with 417,200 inhabitants, of whom 180,000 live in Lishui city (Lishui Bureau of Statistics, 2020).

In 1993, the provincial government of Zhejiang instituted the Lishui Economic Technology Development Zone (Lishui ETDZ), and in 2002, work began on the Lishui Shuige Industrial Park: a 14,534-hectare development located 4 km southwest of Lishui city. Since the initial 2-year phase of construction, the site has been under the supervision of the NDRC, which has funded its realization. Thereafter, in 2007, Lishui Municipality promoted Nancheng District: The eastward expansion of the above industrial park with the addition of a new town for 170,000 inhabitants. To turn this project into a reality, a hilly territory of 3528 hectares was leveled and equipped with roads parceling out plots of 500 × 500 m. Within this development, 30% of the area was designated for industry, 25% for environmental facilities and public spaces, and the remainder for residential use (Administration of Lishui ETDZ, 2011). Work began in the following year, and Nancheng District was included in the *Urban Masterplan of Lishui City* (*2013 – 2030*). In

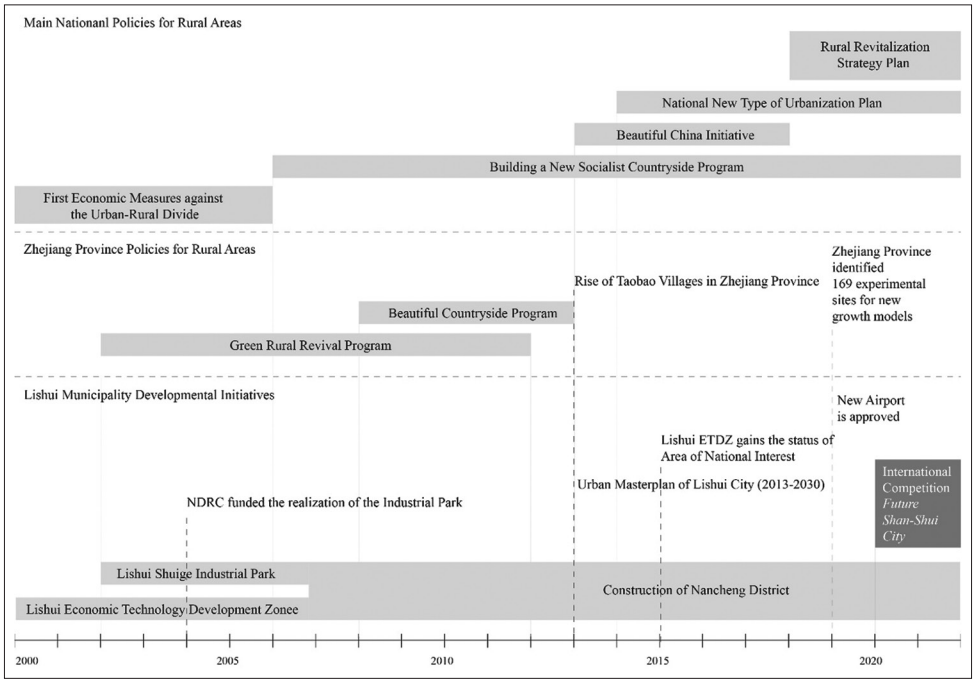

Figure 1. Timeline showing the main national and provincial policies for rural areas, and the initiatives undertaken by Lishui Municipality. Source: Illustration by the author; reprinted (adapted) with permission from Leonardo Ramondetti; Copyright © 2023 Leonardo Ramondetti

parallel, the local administration established the Liandu-Yiwu Shanghai Cooperation Industrial Park, a low-carbon district on two sites. The first site covers 250 hectares close to Bihu Town, 18 km southwest of Lishui city. Since 2008, this development has been gradually equipped with infrastructures, and inhabited. The second site covers 250 hectares along the mountainous western edge of the valley plain, 17 km southwest of Lishui city. Between 2013 and 2015, it was leveled and divided into plots. Thanks to this set of initiatives, the State Council raised Lishui ETDZ to the status of "area of national interest," and in 2019, approval was given for the construction of an airport to the south of the new district (Government of Zhejiang Province, 2019). Today, most mobility infrastructures have been completed; about half of the area for industrial use has been leased, while housing, services, and parks are under construction. As a result, Lishui ETDZ has 40,000 inhabitants, and 1100 companies and accounts for 20% of the GDP of Liandu District (Lishui Bureau of Statistics, 2020).

