Fig. 1

Jiangnan Park: A Territorial Vision for the Yangtze River Delta Megacity Region

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Jiangnan Park represents a territorial vision for the cultural landscape located at the heart of the Yangtze River Delta megacity region of China. At the hinterland of Shanghai, Suzhou, and Hangzhou, this area is often overlooked in spatial and development plans; however, it has the potential to evolve into a unifying core reflecting the multiple identities of the region. The concept of Jiangnan Park was developed through a five-year, incremental research-through-design initiative led by a multidisciplinary team of academics, students, and local experts. This chapter specifically highlights the role of collaborative pilot projects in shaping territorial visions within the context of China's "Ecological Civilization Construction" strategy.

A megacity region shaped by its cultural landscape

The Yangtze River Delta megacity region stands as one of the most economically prosperous and densely populated areas globally. This density reaches its pinnacle within the alluvial and marshy plains of the Taihu Basin. Although covering only 0.4% of China's landmass, the basin hosts 4% of its population and contributes to an estimated 11% of GDP[1]. This exceptional concentration of human activity is not recent and owes its existence to the region's very fertile soil and centuries of water management systems. Commencing with the completion of the Grand Canal in the early seventh century to facilitate grain export to the northern capital, the entire delta territory was meticulously tamed using a sophisticated network of canals and polders. Over centuries, this polder system underwent several adaptations, gradually densifying the productive territory into a continuous rural fabric interspersed in relative harmony with various towns and cities[2].

However, since the 1950s—and especially following the economic reform of 1978—this balance has been disrupted by the acceleration of urbanization. Supported by centralized and mechanized water management systems and an extensive transportation network, the urbanized area within the Taihu Basin has expanded up to tenfold from 1983-2015[3]. While this exponential growth has consolidated the region as an economic powerhouse, it has also generated serious environmental issues that threaten the region's sus-

