

# **RIVERS FLOW , CITY GROW**

Deqing County's Happy Rivers and Lakes  
Construction and Action Plan (2023-2027)





## Project Statement:

Deqing County is located in the northern part of Zhejiang Province, with a dense water network and a typical Jiangnan water town style. At present, the focus of water management in Deqing is on how to promote the further integration of water and urban development to enhancing the happiness of citizens.

The project is based on the method of "planning–construction–governance" throughout the entire process, achieving the coordination of various resource elements, efficient division of labor among government departments, and intelligent water management. The plan proposes the goal and vision of "Rivers Flow, Cities Grow", with a highly integrated county development pattern of "blue, green, and gray", more resilient water management capabilities, and a water friendly space for the whole people, making water and urban development more closely related.

Propose to carry out orderly construction around "one mountain and water green corridor, two river and lake economic and cultural belts, hundreds river and lake development clusters and waterfront living circles, and a thousands mile slow walking trail". The design of the Zhejiang University of Technology cluster aims to create a grand vision at a human scale, making the happy river and lake perceptible and experiential.



# Project Narrative and Contents:

This project belongs to the Analysis and Planning in the Unbuilt Category.

## Location, scope and size

The project is located in Deqing County, northern Zhejiang Province, and is a typical water town in Jiangnan. The western part of the county is known as the famous vacation holy land of Moganshan, with the central urban area in the middle and the water plain in the east. The overall pattern is "five mountains, one water, and four fields". The planning scope mainly covers the water area and waterfront space of the entire county, with a total area of 936 square kilometers. The project aims to provide a forward-looking planning solution to promote the integration of "blue green gray" infrastructure and enhance the promoting effect of rivers and lakes on urban development.

## Site and context investigation

The study first conducted a systematic analysis of the upper level planning of Deqing County. Based on its latest survey data, the design team conducted on-site research on various types of water bodies such as reservoirs, lakes, streams, rivers, ponds, and canals, recording hydrological characteristics and interviewing local residents to understand development demands. Overall, Deqing County was born out of water and has developed a unique culture, economy, and way of life around water management. As an ancient Chinese saying goes, "Everyone has virtue, like clear water." The county is also named after water, and the importance of water to the people of Deqing is self-evident. Since modern times, the management of clean water in Germany has gone through two stages of "flood control and water purification" and has begun to seek new development goals and paths of "borrowing water to enrich the people". The inherent logic of "Happy River and Lake" is to achieve harmonious development of "water, city, and people", which is in line with the demands of Deqing.

## Design program

The project proposes to promote the construction of Xingfu River and Lake in Deqing County through the full process of "planning construction governance".

- ① Planning level The project proposes the goal and vision of "rivers and lakes nourishing the city, as clean as water", and proposes measures for upgrading water management from five dimensions: "water control, water purification, clean water, live water, and water management".
- ② At the construction level, we have carried out the design and practice of the Zhejiang University of Technology cluster, proposing to organize urban space through "river green corridors", and enhance the connection between people and water through the construction of the Jin'e Lake Park and waterfront space system.
- ③ At the governance level, it is recommended that homeowners establish an effective cross departmental coordination model. At the same time, we will promote the digital twin construction of water conservancy throughout the county, achieving intelligent services, management, and monitoring.

## Design intent

The Happy River and Lake Plan in Deqing County not only provides a forward-looking plan for urban managers to promote urban redevelopment through water management, but also provides residents with a better waterfront landscape.

