

# Cultural Landscape as an Art of Survival and Its Implications for Contemporary Landscape Architecture

Hexing Chang<sup>a, b</sup> & Huixian Wang<sup>b</sup>

<sup>a</sup> College of Architecture and Landscape Architecture, Peking University, Beijing (People's Republic of China)

<sup>b</sup> Turenscape Company Limited, Beijing (People's Republic of China)

**Abstract** Across the vast territory of China, numerous cultural landscapes have been shaped over centuries through the wisdom of local inhabitants, who maintained a stable and sustainable human-land relationship. These landscapes can be called an “art of survival,” forged through countless attempts, adaptations, failures, and successes, involving a complex interplay of natural, biological, and cultural processes with the land. In the era of urbanization, globalization, and industrialization, urban development in China faces the challenges of losing cultural identity and of a deterioration of human-land relationships. Traditional cultural landscapes, as manifestations of an art of survival, can inspire contemporary urban planning and landscape design in China and around the world. They provide innovative concepts and actionable guidelines for rebuilding harmonious relationships between humans and the land.

**Keywords** Cultural landscapes, art of survival, landscape architecture, ecological infrastructure, human-land relationship.

## Chinese cultural foundations: cultural landscapes as an art of survival

Approximately 4,000 years ago, a harrowing scene unfolded at the Lajia (喇家) archaeological site in China's Qinghai province: at the base of a wall, a woman knelt with her young child in her arms, looking up to the sky in desperate prayer for a savior (Xia, Yang, and Ye 2003). This poignant tableau, discovered among the skeletal remains at the Lajia relics near the Yellow River, captures a moment of sudden calamity that crystallized the helplessness of humanity in the face of natural forces and their yearning for a transcendent “divine” intervention. This scene was part of

a widespread, simultaneous occurrence of natural disasters, including floods and earthquakes, which led to the destruction of the Lajia village (Zhou and Zhang 2015). Such disastrous events were not uncommon in ancient China. Based on these catastrophic experiences, which cost countless lives, the practice of seeking appropriate and auspicious habitats has been a central theme in the tragic yet poignant narrative of China's 5,000-year relationship with its lands.

### **Hydraulic management**

The mythological ruler Yu the Great, a prominent figure in Chinese culture, is celebrated for possessing great understanding of how to befriend the floods and how to cultivate and develop farmlands in appropriate places. Due to his skills in planning the landscapes of ancient China, he has traditionally been esteemed as a major deity. Additionally, there are historical figures such as Li Bing and his son, who oversaw the construction of the Dujiangyan irrigation system in present-day Sichuan province. They have been revered as local deities due to their successful management of water in specific regions. Their work is said to have transformed a flood-prone river basin into fertile farmland, which continues to sustain millions of people in Sichuan today.

### **Site selection**

Historically, geomancers who study both celestial signs and terrestrial forms played a crucial role in selecting dwelling sites and discerning auspicious locations across the vast network of villages and towns in China. These practitioners often associated the local topography with mythological entities such as the Black Tortoise, Vermilion Bird, Azure Dragon, White Tiger, and various spirits and deities. This belief of China's landscape being inhabited by divine spirits gave rise to a profound integration of spirituality and environmental consideration in traditional Chinese settlement planning. Site selection is therefore to be seen not merely as the practical act of choosing a place to live but also a mode of environmental adaptation deeply embedded in Chinese culture. This process encompasses a complex system for interpreting environmental conditions. It represents a choice made after thorough research and utilization of natural conditions such as geography, climate, and hydrology.

### **Field creation**

Fields reflect the true relationship between humans and the land, embodying the necessity for people to adapt to natural processes and patterns for their production and livelihood. Across diverse regions, humans have used minimal labor, resources, and material energy to create fields perfectly suited to support the growth of a wide range of crops, from aquatic to early maturing species. The technology of field construction can be summarized by the term "cut and fill." Functional cut balanced with functional fill creates a field. Cut and fill should be viewed as a single integrated action, not two separate ones, and it occurs on a human scale, within the capabilities of human and animal power (Yu 2007). Finally, fields are also about the storage, conservation, diversion, and utilization of water resources, forming a systematic engineering approach.

### **Cultivation and harvest**

The field system encompasses not only the selection, cultivation, and maintenance of crops but also a comprehensive understanding of hydraulic management, site selection, field creation, farming, irrigation, planting, and harvesting. Through crop rotation, intercropping and the exploitation of symbiotic and mutualistic relationships among organisms, people have created productive agroecological systems. Examples of such systems include the mulberry dyke fish ponds of the Pearl River Delta, the Hani terraced fields of Yuanyang in Yunnan province, and the “floating gardens” of the ancient Aztecs of Mexico. Responding to natural disasters such as floods, droughts, earthquakes, and landslides, former generations accumulated wisdom over centuries that has sustained a stable and enduring human-land ecological relationship. It represents the “art of survival” achieved through myriad trials, adaptations, and physiological experiences in interaction with various natural, biological, and cultural processes on the land.