However, this development model, centered on heavy industry and urbanization, has impacted the environment (Wang & Lu, 2011), and failed to stem migration and depopulation in rural mountainous areas (Shen & Li, 1996; Zhang & Song, 2003). At the same time, many doubts have been voiced regarding the ability of minor municipalities like Lishui to effectively fulfill their ambitious plans for urban growth (Shepard, 2015; Wu, 2015). In this regard, national and provincial administrations are now pressing for alternative developmental strategies to boost the primary sector. This is especially relevant for the municipality of Lishui, where agriculture represents 7% of its GDP and employs 475,000 people (one in five residents), with revenues that have more than tripled to 15.5 billion CNY over the past two decades. Here, land reclamation has been at the heart of this new strategy. In Liandu District, which accounts for 20% of the agricultural production of Lishui Municipality, the agricultural land area has more than doubled, with an increase of 5700 hectares (Li *et al.*, 2016; Lishui Bureau of Statistics, 2020).

Furthermore, new policies to develop environmental and cultural resources and to promote tourism have been enacted (Government of Zhejiang Province, 2018; Zhejiang Provincial Department of Culture and Tourism, 2018). In January 2020, the Zhejiang Province identified 169 experimental sites for new growth models (Government of Zhejiang Province, 2020). Among these, two strategic areas have been designated in Liandu District: Bihu Town, as an experimental site for urban-rural integration; and Dagangtou Town, as a place of great cultural and tourism value.

4. *Future Shan-Shui City*: Three projects

In line with the change in Lishui urbanization strategy, the municipality launched the international competition

Future Shan-Shui City in May 2020.[1] The competition took place in two phases. The first phase attracted 93 applications from individual firms or groups of experts, design institutes, and universities. Each participant was required to submit a portfolio and a preliminary draft of the strategy for the overall site. Based on these documents, ten contestants were shortlisted for the second phase.[2] They were asked to develop a territorial project for the overall area, in-depth urban plans for five different sites, and an architectural prototype for each (Lishui Municipal People's Government, 2019). The competition set four main objectives: (i) the development of new typologies of settlement to curb land consumption and repopulate the mountainous areas; (ii) the promotion of new economic activities based on agriculture, tourism, and well-being; (iii) the re-organization of services and facilities throughout the site; and (iv) the preservation and enhancement of the local landscape. Within this brief, the theme of *shan-shui*, that is, the landscape in its pictorial and contemplative meaning, underscores the focus on the environment, while the adjective *future* encourages experimental and innovative approaches.

The site for the planning activities is a 152 sqkm area centered on a valley 20 km southwest of Lishui. The main industry on the valley floor is agriculture with 5000 hectares of farmland (Figure 2). This is surrounded by mountains featuring forests, small waterways, and terraces for rice cultivation (Figure 3). This environment is prone to hydrogeological events, such as flooding and landslides, during the rainy season from April to June (Liu *et al.*, 2020b). The Ou River flows from the southwest to the northeast of this valley (Figure 4). The riverbed ranges from 120 to 350 m in width, but in places, it is more than 1 km wide. Apart from the new developments close to Bihu and Dagangtou Towns, most of the settlements are agricultural villages with a population from 500 to 2000 people. The typical dwellings are two- or three-story, single-family houses, in concrete and brick (Figure 5). This site has a total population of about 85,000 people; more than 85% of residents are classified as rural citizens (*hukou*) (Lishui Bureau of Statistics, 2020).

Within this area, four sites were assigned to all the participants to develop site-specific projects, plus a fifth one specific to each competitor (Figure 6). These sites varied from mountainous terrains with traditional villages,



Figure 2. Cultivations in Lishui Valley, 2021. Source: Photo by Raul Ariano; reprinted (adapted) with permission from Raul Ariano; Copyright © 2021 Raul Ariano



Figure 3. Lishui mountains and the agricultural villages, 2021. Source: Photo by Raul Ariano; reprinted (adapted) with permission from Raul Ariano; Copyright © 2021 Raul Ariano

[1] The competition was organized by the Lishui Municipal People's Government with Lishui Municipal Development and Reform Commission, and Dwellings in Lishui Mountains Project Planning and Construction Leading Group Office; and the planning executive was the Shanghai One-Tenth Art Space Co., Ltd. The jury was composed by Jiaming Cao (Architectural Society of China), Kai Cui (Chinese Academy of Engineering), Yansong Ma (MAD Architects), Weidong Ma (Architecture and Urbanism), Nishizawa Ryue (SANAA Architects), Alan J. Plattus (Center for Urban Design Research), Zhiqiang Wu (Chinese Academy of Engineering and Tongji University), Shiling Zheng (Chinese Academy of Science and French Academy of Architecture and Science), and Jian Zhuo (Shanghai Tongji Urban Planning and Design Institute and Urban Planning Society of China).