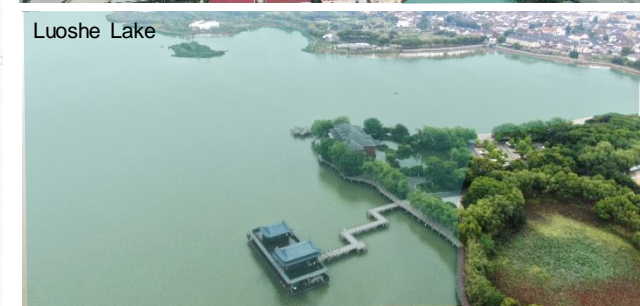
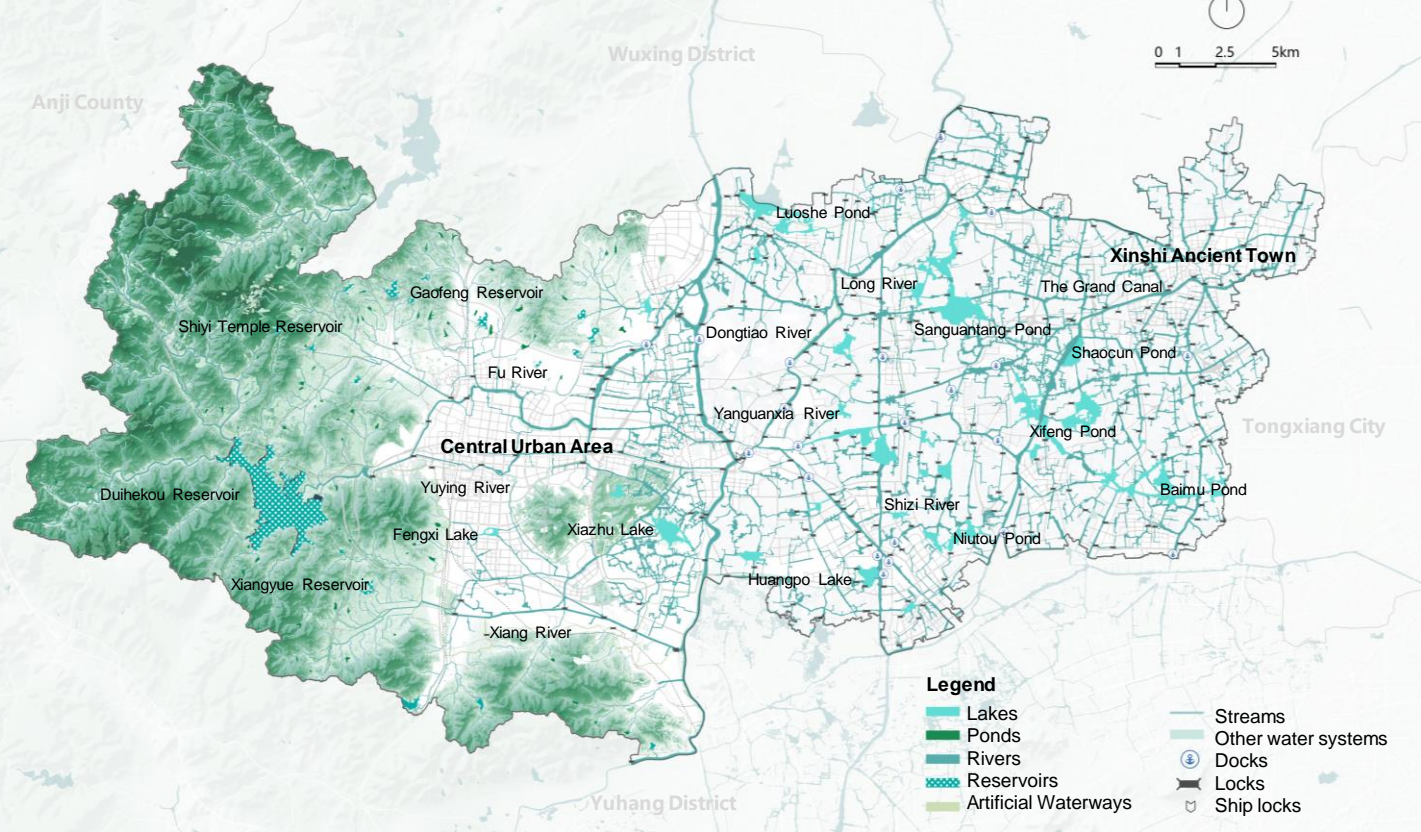
## Collaborations

The project collaborates closely with the government, other design teams, and professional consultants. The project team includes designers and researchers from multiple backgrounds, including urban planning, landscape design, water conservancy planning, municipal engineering, and transportation. In the process of project promotion, in-depth communication and exchange of opinions with various functional departments of the government are carried out, and the results are distributed to towns and villages, mobilizing all levels of departments to participate.



# Characteristics and Challenges of Deqing Water Resources

The water network is densely distributed and deeply integrated with urban development.



## Rivers and Streams

- 1,340 river channels
- Total length 1868.7km
- Total area 84.47km<sup>2</sup>

## Lakes and Ponds

- Concentrated in the east
- 40 lakes
- Total area of 16.15km<sup>2</sup>

-1990

Promoting Urban  
Flood Control Work  
through Engineering

1990-2003

Central urban  
area relocation

Water Security:  
Flood Prevention and  
Security

1990-2003

Enhanced  
urban functions

Water Cleanliness:  
Ecological  
Governance

2013 - Present

Ecological high-  
quality development

Water Wealth:  
Prosperity and  
Benefits for the People

Water Management

?