### **The fading of the art of survival and cultural identity**

In the context of rapid urban economic development in China, agriculture has swiftly receded from its dominant position in the socio-economic landscape. Similarly, the everyday, local landscape art rooted in agricultural technology and civilization, which nurtured notions of survival and land stewardship, has also declined. Starting in the early 1990s, China witnessed the emergence of an “urban cosmetic movement,” followed by a vigorous “new rural construction” campaign that swept across the country. These developments have brought China’s landscapes to the brink of a severe crisis: degradation of ecological integrity, loss of cultural belonging, and disappearance of historical heritage. With the gradual disappearance of old cultural landscapes, how can harmony in the human-land relationship be reconstructed in contemporary times? Contemporary Chinese landscape design faces three main challenges:

#### **The little feet aesthetic**

For nearly a thousand years, young Chinese girls were compelled to bind their feet in order to marry into wealthy urban families. Foot binding initially was a privilege of the upper classes and having “big feet” was seen as synonymous with rural peasants and a rough lifestyle. This custom persisted until the collapse of the Qing Dynasty in 1911. For a long time within Chinese culture, beauty was equated with being unproductive, deliberately crafted, and morbidly dysfunctional rather than natural, healthy, and useful.

This notion of nobility and beauty was not exclusive to traditional Chinese culture. Prior to Spanish colonization, Mayan priests and urban nobles in Central America sacrificed physical integrity to maintain their power and social status, willingly deforming their bodies by flattening their skulls and disabling their limbs, often beginning when they were just a few months old. For centuries, as a declaration of

superiority and power, urban nobles worldwide have held the privilege of defining beauty and refined taste. Foot binding and deformed foreheads are just two of the myriad cultural customs that idolize urban elegance and demean rural simplicity. These cultures share a common trait: they define beauty by betraying innate health, productivity, and survival, which can be referred to as the “aesthetic of little feet.”

In China, the “refined taste” of urban development, architecture, and landscape design evolved in a similar manner as the aesthetic of little feet. For thousands of years, farmers leveraged the art of survival passed down by former generations while adapting to the threats posed by natural disasters. However, with the increasing level of urbanization in China, the fruits of these centuries-old survival experiments—the beautiful rural landscapes—are gradually being deprived of their productivity, self-regulatory capacity, life-supporting ability, and inherent beauty. Much like rural girls forced into foot binding and becoming disabled, these landscapes are rapidly being devastated and abused under the guise of “beautification,” “elegance,” and “modernization.”

### **Cultural identity crisis**

As a primary subject of phenomenological study, identity in the context of cultural landscapes and human geography pertains to the unique geographic characteristics that distinguish one place from another. It involves an adaptation to the spirit of the place, recognizing oneself as belonging to a particular location composed of both natural and cultural phenomena—an encompassing environmental whole (Relph 1976; Seamon 1980). By identifying with a place, humans possess their external world, feel connected to a larger universe, and become a part of this world (Norberg-Schulz 1980). If landscapes are seen as embodiments and symbols of societal ideologies (Cosgrove 1998), then it is reasonable to assert that landscapes serve as identity cards of a country and its culture. When examining the majority of sites listed as national and World Heritage, it becomes evident that the heritage considered representative of Chinese culture is mostly the product of imperial and scholarly upper-class culture. While not denying their achievements, it is essential to ask: Does placing such imperial upper-class cultural landscapes in contemporary urban settings still represent the cultural identity of present-day China?

Meanwhile, faced with the extensive destruction of traditional culture during urban construction booms and the impacts of globalization on regional cultures (Wu 2003), the crisis in urban cultural landscape creation is another manifestation of a cultural identity crisis. The imitation of Western urban architecture and the rise of large plazas in urban landscape construction are clear expressions of this crisis. Caught between the grandeur of China’s imperial past and the complexity of modern Western influences, China finds itself at a loss. What is China’s cultural identity? This is a critical question that contemporary Chinese and global landscape designers must consider.

### **Crisis in the human-land relationship in China**

In China, two-thirds of more than 660 cities face water shortages, and nearly every river flowing through its urban and rural areas is polluted. The country has approximately 25,800 dams that are over 15 meters high, accounting for more than half of the world's total number of dams. For several consecutive years, China has consumed more than 50% of the world's steel and over 30% of its cement annually. Where is all this material going? It is used in the construction of large, monumental plazas and buildings, to line natural riverbeds, and to build dams across rivers. The cost of rapid economic development has been substantial environmental degradation. Original farmlands, natural forests, and grasslands—a diverse mosaic of land types—have been transformed into homogenized urban built areas. These transformations are precipitating a crisis in living space and national ecological security that are both unprecedented in history.