[2] The ten finalist are: Boeri Architecture Design Consulting + Tongji Architectural Design + WWSZ; UNStudio + Gross Max + Systematica; SCUT + Politecnico di Torino; Eco Systems Design Studio + Cai Yongjie; Canada GA City Planning and Landscape Design + Zhejiang Province Institute of Architectural Design and Research + ZIAD; CAUPD, Architectural Design and Research Institute of Tsinghua University; Olivier Greder Architects; China Architecture Design and Research Group; DE-SO Asia Design Consultant Joint Stock Company + DDON Planning and Design.



Figure 4. The Ou River, 2021. Source: Photo by Raul Ariano; reprinted (adapted) with permission from Raul Ariano; Copyright © 2021 Raul Ariano



Figure 5. Traditional houses in Lishui Valley, 2021. Source: Photo by Raul Ariano; reprinted (adapted) with permission from Raul Ariano; Copyright © 2021 Raul Ariano

to agrarian landscapes and natural reserves along the Ou River. Such a heterogeneity offers a unique opportunity to develop an overall strategy incorporating the themes of the competition, but sensitive to the specificity of each area. This was achieved by the top three entries in the competition: *Future Super Shan-Shui Park* by the CAUPD, *A Symbiotic Urban Change* by Olivier Greder Architects, and *Prosperous Lishui* by SCUT and Politecnico di Torino. As summarized in Table 1, these projects adopt different approaches and prioritize diverse features. The result is a collection of different visions for the *Future Shan-Shui City*, which interpret Chinese rural areas in radically different ways. These schemes are discussed in greater detail in the next sub-paragraphs.

4.1. *Future Super Shan-Shui Park* by the CAUPD

The project *Future Super Shan-Shui Park* by the CAUPD (China) focuses on the environmental features of the

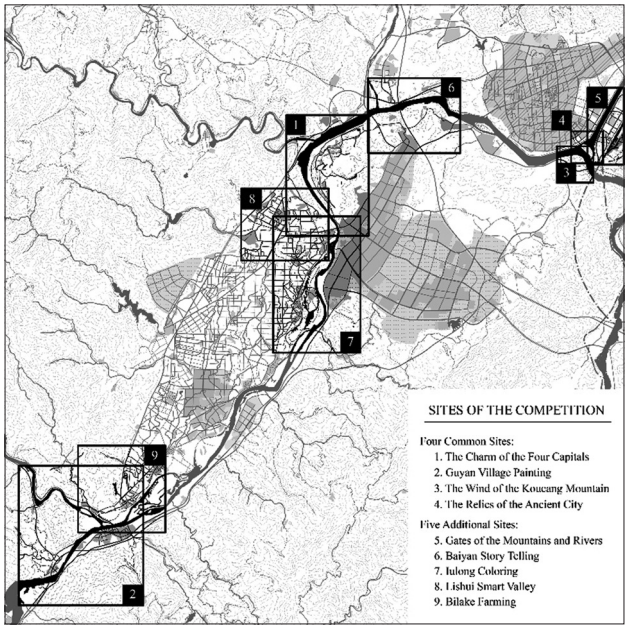

Figure 6. Map of the sites for the competitors. Source: Map by the author; reprinted (adapted) with permission from Leonardo Ramondetti; Copyright © 2023 Leonardo Ramondetti

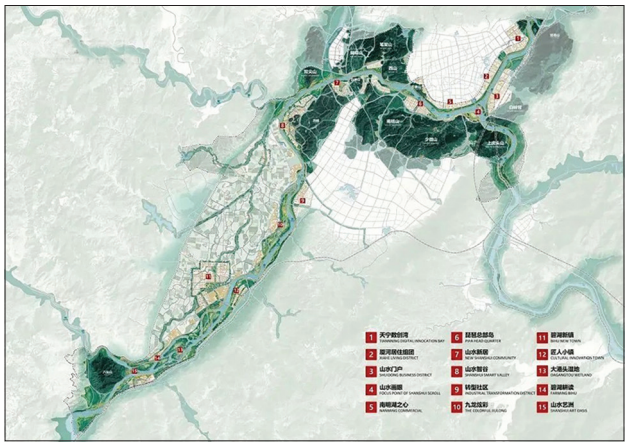

Figure 7. *Future Super Shan-Shui Park* overall plan. Source: One Tenth Culture & Art Company; reprinted (adapted) with permission from One Tenth Culture & Art Company; Copyright © 2020 One Tenth Culture & Art Company

local ecosystem to promote a new type of urbanization in harmony with nature. The plan allocates 63% of the area to ecological preservation, 17% to agriculture, and 14% to new urban developments while the remaining 6% is existing villages. The overall strategy is based on three points: the improvement of the environment, particularly the water system, its flora and fauna; the development of a new urban system along the Ou River; and the promotion of a new economy based on cultural activities and innovative industries (Figure 7).