How to enhance  
citizen happiness, and  
support high-quality  
urban development.



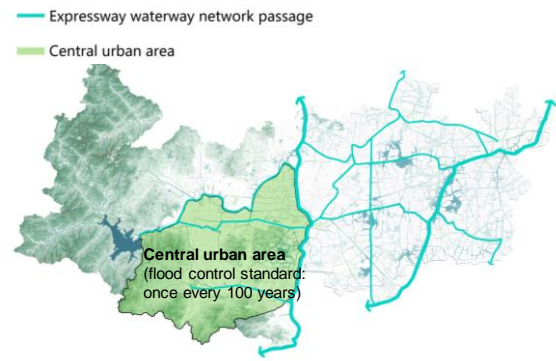
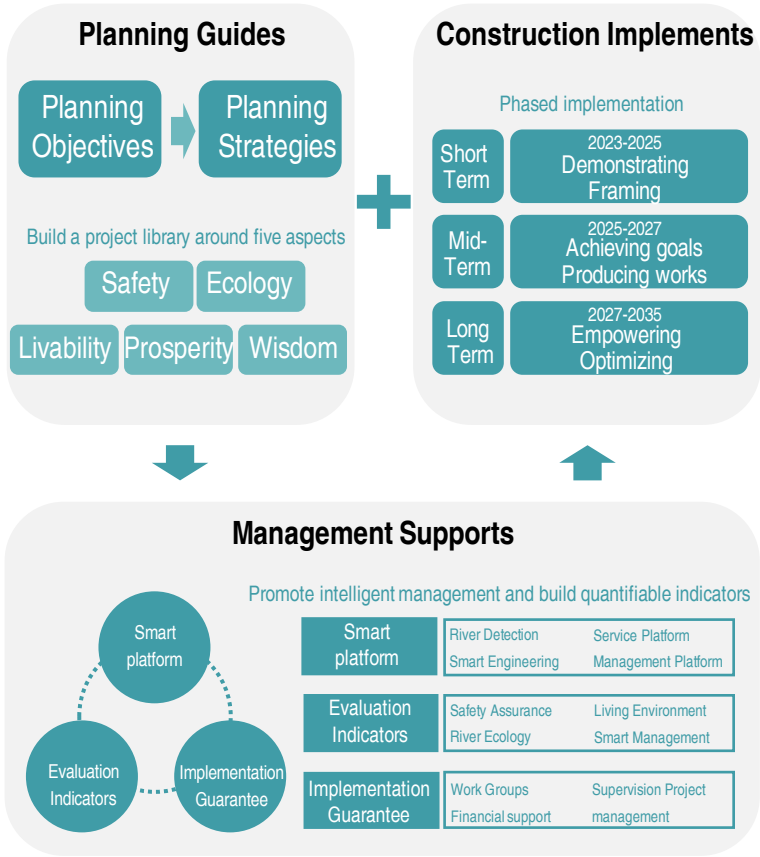
# Planning Concepts and Methods

## Planning-Construction-Governance, the Whole Process throughout

At the planning level, planning involves coordinating all elements, understanding the multiple values of water from the perspective of urban development.

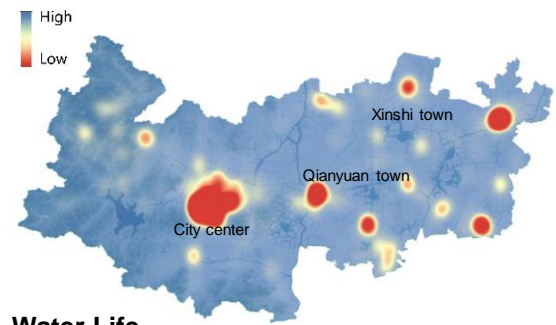
At the construction level, inter-departmental collaboration is realized, and various projects are scientifically arranged and implemented in an orderly manner.

At the governance level: Relying on the urban smart platform to achieve dynamic monitoring of water environment and project implementation.