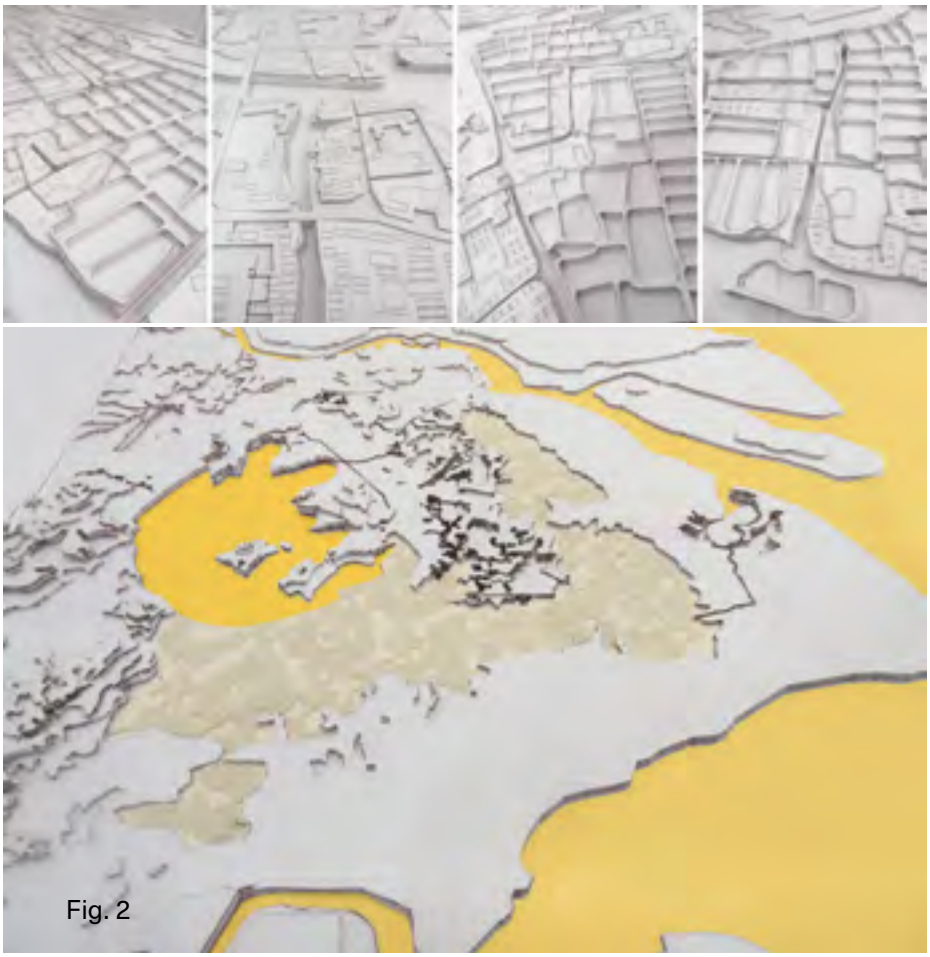


Fig. 2

tainability, including the alarming depletion of natural habitats, fresh water, and cultivable land resources.

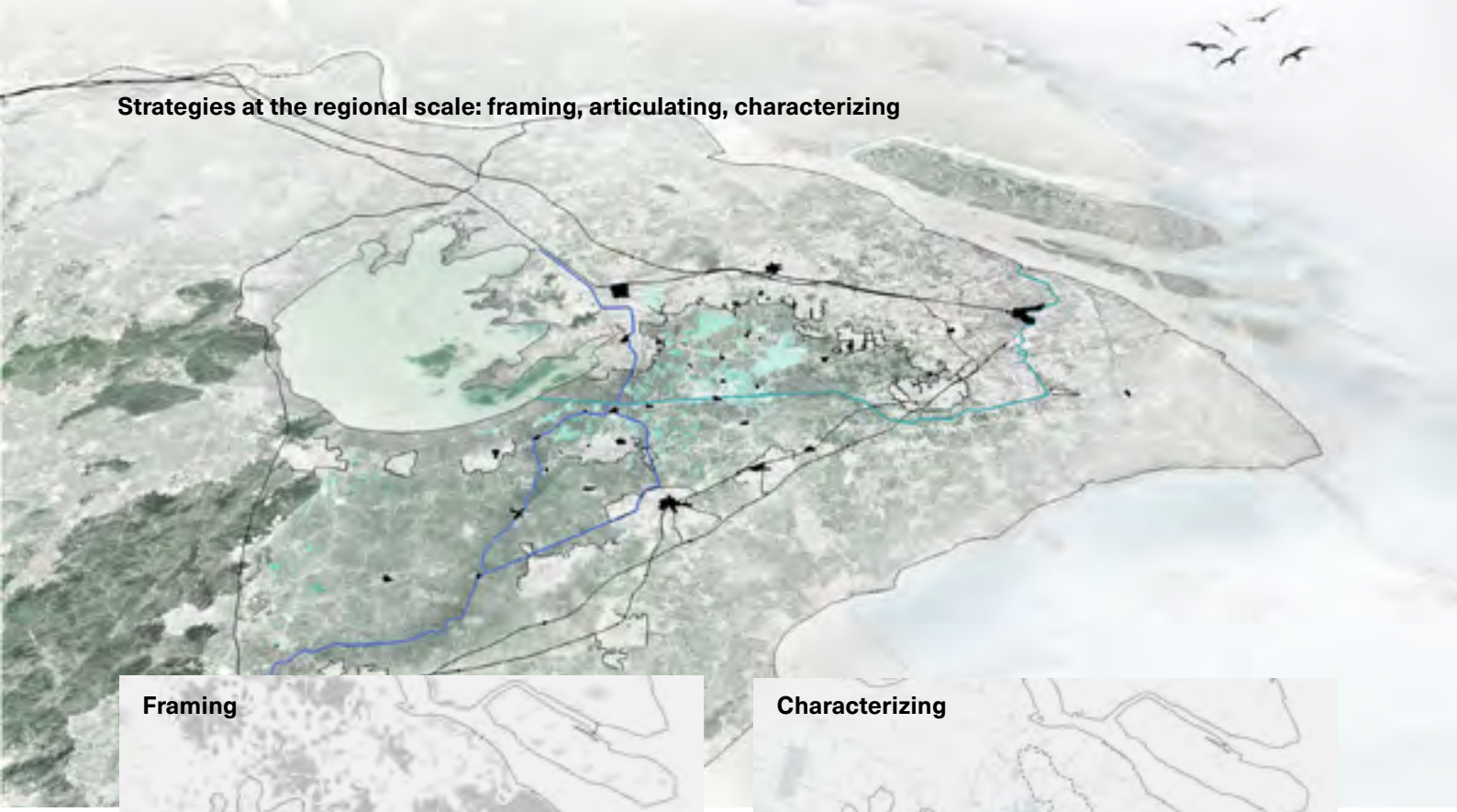
A test bed for China's Ecological Civilization Construction