The plan fosters the renaturing, preservation, and enhancement of the local environment. Within this framework, the areas along the river are designated as protected zones, which form a single nature reserve for animals and native vegetation, with a small number of pavilions for responsible interaction between people and nature. These wetlands are also helpful in water management, reducing the risk of floods while phytodepurating the water (Figure 8). In parallel with the renaturing process, the agricultural villages in these zones are to be renovated to harmonize with the surrounding countryside. Finally, the sites for new facilities and businesses also feature rain gardens to blend the new developments into their natural surroundings, and to promote a healthy environment for the new inhabitants.

Indeed, within this new landscape, the main urban layout is a linear system that runs along the Ou River from Lishui to Dagangtou Town, which is composed of eight "shan-shui units" interspersed with wooded mountains

Table 1. Key strategies adopted by the three awarded projects in the *Future Shan-Shui City* competition

Project	Author	Approach	Design strategies
Future Super Shan-Shui Park	CAUPD	Environmental approach	• Preservation and valorization of the riverfront with attention to the environment • Urbanization harmonized with the mountainous scenery • Cultural activities, high-tech industries, and research as core businesses
A Symbiotic Urban Change	Olivier Greder Architects	Morphological approach	• Incremental addition to the existing villages to create a mixed-use development • Preservation of the traditional lifestyle • Tourism and recreational activities as core businesses for the area
Prosperous Lishui	SCUT Politecnico di Torino	Landscape approach	• Modernization of the agricultural system • Preservation of the scenic spots • High-tech agriculture and cultural activities as core businesses for the area

CAUPD: China Academy of Urban Planning and Design; SCUT: South China University of Technology

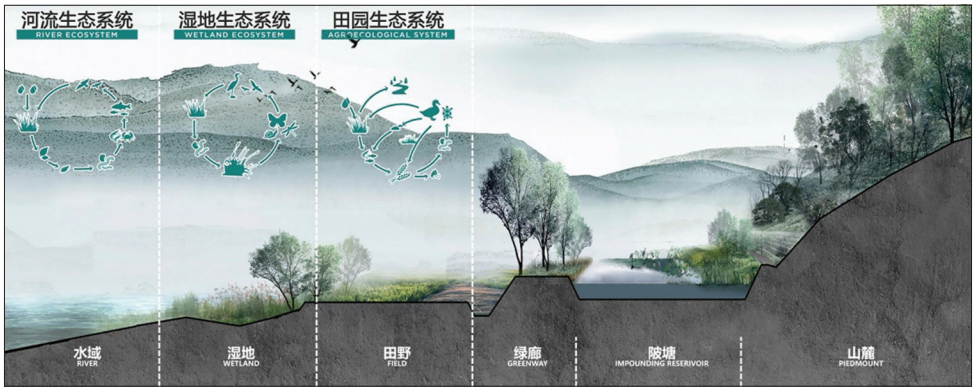

Figure 8. The new ecosystem along the Ou River. Source: One Tenth Culture & Art Company; reprinted (adapted) with permission from One Tenth Culture & Art Company; Copyright © 2020 One Tenth Culture & Art Company



Figure 9. View of the "shan-shui units." Source: One Tenth Culture & Art Company; reprinted (adapted) with permission from One Tenth Culture & Art Company; Copyright © 2020 One Tenth Culture & Art Company

and agricultural fields. This urban structure takes greater account of the visual impact of the built-up areas on the landscape. Hence, a continuum is created along the river between construction and nature thanks to the pace and density of the shan-shui units, each limited to a 1 km river frontage (Figure 9). Similarly, the height of the buildings is in proportion to the altitude of the mountains in the background. These shan-shui units differ from real estate compounds, in that they are low-density housing developments themed on their settings: living inside the gardens, living inside the fields, living inside the valley, and living near the river.

Finally, the proposal envisages a new economy for the area based on three sectors: tourism, high-tech, and R&D (Figure 10). *The Wind of the Koucang Mountain*, *The Relics of the Historic City,* and *the Guyan Village Painting* are scenic spots for leisure and cultural activities. Conversely, the *Gates of the Mountains and Rivers* and the *Baiyan Story Telling*, the newly urbanized areas close to Lishui city, are for digital industries, high-tech services, and business. Finally, the new shan-shui units located in proximity to the agricultural plain in *The Charm of the Four Capitals* and *Bilake Farming* are for research centers and educational facilities. This mix of spaces and functions promotes a landscape rich in aesthetics, where traditional architecture meets new trends, and the rural and the urban combine harmoniously.