### **It is time for a revolution: reviving the art of survival, and the big feet aesthetic**

Faced with the loss of cultural identity and the increasingly deteriorating relationship between humans and the land in this era of urbanization, globalization, and industrialization, contemporary landscape architecture must take on the mission to reconstruct a harmonious relationship between humans and the earth. Achieving this goal requires a revolution in values, aesthetic perceptions, definitions, and design methods, as well as in practice. This ideological revolution was named the “Big Feet Revolution” (Yu 2006).

It encompasses two key concepts/philosophies:

1. Revive the art of survival: Reinterpret the value of cultural landscapes and derive wisdom from them.
2. Establish the big feet aesthetic: Although ordinary, it prioritizes simplicity and authenticity, using health and productivity as standards. This involves a reappreciation of the beauty of the land and fosterage of respect and care for adapting to both the natural and cultural processes on the land.

It further encompasses actions on two levels (Yu 2016):

1. Think like a “king” and convince the “king:” This involves landscape planning aimed at establishing ecological infrastructure across various scales. It requires adopting a strategic and comprehensive viewpoint typically associated with leadership (“thinking like a king”) and involves persuading those in positions of power (the “king”) of the necessity and benefits of ecological infrastructure.
2. Act like a peasant: This level focuses on the actual transformation of the landscape through design and engineering to construct ecological infrastructure. It emphasizes grassroots, hands-on engagement in the practical aspects of

ecological development, akin to the traditional, meticulous approach of a peasant to land and resource management.

### **Think like a king: from site selection to ecological infrastructure across scales**

Inspired by the ancient practice of site selection and the underlying pursuit of a harmonious environment, Turenscape's approach is to emphasize the importance of maintaining a harmonious relationship with nature in urban planning and landscape design, as well as preserving the harmony between humans and their heritage. Ecological infrastructure planning serves as an approach to achieve these goals. It prioritizes the establishment of ecological safety baselines for urban expansion and specifies protective guidelines, selecting appropriate areas for development and construction. Ecological infrastructure planning operates across multiple scales, including national, regional, and community levels.

### **National ecological infrastructure planning**

National Ecological Infrastructure Planning is a critical strategy for land development and management in China, aimed at maintaining national ecological security while promoting socio-economic sustainability. At the national scale, it involves systematic analysis and evaluation of the five most critical natural processes for maintaining ecological security: water conservation, flood storage, desertification control, soil conservation, and biodiversity protection. The overall plan for a national-scale ecological infrastructure is generated by superimposing ecological security patterns of individual ecological processes classified into three levels of protection: low, medium, and high (see fig. 1 and 2, Yu et al. 2009). The nationwide implementation of national-scale ecological infrastructure requires an integration into the statutory planning system and a permanent protection through legislation and relevant policies, guiding and restraining both disordered urban expansion and human activities. This approach offers valuable insights for China in delineating ecological lands, improving and implementing ecological functional zoning, and regional regulatory policies.

### **Convince the “king”**

Since 1997, Chinese landscape architect and Turenscape founder Kongjian Yu has urged city mayors and urban development decision-makers to recognize the problems and dilemmas caused by current urbanization processes. In 2003, Kongjian Yu and Dihua Li published *The Road to Urban Landscape: A Dialogue with Mayors*. This book criticizes China's unsustainable urban beautification movements and highlights the ecological challenges the country is already facing, a situation which is very likely to exacerbate. Furthermore, the book argues for the necessity of constructing cross-scale ecological infrastructure and establishing ecological baselines for urban development.

In the past 20 years, Kongjian Yu and his firm Turenscape were able to make important achievements with regard to convincing decision-makers on different administrative levels of the necessity to construct ecological infrastructure. In cities like