### Water Safety

Improving Flood Control and Disaster Reduction, Building a Safe Modern Water Network



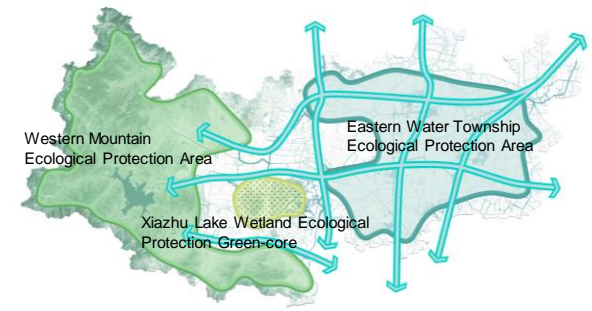
### Water Life

Creating a Water friendly and Pleasant Deqing Life



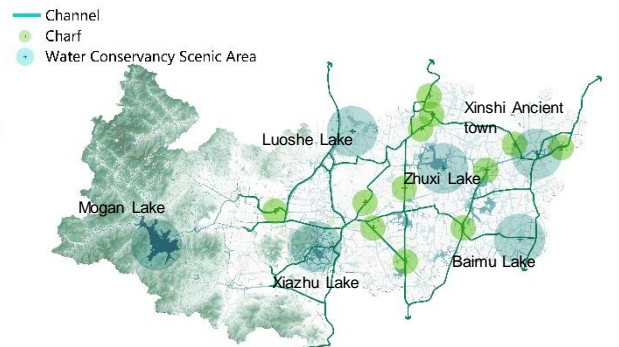
### Water Intelligence

Building a Smart and Efficient Management Platform



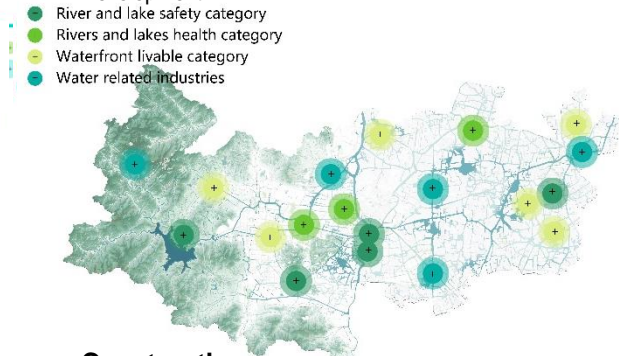
### Water Health

restoring natural and healthy mountain and water habitats



### Water Economy

Promoting Rivers and Lakes Economy for Waterfront Development



### Construction

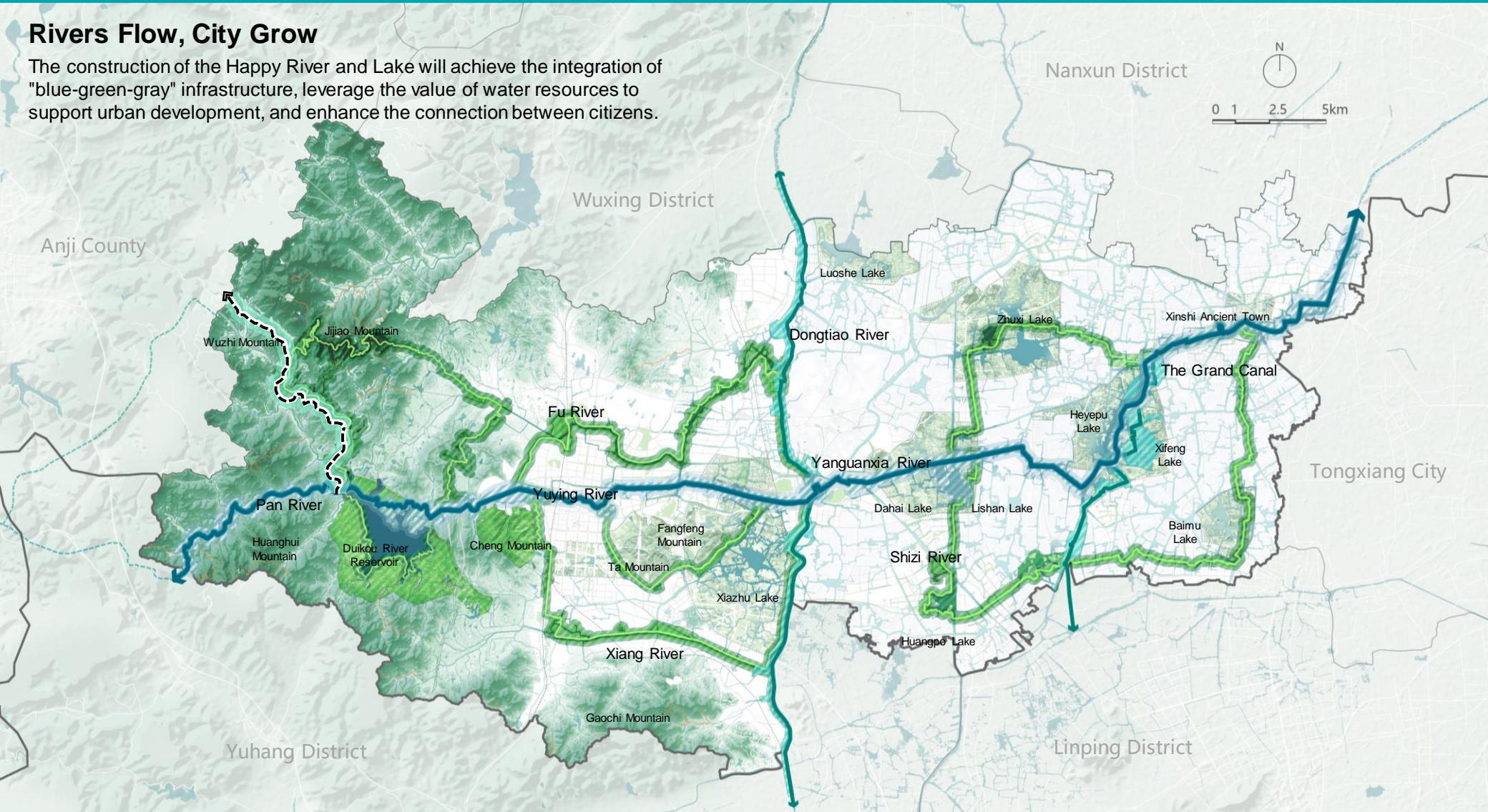
Combining existing characteristics to promote the construction of various water related projects