4.2. *A Symbiotic Urban Change* by Olivier Greder Architects

The project *A Symbiotic Urban Change* by Olivier Greder Architects (China) aims at reconnecting humankind and nature in a unique interdependent environment, where both coexist harmoniously. With respect to the other proposals, this one focuses on the development of multiple settlements promoting various ways of inhabiting the valley. According to the specificities of each site, these new built-up areas define relations with the environment based on their diverse morphologies (Figure 11).

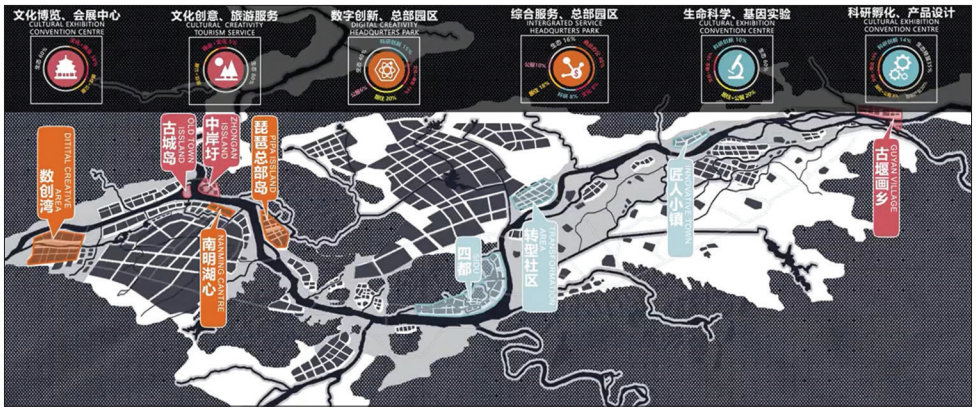

Figure 10. New economic activity within the Lishui Valley. Source: Courtesy of One-Tenth Culture & Art Company; reprinted (adapted) with permission from One-Tenth Culture & Art Company; Copyright © 2020 One Tenth Culture & Art Compan



Figure 11. The different living experiences along the Lishui Valley. Source: One Tenth Culture & Art Company; reprinted (adapted) with permission from One Tenth Culture & Art Company; Copyright © 2020 One Tenth Culture & Art Company



Figure 12. View of Bihu Town as "15-min city." Source: One Tenth Culture & Art Company; reprinted (adapted) with permission from One Tenth Culture & Art Company; Copyright © 2020 One Tenth Culture & Art Company



Figure 13. New settlements along the Ou River. Source: One Tenth Culture & Art Company; reprinted (adapted) with permission from One Tenth Culture & Art Company; Copyright © 2020 One Tenth Culture & Art Company

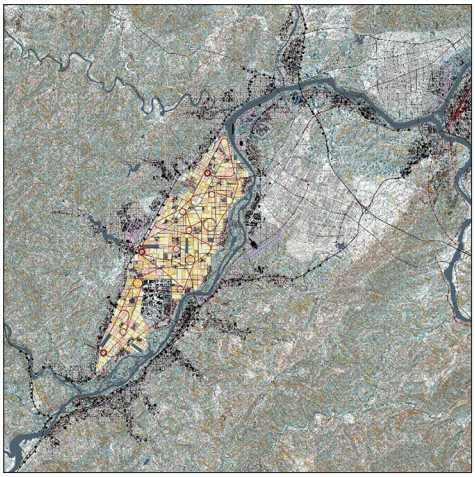

Figure 14. *Prosperous Lishui* overall plan. Source: Courtesy of SCUT and Politecnico di Torino; reprinted (adapted) with permission from SCUT and Politecnico di Torino; Copyright © 2020 SCUT and Politecnico di Torino

In Bihu Town, the project plans to reclaim 2 sqkm of industrial land for agriculture and to adapt the road grid for new housing for rural villagers. These new developments form a membrane of high-density courtyard buildings, with recreational and business activities on the first floor. The resulting open spaces do not have strictly defined functions but can be used and adapted freely by the inhabitants for drying crops, temporary markets, and recreational activities. In this way, the new housing provides an experience of urbanity while preventing a complete detachment from farmers' traditional habits. Furthermore, thanks to the wide variety of functions and the new system of connections, Bihu Town is laid out as a "15-min city," that is, a new mixed-use settlement where inhabitant may access all the major facilities in less than a 15-min walk (Figure 12).