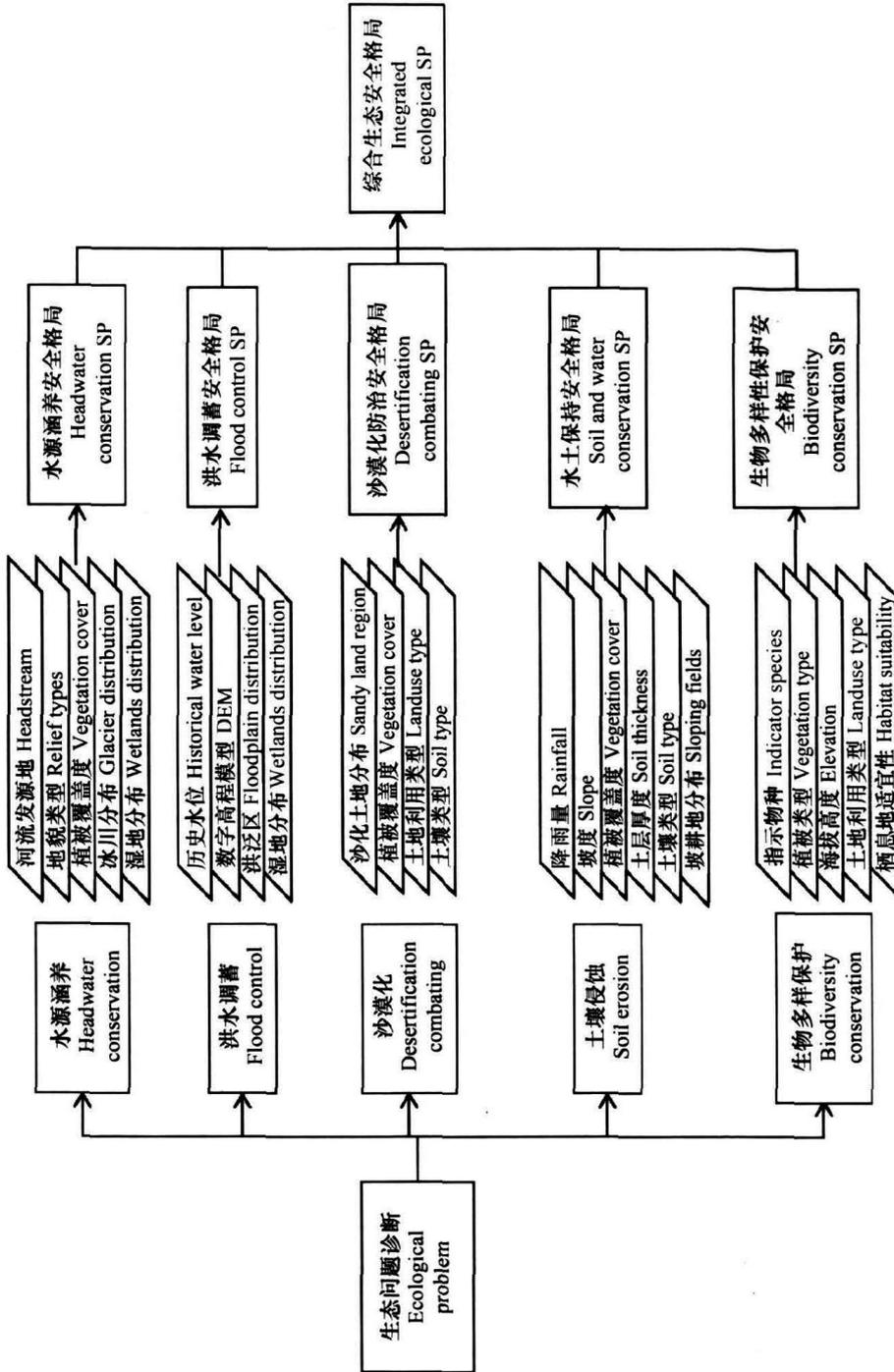


Figure 1 The research framework of China National Ecological Infrastructure. © Turenscape Academy