# Layout Plan and Development Vision

## Rivers Flow, City Grow

The construction of the Happy River and Lake will achieve the integration of "blue-green-gray" infrastructure, leverage the value of water resources to support urban development, and enhance the connection between citizens.



### 1 east-west landscape green corridor

Linking more than 20 parks  
The trail spans 65 km  
Connecting various urban public spaces

### Two Rivers and Lakes Economic and Cultural Belt

Dongtiao River Cultural and Economic Belt  
The Grand Canal Cultural and Economic Belt

### Three groups of urban development zones

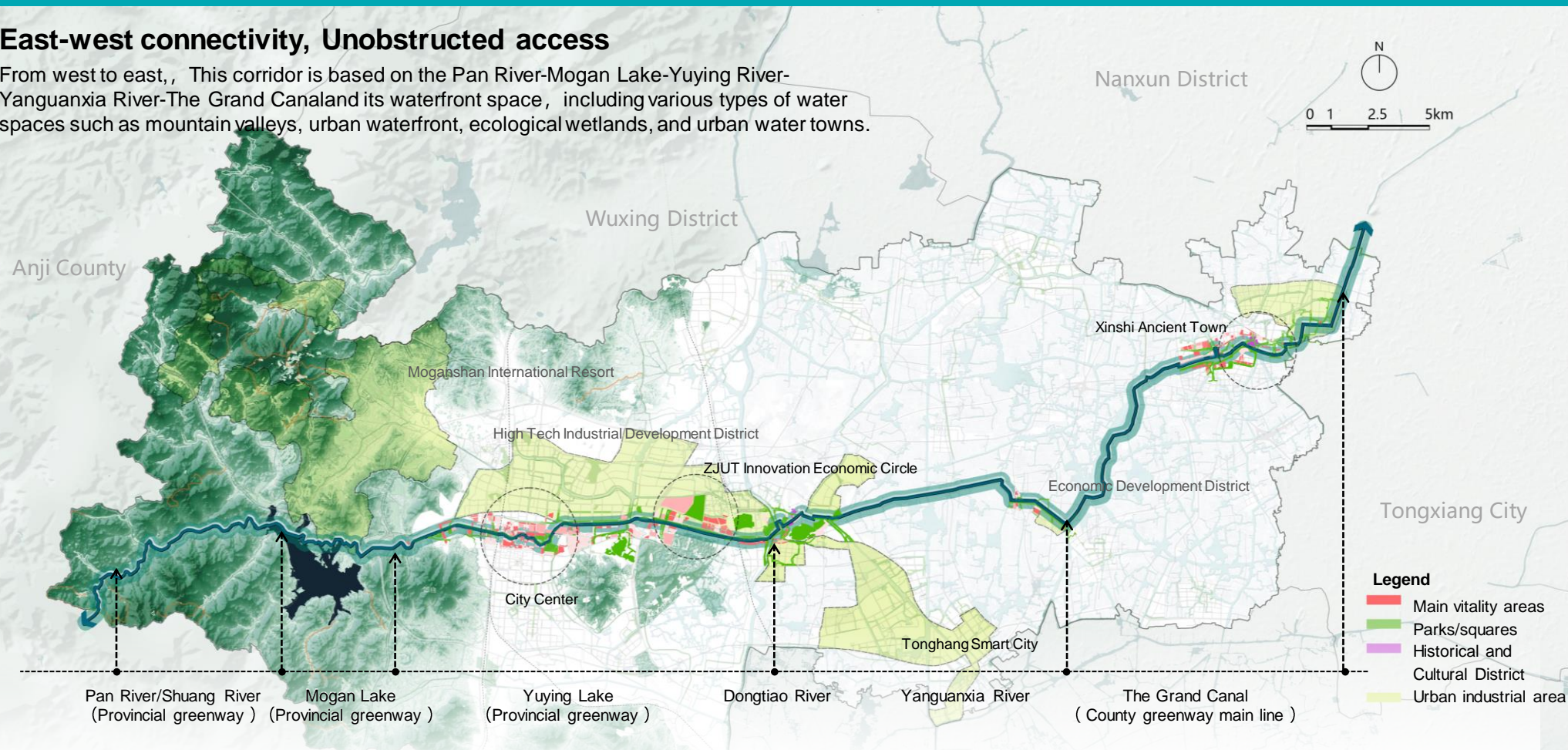
Western Reservoir Mountain Pond Area  
Central Water City Development Zone  
Eastern Plain Water Township