In response to these threats, a national-led program for the Integrated "Regional Development of the Yangtze River Delta" was launched in 2019[4]. Alongside economic, transportation, and energy aspects, the Yangtze River Delta integration plan introduced quantified objectives for permanent farmlands, ecological spaces, and water quality[5]. These objectives echo the priorities of the national strategy of "Ecological Civilization Construction" and the new territorial planning system of China. The creation of the new "Ministry of Natural Resources" confers upon it the responsibility of implementing the "three red lines" policy, which pertains to the protection of permanent farmland, vital ecosystems, and the establishment of urban growth boundaries.

If these planning reforms suggest a more balanced and sustainable spatial development of the territory, they nonetheless adhere to a functionalist logic. This tends to contrast an urban model of compact, hyper-connected cities with a modernized rural alternative focused on agricultural and ecological performance. Within this productivist and dualist perspective, the cultural and inhabited dimensions of the rural landscape are often neglected. In numerous instances in the Yangtze River Delta, entire villages are demolished, their populations relocated to larger "super villages," and the historical polder landscape is reconfigured into regularly gridded fields to maximize agricultural output.

However, interestingly, a growing awareness of the characteristic Jiangnan culture has resurfaced in the Delta region in recent years. Jiangnan directly translates as "south of the river" and thus embodies a cultural significance associated with a lifestyle—half urban and half rural—centering on water. This idea is expressed in regional architecture, craftsmanship, music, painting, literature, and gastronomy. Moreover, the renewed interest in Jiangnan culture is evidenced in the ongoing joint applications of several water towns for inclusion on the World Heritage List[6]. However, spatially confined to several protected heritage sites, this interest has

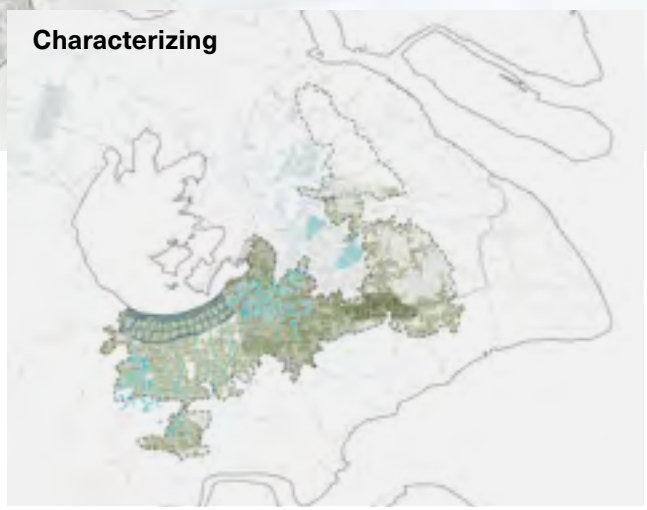
Strategies at the regional scale: framing, articulating, characterizing