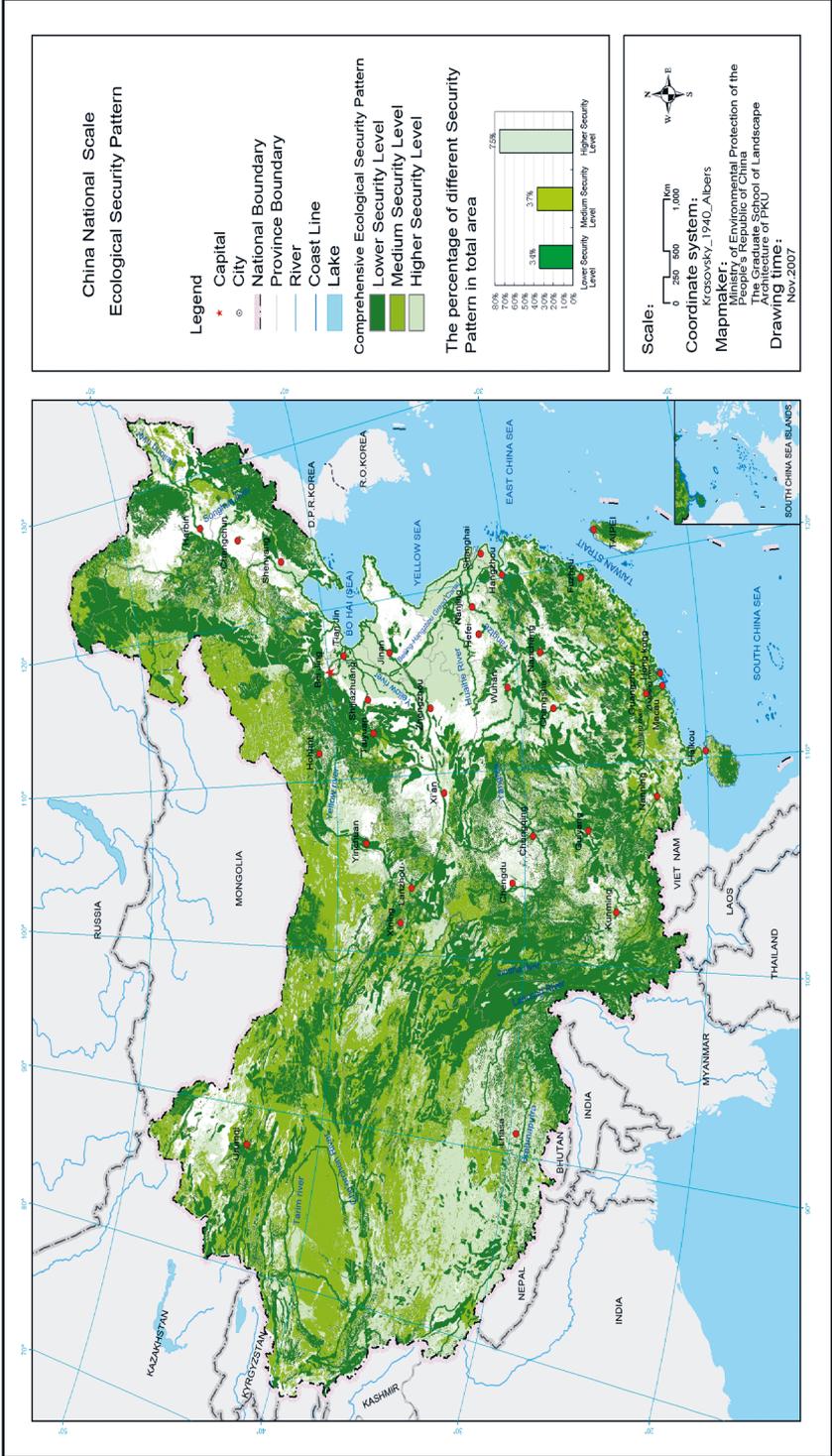


Figure 2 National Integrated Ecological Security Pattern. © Turenscape Academy

Zhongshan in Guangdong, Taizhou in Zhejiang, and Suqian in Jiangsu, Kongjian Yu successfully persuaded the respective mayors to immediately cease river channelization projects or modify ongoing constructions.

In 2006, Kongjian Yu wrote a letter to China's Prime Minister at that time, Wen Jiabao, in which he criticized the pervasive destruction of urban areas over the previous two decades. He highlighted that many rural areas still harbored a rich ecological and cultural heritage and proposed a "negative planning" approach. This approach involved planning and constructing a National Ecological Security Pattern and an Ecological Infrastructure Concept at various scales to identify and safeguard vernacular cultural and ecological assets, thereby setting a baseline for urbanization.

Two weeks after sending the letter, Kongjian Yu was invited to elaborate on his "negative planning" approach and the Ministry of Environmental Protection assigned him the task of drafting a National Security Plan for the entire country. By 2011, this approach had been adopted in the official Methodological Guidelines for National Land Use Planning and National Land Use Zoning (Ministry of Land Resources) and was implemented in various municipal and land use plans, including those in Beijing, Shenzhen, Chongqing, and Guangzhou. One year later, the building of a national ecological security pattern became one of the five major goals in the new central government agenda.

## **Act like a peasant: landscape transformation through design and engineering to build ecological infrastructure**

Inspired by ancient Chinese survival strategies and agricultural wisdom, Turenscape developed replicable construction modules to address challenges and problems on a massive scale in a cost-effective manner. The application of these modules is presented in the following with regard to three aspects: water management, field creation, and cultivation and harvesting.

### **Water management: befriending floods**

In ancient China, communities were established around natural water sources, with people settling along rivers and lakes. Today, as global climate change introduces extreme weather events and issues of unequal water distribution, Turenscape advocates for "befriending floods." This approach involves establishing comprehensive hydrologic ecosystems to effectively cope with flood disasters brought about by monsoonal climates, restoring the self-purification capabilities of urban water systems, and enhancing the resilience of ecosystems.

In Jinhua City, Zhejiang province, the feasibility of the "befriending floods" concept is being tested at Yanweizhou Park. Located in the subtropical region of Eastern China, Jinhua is characterized by a strong maritime monsoon climate, with distinct dry and rainy seasons, the latter often disrupted by flooding. Traditionally, high concrete embankments were constructed along the rivers to prevent flooding.

Turenscape’s design solution involved flood inundation analysis for various recurrence intervals, meeting the flood protection needs for a 50-year event: preserving and restoring natural habitats, combining native vegetation and topography to construct an ecologically resilient flood embankment suited to the flood recurrence intervals. Originally, the site had two rigid flood embankments designed for 20-year and 50-year events, which disrupted the continuity of the wetland ecosystem. In the design of Yanweizhou Park, the hard embankments within the park were demolished, applying the principle of on-site balance between cut and fill to transform the riverbanks into terraced planting zones submersible during floods (see fig. 3).