# One Corridor: Full of Vitality, Culture, and Ecology

## East-west connectivity, Unobstructed access

From west to east,, This corridor is based on the Pan River-Mogan Lake-Yuying River-Yanguanxia River-The Grand Canal and its waterfront space, including various types of water spaces such as mountain valleys, urban waterfront, ecological wetlands, and urban water towns.





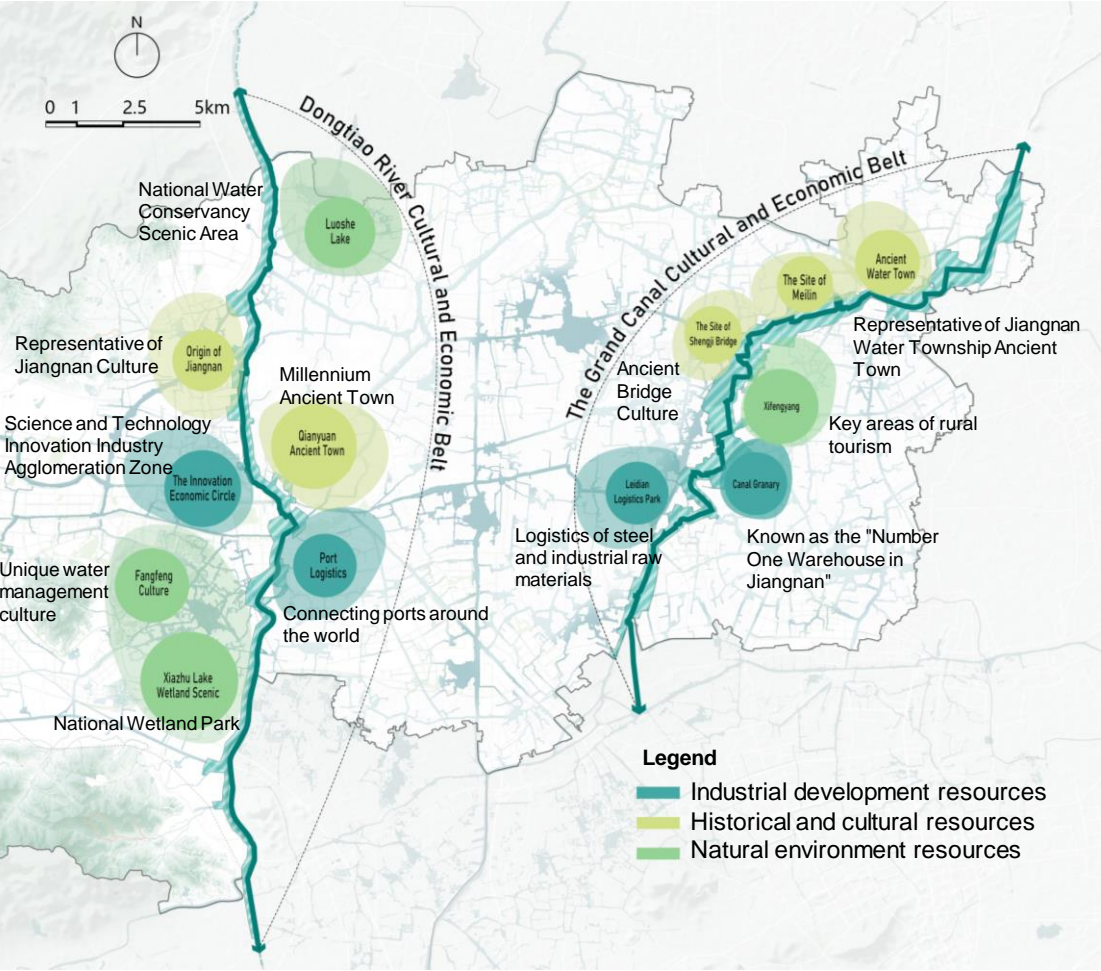
# Rivers and Lakes Cultural and Economic Belts: Linking Resources