Figure 15. *Prosperous Lishui* overall view. Source: Courtesy of SCUT and Politecnico di Torino; reprinted (adapted) with permission from SCUT and Politecnico di Torino; Copyright © 2020 SCUT and Politecnico di Torino

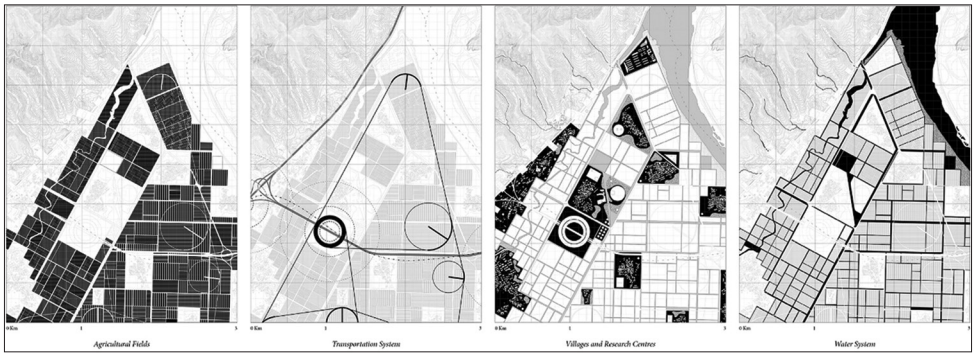

Figure 16. Plan of *Lishui Smart Valley*. Source: Courtesy of SCUT and Politecnico di Torino; reprinted (adapted) with permission from SCUT and Politecnico di Torino; Copyright © 2020 SCUT and Politecnico di Torino

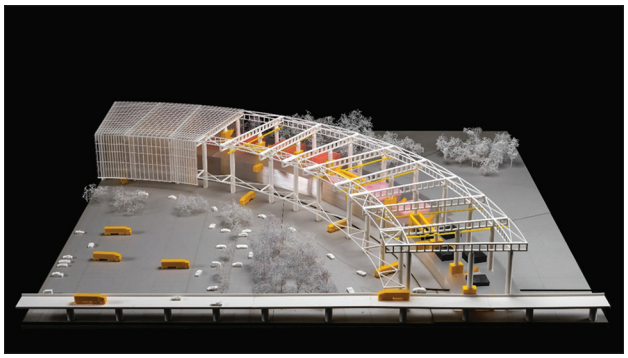

Figure 17. Model of the logistics hub. Source: Courtesy of SCUT and Politecnico di Torino; reprinted (adapted) with permission from SCUT and Politecnico di Torino; Copyright © 2020 SCUT and Politecnico di Torino

In *Baiyan Story Telling*, the project envisages the preservation of seven existing villages, so the high-rise compound under construction to relocate the villagers will instead be turned into a mixed-use neighborhood, with housing, offices, retail market, and vertical farms. This new form of composite development, rich in functions and uses, is then to be expanded to the whole area. Here, small mixed-use towns are to be built on the summits of each of the three hills facing the river. Siyao Wellness Town is dedicated to sport facilities, health centers, and nursing homes; Qian Wu Recreative Town is home to tourism services, hotels, agritourism, and a panoramic monumental tower; finally, Xiao Bayan Mother Town will be the core of the area, where the main markets, education facilities, and amenities for the inhabitants are located. The three towns are planned for 5500, 4000, and 9500 inhabitants, respectively; however, since these centers are mostly for tourism and recreational uses, the population is expected to double during the peak season and national holidays. Within this strategy, <25 hectares are for construction, while the remainder is reserved for forests and agricultural fields. A similar development is also proposed for the Charm of the Four Capitals, where new mixed-use settlements are planned to accommodate research activities centered on agribusiness and high-tech industries.

Two other types of dwellings are proposed for the *Gates of the Mountains and Rivers* and *Guyan Village Painting*. Since the former is close to Lishui city, the project envisages a high-density settlement with buildings in symbiosis with the river (Figure 13). A system of stilt houses is to be built along the banks of the Haoxi Brook to accommodate the new inhabitants, offering an unconventional way of living with water. Conversely, the *Guyan Village Painting* site is home to traditional wood houses, which establish close relations with the surrounding forests. These houses are to accommodate local and international artists, offering the unique experience of Lishui picturesque scenery.

Finally, two sites are entirely devoted to educational and recreational activities: *The Wind of the Koucang Mountain* and the *Relics of the Historic City*. The first is a 32-hectare site on the southern bank of the Ou River, where the Zhongan Expo-Park Town is proposed. With only 27% of the area for construction, this space is designed to accommodate eight major pavilions to host the most important exhibitions and cultural activities in the metropolitan area. It is surrounded by minor buildings for sport activities and hospitality. This group of buildings has a park at the center, while the riverbank is turned into a wet area to protect the site from flooding. The Zhongan Expo-Park Town is also connected to the *Guyan Village Painting*, which is to become the Gucheng Shan-Shui Recreational Island. This is home to a restored traditional village with small agricultural fields for educational activities.