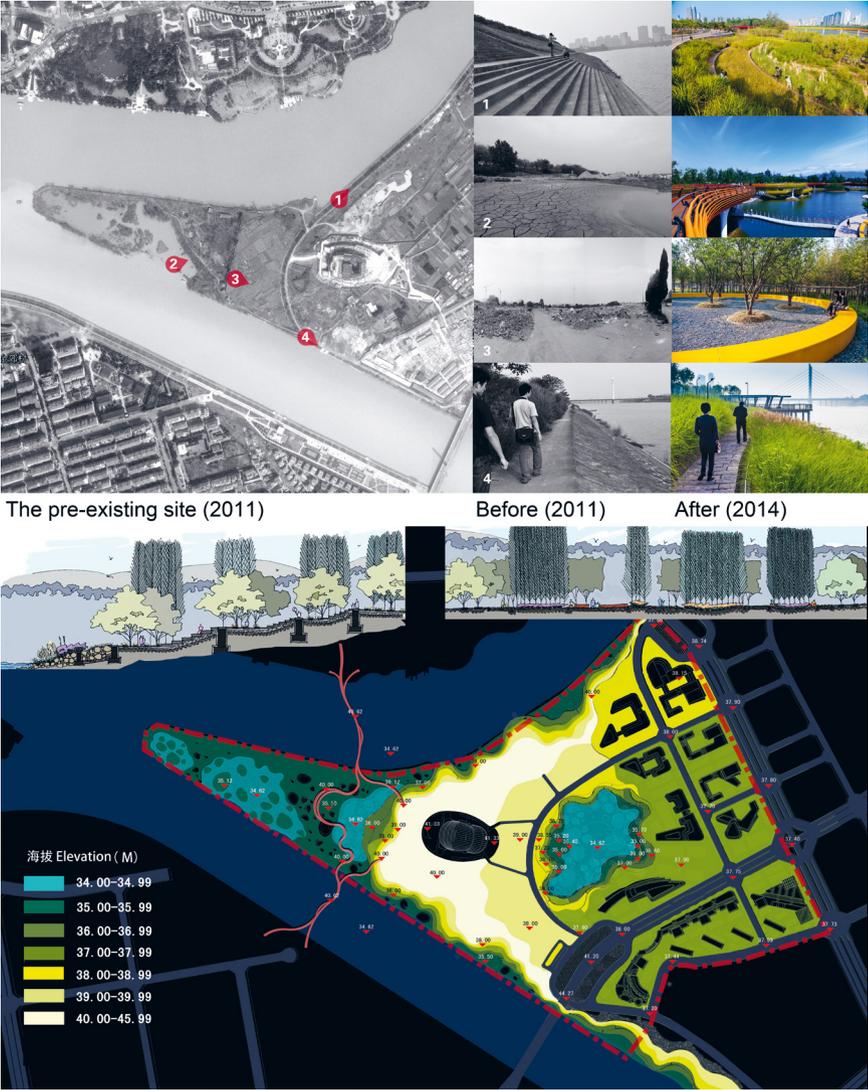


Figure 3 Designed elevation of Yanweizhou Park. © Turenscape Academy



Figures 4-1 to 4-3 The three images (from top to bottom) show Yanweizhou Park during a 100-year flood event, a 20-year flood event, and during the dry season. © Turenscape Academy