Framing

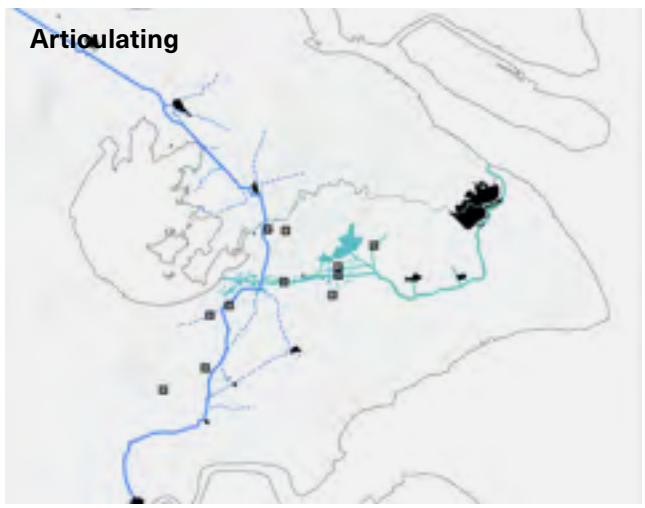
Train station
High speed train
Urban edge
Urbanised area

Characterizing



Low elevation area
Low-lying polder area
Urbanised area
① Great lakes
② Lougang-canal system
③ Fishbone-canal system
④⑤ Ponds / Polders
⑥ Grid structure