## Dongtiao River Cultural and Economic Belt

Linkage with Zhejiang University of Technology Innovation Economic Circle, Xiazhu Lake Wetland Scenic Area, Qianyan Ancient Town, Deqing Port and other resources

## The Grand Canal Cultural and Economic Belt

Linking resources such as ancient water towns, canal granaries, Xifengyang, and Leidian Logistics Park



## Typical Scenarios

The Innovation Economic Circle(Dongtiao River) : Organic Integration of River and Lake Resources with Science and Technology Innovation.

Xinshi Ancient Town(the Grand Canal): Revitalizing and utilizing traditional scenery and water resources.





# Thousands Mile Greenway Network: Connecting Mountains and Rivers

## Resource integration

Most of them utilize existing mountain and forest tourism routes, park roads, embankment roads, and streets; New construction in some regions.



**100 KM** Provincial Greenway  
**135 KM** Main Greenway  
**300 KM** Secondary Greenway  
**82KM** Ancient Greenway



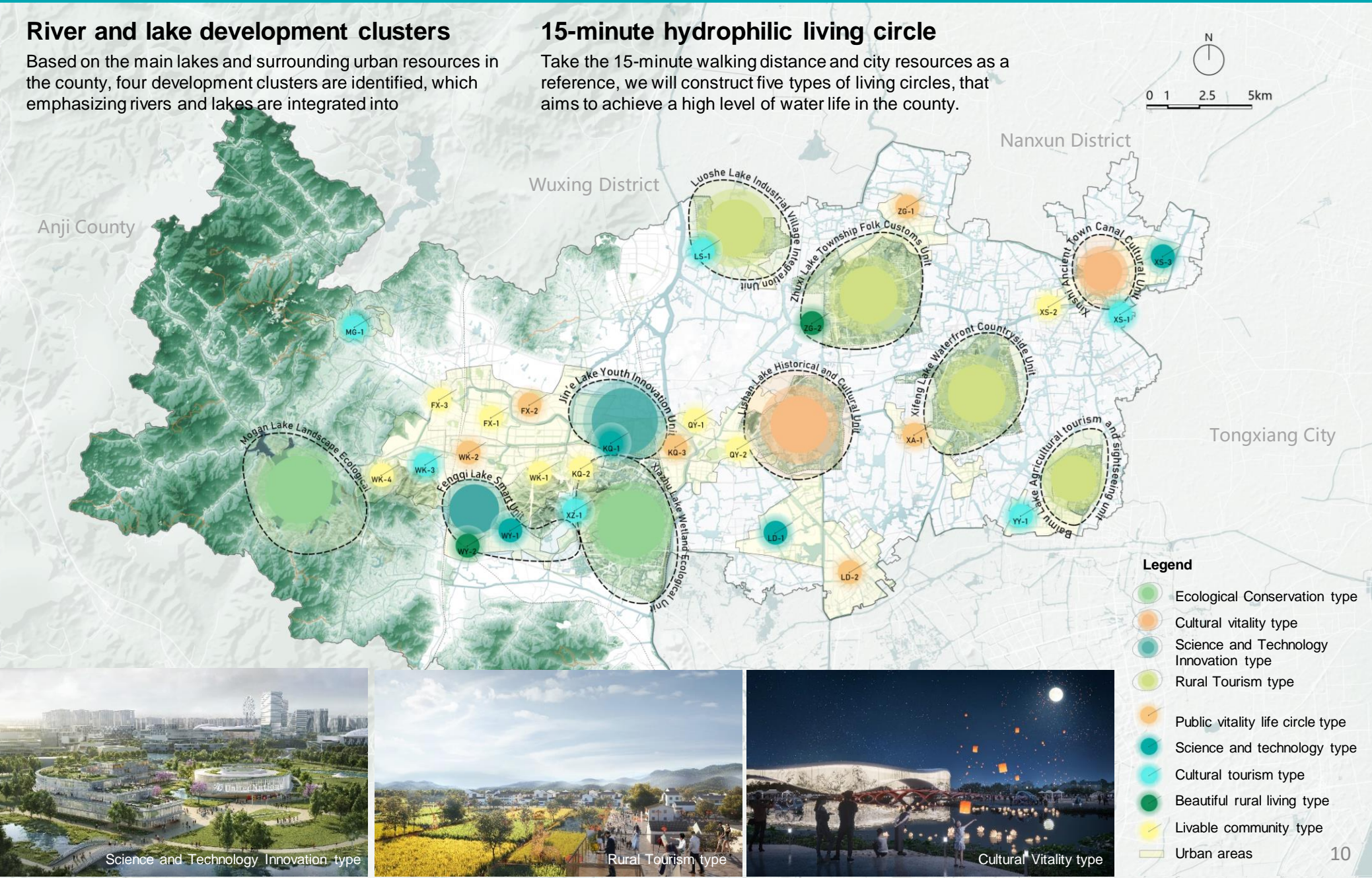
# Development Cluster and Hydrophilic Living Circle: the Integration of Water and Life