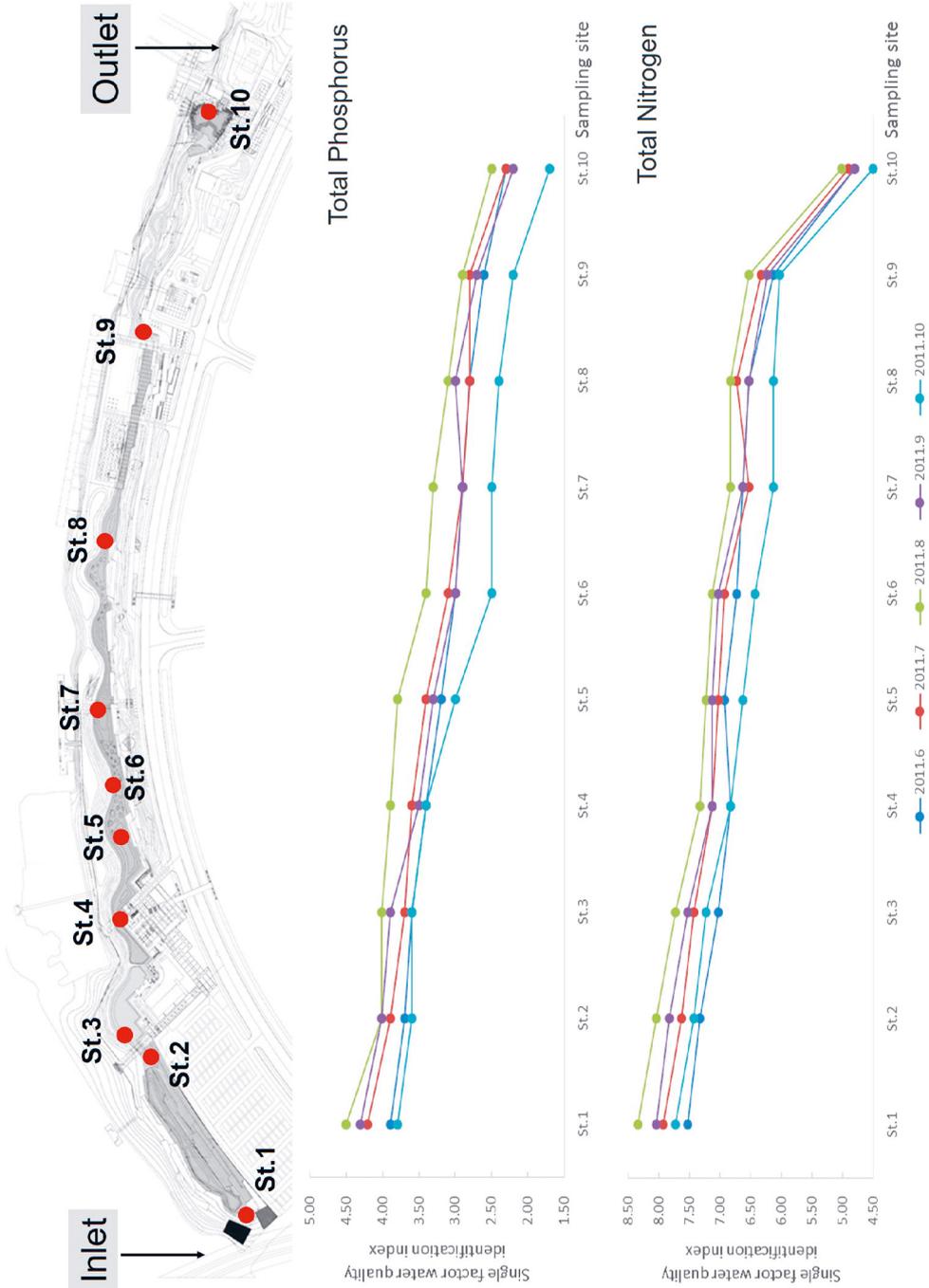


Figure 6 Monitoring the purification effects of terraced wetlands. © Turenscape Academy

The proof of concept for Yanweizhou Park's approach to befriending floods has been validated. Since its completion in 2014, the park has successfully managed both 20-year and 100-year flood events (see fig. 4-1 to 4-3). It constitutes a resilient urban landscape. A 100-year flood will partially submerge the park but still satisfies the most basic transportation needs. The ecological flood embankment design, vegetation adapted to both drought and inundation, and 100% permeable paving all contribute to the landscape's ecological resilience. Furthermore, through the design of universally usable trail systems and pedestrian bridges, the fragmented city is reconnected, fostering community interaction and making the park a focal gathering place.

### **Field creation: cut and fill like a peasant**

At Shanghai's Houtan Park, Turenscape has built an ecological purification system inspired by traditional field construction and irrigation techniques. The design utilizes an inner river to ecologically purify the polluted water from Huangpu River. Through cut and fill methods, an inner river wetland has been transformed into a terraced wetland landscape system stretching 1.7 km in length and 5–30 m in width. It is segmented into various functional zones. When water from the Huangpu River enters the terraced wetlands, it percolates down the terraces, undergoing sequential filtration and thus achieving water purification (see fig. 5 and 6).

The designed terraced wetlands have a water purification capacity of 2,400 cubic meters per day. The purified water not only supports the park's water features but also meets the park's daily needs for irrigation, road washing, and other miscellaneous uses. The principle behind the water purification design follows the natural wetland purification mechanism to structure the artificial wetland (see fig. 7). In this process,



**Figure 7** Terraced wetlands. © Turenscape Academy



Figure 8 Masterplan of Luming Park. © Turenscape Academy

various elements involved in water purification not only serve as aesthetic landscapes and recreational spaces but also as a platform for ecological education.

### **Planting and harvesting: go productive**

Three to four decades ago, 80% of China's urban population still lived in rural areas. China has 20% of the world's population but only 8% of the world's arable land, 10% of which has been lost in the past 30 years due to urban development. Traditional agricultural landscapes not only possess aesthetic value in contemporary landscape design but also represent a reenactment of traditional Chinese cultural landscapes.

Landscape design in Quzhou City's Luming Park, Zhejiang province, for example, integrates agricultural landscapes with low-maintenance native plants, creating a productive and beautiful urban park. The park spans approximately 32 hectares and features a complex topography with upland red sandstone hills, riverbank sandbars, flat farmlands, shrublands, and wild grasses, with a riparian forest of maple and poplar trees along the riverbanks (see fig. 8).