Articulating



Historic town / City centres
Grand canal
Branches of Grand canal
Taipu canal

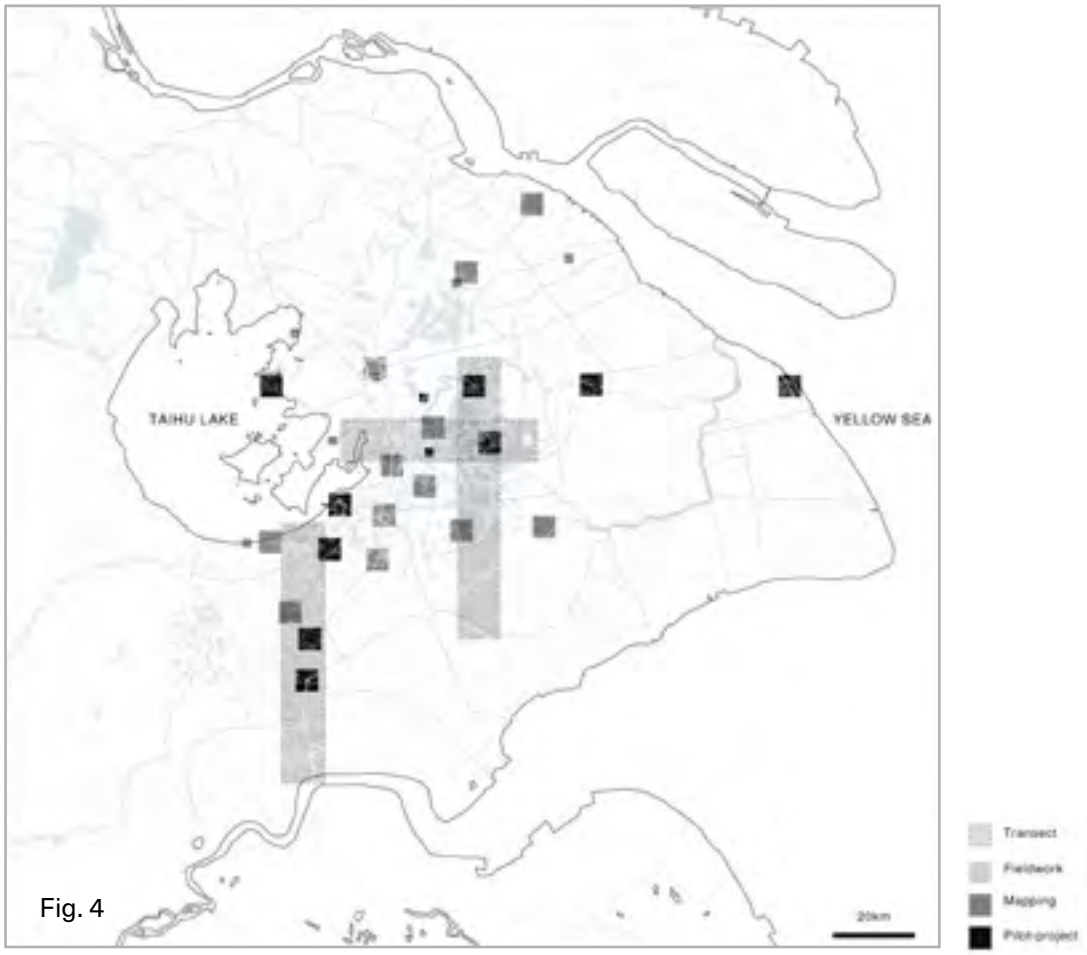


Fig. 4

yet to encompass the surrounding polder landscape[7]. Consequently, the modernization of rural areas promoted by the Ecological Civilization Construction strategy continues in the Yangtze River Delta without fully acknowledging the historic and cultural value embedded in the productive landscape.

Jiangnan Park: Objective and methods

The vision of Jiangnan Park focuses on the low-lying polder area at the heart of the delta. Situated at the intersection of Jiangsu, Zhejiang, and Shanghai provinces—and until recently sparsely connected by roads and rail—this area has escaped the rapid urbanization that has transformed the rest of the delta region. Thanks to its isolation, the area has preserved its characteristic mosaic of fields, ponds, basins, lakes, canals, and a lacework of linear villages and water towns that constitute the Jiangnan polder landscape (Fig. 2). Typically overlooked as the hinterland of Shanghai, Suzhou, and Hangzhou, this area has the potential to evolve into a unifying core representing the diverse identity of the region. Employing the metaphorical concept of a "park," the territorial vision aims to regenerate this central rural area in its multiple productive, ecological, and socio-cultural dimensions, complementing the megacity.

Led by a multidisciplinary team of academics and students in spatial planning, urban design, and landscape architecture, the vision of Jiangnan Park crystallizes an incremental process that employed a variety of methods over several years (2016-2021). Initially, at the regional level, a descriptive and interpretative mapping exercise was conducted to identify the distinctive landscape features of the region and its evolution[8]. This mapping process suggested three complementary strategies for the Jiangnan Park area: first, framing it by defining its boundaries; second, articulating the area with key structures; and third, characterizing the region by emphasizing the diverse types of polder landscapes it encompasses (Fig. 3).

Each of these strategies at the regional scale was then explored in greater detail in representative sites through workshops and design studios. One studio focused on requalifying urban-rural edges as active interfaces to frame Jiangnan Park[9]. Two parallel studios

Fig. 5

delved into the structuring potential of the Grand Canal and the Taipu Canal to articulate the area[10]. Finally, a series of pilot projects were conducted in collaboration with local stakeholders in various sites to develop regeneration strategies tailored to distinctive landscape features[11] (Fig. 4).

Hunan Village as a pilot project

One of these pilot projects took place in Hunan Village, situated within the Tongli township, south of Suzhou. Positioned in the delta's lowest area, Hunan serves as a quintessential example of traditional villages and the contemporary challenges they encounter. Functioning as a fishing village adjacent to a lake, Hunan Village comprises six distinct polder units. Each unit is encircled by an outer perimeter dyke, safeguarding it from the varying water levels of the surrounding lake and canal system. Within each polder unit, terraced sub-basins guide water toward a central drainage ditch. The houses are arranged atop the perimeter dyke and occasionally linked to neighboring homes in another unit via a bridge spanning the canal in between.