## River and lake development clusters

Based on the main lakes and surrounding urban resources in the county, four development clusters are identified, which emphasizing rivers and lakes are integrated into

## 15-minute hydrophilic living circle

Take the 15-minute walking distance and city resources as a reference, we will construct five types of living circles, that aims to achieve a high level of water life in the county.





# ZJUT Cluster: Enhancing the Characteristics by Rivers and Lakes

## A source of wisdom inspiration , A youth-friendly urban area

Rich in river and lake resources and concentrated in scientific and technological innovation resources, the overall positioning of the cluster is “Hangzhou Urban Circle Youth Development Innovation City”

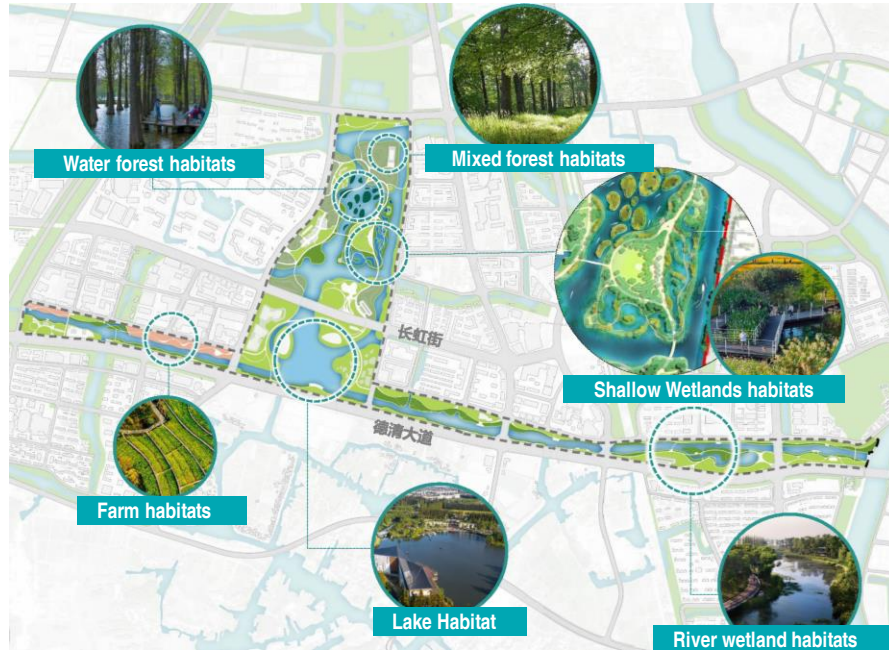




# ZJUT Cluster : Implement the Construction Plan

## Diverse habitat creation

Multiple ways to improve water quality, optimize plant planting, create diverse habitats, and enhance ecosystem stability.



## Blue-green space and urban order

A blue-green network is formed with the Jin'e Lake Park and the "River Green Corridor", so as to organize the urban space unit.



## Design rendering and Live photo

The Jin'e Lake Park was the first to be put into construction, and at present, the wetland, the island and the surrounding businesses have begun to take shape