4.3. *Prosperous Lishui* by SCUT and Politecnico di Torino

Unlike the other proposals, *Prosperous Lishui* by SCUT (China) and Politecnico di Torino (Italy) focus on



Figure 18. Plan of *The Charm of the Four Capitals*. Source: Courtesy of SCUT and Politecnico di Torino; reprinted (adapted) with permission from SCUT and Politecnico di Torino; Copyright © 2020 SCUT and Politecnico di Torino

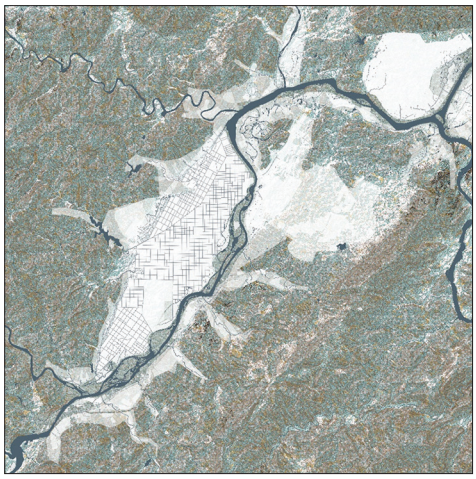

Figure 19. *Prosperous Lishui* environmental system. Source: Courtesy of SCUT and Politecnico di Torino; reprinted (adapted) with permission from SCUT and Politecnico di Torino; Copyright © 2020 SCUT and Politecnico di Torino

agriculture as the core activity, and envisions the agrarian valley south of Lishui as the new green center of the emerging metropolitan development. Hence, the project combines the best features of city and countryside to produce an urbanized agricultural landscape where new settlements and facilities coexist with high-tech farms and traditional villages. In this regard, most of the flatland is reserved for agriculture, while new developments are situated either along the existing mobility infrastructures at the foot of the mountains, or on the slopes (Figures 14 and 15). Based on this layout, the project focuses on three goals: the reorganization of farmland to increase agricultural production, the development of new settlements and housing to populate the mountain slopes, and the preservation of the environment.

The restructuring of the farmland aims to consolidate smallholdings to increase output. At present, fields range from 0.1 to 0.5 hectares in size, and much of the land is rented to large agribusinesses. The project envisages lots from 5 to 12 hectares, for a total 3500 hectares of arable land. While encouraging crop diversity and the preservation of native varieties, this restructuring also promotes the use of new agricultural technology. The plan proposes 180 greenhouses over 860 hectares, 150 vertical farms, and a system of educational facilities, such as schools, research centers, and laboratories. Furthermore, as visible from *Lishui Smart Valley*, an innovative infrastructure for the movement of goods and the production of green energy connects the agricultural fields to three major logistics hubs (Figures 16 and 17).

To save as much flatland as possible for cultivation, the proposal locates the major constructions at the side of the agricultural valley, close to the existing main mobility systems. These are upgraded with a new system of sustainable mobility made up of trains and subway lines to reduce air pollution. Along this new transport system, in sites such as *The Wind of the Koucang Mountain*, new high-density residential areas are planned, together with metropolitan facilities such as stadiums, museums, and large hospitals. The result is an "urban ring" that encircles the plain, and enriches the entire valley with services, recreational areas, and activities. As visible from the urban layout proposed for *The Charm of the Four Capitals*, this urban system also connects the side-valleys, integrating into the metropolitan area small settlements, forests, water basins, and terraces for rice cultivation (Figure 18). This traditional landscape is preserved and enhanced with small, high-quality architectures, to promote cultural activities, and tourism industries.

The side valleys and the mountain slopes are also home to a complex and fragile ecology based on water (Figure 19). In this respect, in areas such as *Guyan Village Painting* and *The Relics of the Historic City*, the project promotes the construction of small dams to optimize water management through the year, and the reinforcement of the existing

basins to produce hydroelectric energy. Similar initiatives are proposed for the agricultural plain. Based on the new farmland layout, the number of waterways is reduced, and, while the historical canals are restored, the new ones are enlarged for navigation. Together with this, the proposal entails the construction of new locks, water basins, and fishponds. Finally, the project promotes the consolidation and renaturing of the banks of the Ou River in two ways: where the riverbed narrows, "hard banks" are planned by reinforcing the existing borders; vice versa, "soft banks" are envisioned where the riverbed widens: wetlands to absorb the excessive water of the rainy season, which are also avifaunal oases accessible to visitors thanks to bridges and floodable walkways.