Fig. 1
Polder landscape and waterfront villages in Wujiang District of Suzhou.

Fig. 2
The central region of the Taihu Basin plain in the Yangtze River Delta is characterized by a landscape system of polders, whose micro-topographic structure continues to influence the morphology of the productive and inhabited territory.

Fig. 3
At the regional scale, three complementary strategies are proposed to define Jiangnan Park as a unifying core within the megacity region: framing, articulating, and characterizing.

Fig. 4
Map of detailed study areas (gray) and pilot projects (black) that were conducted in collaboration with local stakeholders to regenerate their characteristic productive landscapes.

Fig. 5
Images from the pilot project in Hunan Village converting rice paddies and fish ponds into a constructed wetland circuit. This project received a first prize from the Urban Planning Society of China in 2018.

Originally designed for rice cultivation, many villages of this type were adapted in the late 1980s, repurposing former paddy fields into fish and shrimp farming ponds. This shift to a more lucrative activity brought economic prosperity to the villages and resulted in water pollution from animal food, waste, and antibiotics. Presently situated in the middle of a new surface water collection zone supplying Shanghai's drinking water network, the village must cease its fish farming activities to prevent any risk of water pollution. While numerous similar villages in the area have been completely demolished and their residents relocated to larger communities, Hunan Village stands out for its potential for regeneration due to its charm, lakeside location, and proximity to transportation hubs.

Throughout the summer, we collaborated with local residents to devise a regeneration strategy for the village (Fig. 5). Following a diagnostic phase involving several days of fieldwork, including interviews and collaborative workshops with villagers, a proposal emerged: to repurpose the fishing village into a nature-based water treatment facility. This transformation involved converting the paddy fields and ponds into a constructed wetlands circuit, utilizing phytoremediation techniques to enhance water quality across the entire region. In doing so, the characteristic terraced structure of the polder area was repurposed to serve a new function while the surrounding fields and village houses were adapted to accommodate agroecology and agrotourism activities, aligning with the expertise and aspirations of the local community.

Awarded a first prize by the Urban Planning Society of China the project for Hunan Village is less a definitive spatial solution than a replicable regeneration strategy. Together with other pilot projects, it exemplifies how leveraging characteristic cultural landscape features and community participation can offer a sustainable solution in the dynamic context of a megacity region.

Learning from Jiangnan Park

The territorial planning of China is at a new turning point. Several decades of rapid urban growth saw hundreds of millions of people migrate to cities, resulting in the disappearance of a significant portion of natural habitats and agricultural land resources. Thus, a new balance between urban and rural areas must be found. The "Ecological Civilization Construction" strategy, coupled with recent planning system reforms prioritizing ecosystem and farmland conservation under the guidance of a centralized Ministry of Natural Resources, marks significant and promising progress. However, adopting a simplistic approach that juxtaposes compact cities against modern countryside for the sake of efficiency could diminish the territory's richness, complexity, and diversity. Moreover, excessive focus on the ecological and agricultural performance of rural spaces at the expense of their inhabited and cultural dimensions poses the risk of homogenizing and anonymizing the productive landscape, which is nevertheless the essence of Chinese civilization.

The vision of Jiangnan Park, focused on the polder landscape at the heart of the Yangtze River Delta megacity region, illustrates a potential path of transformation for these landscapes. Developed through an extensive cartographic process and refined in local-scale workshops, it explores how to steer regional development toward a balanced and culturally rich future, highlighting the cultural dimension of productive landscapes in the evolving urban-rural dynamics. Initiated as a research-through-design project, the Jiangnan Park vision primarily aimed to identify context-specific elements, raise awareness, and explore alternative spatial planning methods. Through a series of publications, conferences, and exhibitions, we hope this endeavor has had a lasting impact, inspiring local and regional authorities to envision the future of the region. We invite researchers, educators, and local stakeholders to continue this mission in the Yangtze River Delta and comparable regions.

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