During the time of China's rapid urbanization, such sites were considered disorderly, ugly, and valueless, with their historical and cultural heritage value largely unrecognized (see fig. 9). The common engineering approach to such sites was aggressive leveling to create lawns, which simplified design and construction processes and facilitated the installation of roads, water supply, and drainage systems.

In 2013, Turenscape proposed a new landscape concept, positioning the urban park not merely as a public green space but also as an ecological infrastructure that provides ecosystem services for the entire city. On a macro scale, the project aimed to address current crises, including climate change, food supply, energy security, and water scarcity, while introducing a new aesthetic of productive and low-maintenance landscapes.

The site's original landscape base and natural habitats were fully preserved; abandoned areas were planted with productive crops in seasonal rotation: rapeseed in



**Figure 9** Luming Park before construction. © Turenscape Academy



Figure 10-1 to 10-3 Luming Park after construction. © Turenscape Academy

spring, sunflowers in summer and autumn, and buckwheat in early winter, alongside vibrant rotations of wild herbs (see fig. 10-1 to 10-3). The meadows filled with low-maintenance wild chrysanthemums serve as valuable medicinal materials. The site's original natural surface runoff system was entirely retained, and a series of ecological detention ponds were designed to capture rainwater, enriching the soil moisture. All pavements within the park are permeable; a network of pathways, boardwalks, and pavilions floating above vegetation and streams allow visitors to wander through nature without excessively disturbing natural processes. This transformation of an urban abandoned site into a productive and beautiful landscape also preserves the site's ecological features and cultural heritage.

## Conclusion

For millennia, former generations have engaged in continuous negotiation and reconciliation with nature to secure their right to survive, thereby giving birth to the art of landscape design—a vivid representation of the interplay and connection between humans and nature. In this new era, the balance between humans and nature is once again disrupted, precipitating yet another crisis in human survival. We must establish a new harmonious relationship between humans and the land to navigate through this crisis, addressing environmental and ecological crises, the loss of cultural identity, and the erosion of our spiritual homes.

Contemporary landscape design must reevaluate cultural landscape and the “art of survival” that underlies it. It must find its place and evolve within the authentic human-land relationships, amid the ordinary and the everyday. Spatially, it must guide urban development through the design and construction of ecological infrastructure, thereby safeguarding ecological and cultural heritage.

## References

- Cosgrove, Denis E. 1998. *Social Formation and Symbolic Landscape*. Wisconsin, London: University of Wisconsin Press.
- Norberg-Schulz, Christian. 1980. *Genius Loci: Towards a Phenomenology of Architecture*. New York: Rizzoli.
- Relph, Edward. 1976. *Place and Placelessness*. London: Pion Limited.
- Seamon, David. 1980. *A Geography of the Lifeworld*. London: Croom/Helm.
- Wu Liangyong 吴良镛. 2003. “Lun Zhongguo jianzhu wenhua yanjiu yu chuanguang de lishi renwu” 论中国建筑文化研究与创造的历史任务 (On the historical mission of researching and creating Chinese architectural culture).” *City Planning Review* 城市规划 1: 12–16.
- Xia Zhengkai 夏正楷, Yang Xiaoyan 杨晓燕, and Ye Maolin 叶茂林. 2003. “Qinghai Lajia yizhi shiqian zainan shijian” 青海喇家遗址史前灾难事件 (Prehistoric disaster events at the Lajia Site in Qinghai).” *Chinese Science Bulletin* 科学通报 11:1200–1204.

- Yu, Kongjian. 2006. *The Art of Survival: Positioning Contemporary Landscape Architecture in the New Era*. Beijing: China Architecture and Building Press.
- Yu Kongjian 俞孔坚. 2007. “‘Tian de yishu – baihua jingguan yu xin xiangtu’ 田的艺术—白话景观与新乡土 (The art of terraces: colloquial landscape and new vernacular landscape).” *Urban Environmental Design* 城市环境设计. 6:10–14.
- Yu, Kongjian. 2016. “Think Like a King, Act Like a Peasant: The Power of a Landscape Architect and some Personal Experience.” In *Thinking the Contemporary Landscape*, edited by Christophe Girod and Dora Imhof, 164–184. Princeton: Princeton Architectural Press.
- Yu Kongjian 俞孔坚, Li Hailong 李海龙, Li Dihua 李迪华, Qiao Qing 乔青, and Xi Xuesong 奚雪松. 2009. “‘Guotu chidu shengtai anquan geju’ 国土尺度生态安全格局 (Ecological security pattern at the national scale).” *Acta Ecologica Sinica* 生态学报 29 (10): 5163–75.
- Zhou Qiang 周强, and Zhang Yuzhu 张玉柱. 2015. “‘Qinghai Lajia yizhi shiqian zainan chengyin de tansuo yu bianxi’ 青海喇家遗址史前灾难成因的探索与辨析 (Exploration and analysis of the causes of prehistoric disasters at the Lajia Site in Qinghai.).” *Acta Geographica Sinica* 地理学报 70 (11): 1774–87.