5. Conclusion

This article has examined the greater attention of today's planning activities to the cohesive development of urban and rural areas. Particularly, the priority has shifted from keeping the city expanding to preserving the land for agriculture and protecting the environment. Initially driven by national policies, this shift is now generating a plethora of practical initiatives at a local level. The new urbanization model of Lishui Municipality, including the *Future Shan-Shui City* competition, is just one example of this trend. Since 2020, the One-Tenth Culture & Art Company alone has promoted six other competitions to envision new ways of living rural and marginal areas of Zhejiang Province (One-Tenth Culture & Art Company, 2018). Similar initiatives have sprung up everywhere in China: the Xiong'an Smart City close to Beijing has been targeted as a pilot project for testing new urban-rural relations under the aegis of the national government (Veglianti *et al.*, 2021); in the Central Plains, the construction of numerous agricultural parks and the flourishing e-commerce businesses are raising living standards in rural areas (Ramondetti, 2022); finally, even in arid Lanzhou, new developments are building water-conservation facilities, high-tech greenhouses for cultivation, and transport systems for moving produce (Safina *et al.*, 2023). These many projects show the efforts to envision new economies, and ways of inhabiting the rural and marginal areas of China while moving away from the logic of urban entrepreneurialism (Ramondetti, 2023).

This break from the past is clear in the projects for the *Future Shan-Shui City* competition: they all share a vision of the countryside as a composite landscape to be enriched in ecology, public services, and high-tech production. These projects hybridize new technologies and traditional culture, contemporary dwellings and ancestral settings, urban lifestyle, and environmental comfort. Not only does this urbanization differ from the previous urban-centric models for Lishui expansion but also from the more general trends in urbanization that characterized China over the last few decades: they are as far from the expressive urban planning of the 2000s (e.g., the nine new towns around Shanghai), as from the eco-development of the 2010s (e.g., Zhengbian New District in Zhengzhou, Henan; and Sino-German Ecopark in Tsingtao, Shandong). By eschewing the morphological approach that characterized the urban design of that first period, and the vague configurations of the projects of the last decade, these new proposals provide a clear urban organization through forms and quantity, while preserving a certain degree of flexibility. Furthermore, by adopting diverse approaches, they highlight several issues that contemporary planning must address, thus opening to a reflection on themes that transcend the Chinese context.

The projects presented in this paper are exemplary. In overcoming the traditional distinction between urban and rural spaces, *Future Super Shan-Shui Park* by the CAUPD engages with the environment as the primary resource of the new city. This approach recalls the recent debate in design theory on the need to abandon a human-centric vision to take care of all life forms equally (see Rawes, 2013). Conversely, by focusing on the inhabitants' well-being, *A Symbiotic Urban Change* by Olivier Greder Architects proposes mixed-use morphologies to reconnect the urban fabric to the natural landscape. This search for the right measures, densities, and mix of uses is not new to urban planning (see Schenk, 2022). However, in engaging with both new technologies and traditional local characteristics, the project contributes to the current debate on preservation and renovation. Finally, *Prosperous Lishui* by SCUT and Politecnico di Torino, focused on the spaces for labor, envisions a new urban system in the form of a territorial agricultural park where high-tech services and facilities blend into nature reserves and croplands. This strategy addresses the need to increase food production while integrating new specialized landscapes within local ecologies and existing urban realms. The result is a domestication of the so-called "operational landscapes" (Brenner & Katsikis, 2020), which, instead of being mere technical sites for resource extraction, become fully fledged parts of the city.

The engagement with such topics, which transcend the specificity of a single place, makes the visions developed in today's China significant to the wider debate on innovative urban-rural relations. Indeed, the themes raised by this competition, and the strategies to address them, have also been at the core of many international contests and public programs all over the world in recent years.[3] These

3 Consider, for instance, the consultation for Gran Paris in 2007, the Bruxelles-Métropole 2040 in 2010, and the more recent consultation for Grand Genève in 2018.

include the transformation of the countryside brought about by changes in the economy and advances in farming techniques, the preservation of land and environment, and access to high-quality services. With respect to these topics, the projects currently underway in China seem to be at the forefront of urban and architectural experimentation (Petermann, 2020; Ramondetti, 2022; Semprebon, 2022; Wang, 2020). While divergences from the vision of these scenarios could still lead to the same problems which have characterized previous urbanization (Shepard, 2015; Williams, 2017; Bonino *et al.*, 2019), today's development appears radically different: administrations demand high-quality projects, expertise from all over the world is available, and construction techniques and materials have improved enormously. Consequently, urban planners and architects working in China are at the vanguard of this process, and their projects are relevant not solely for their local outcomes but also for their impact on the contemporary culture of urban planning and design.

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Conflict of interest

The author declares that he has no competing interests.

Author contributions

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