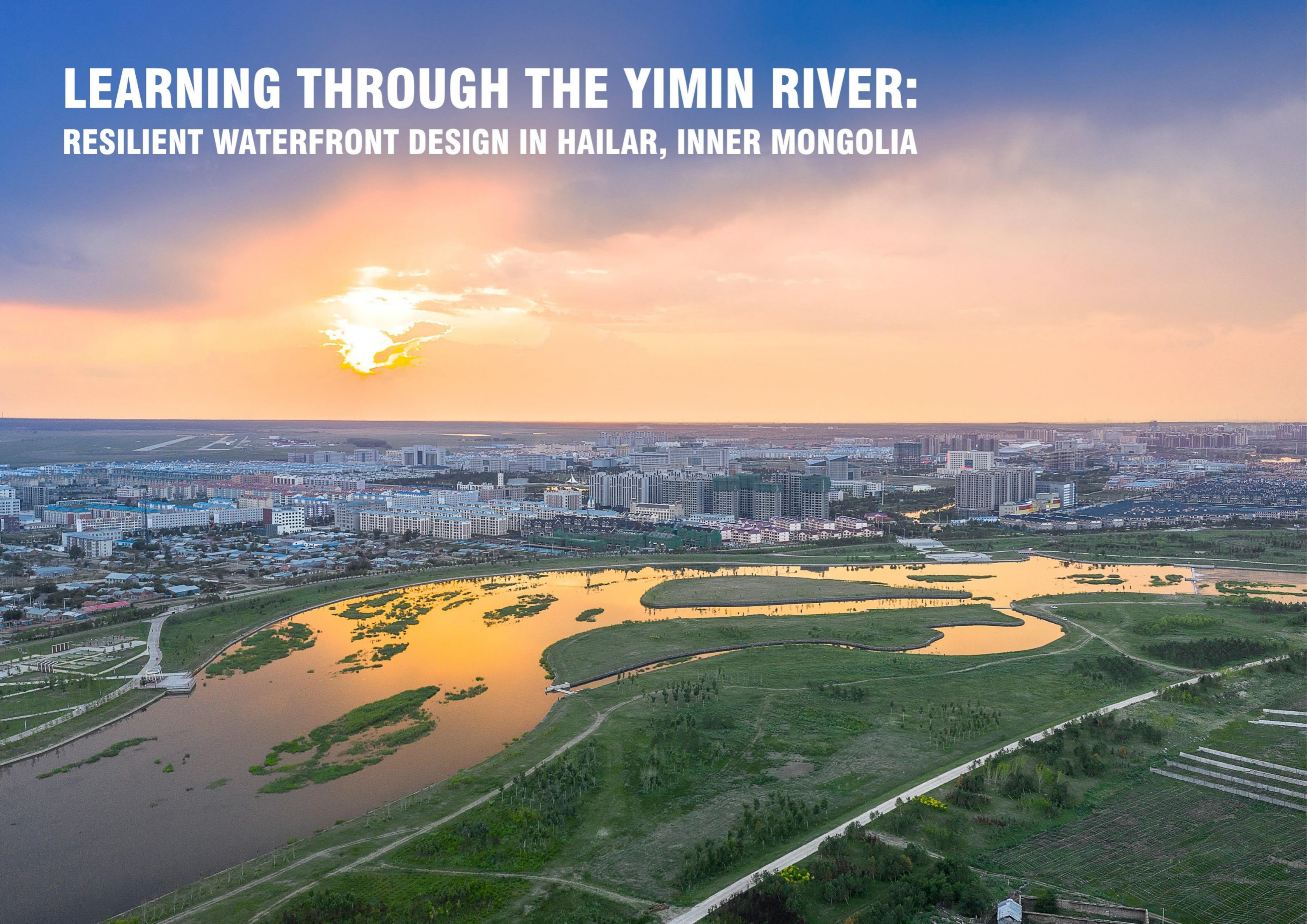
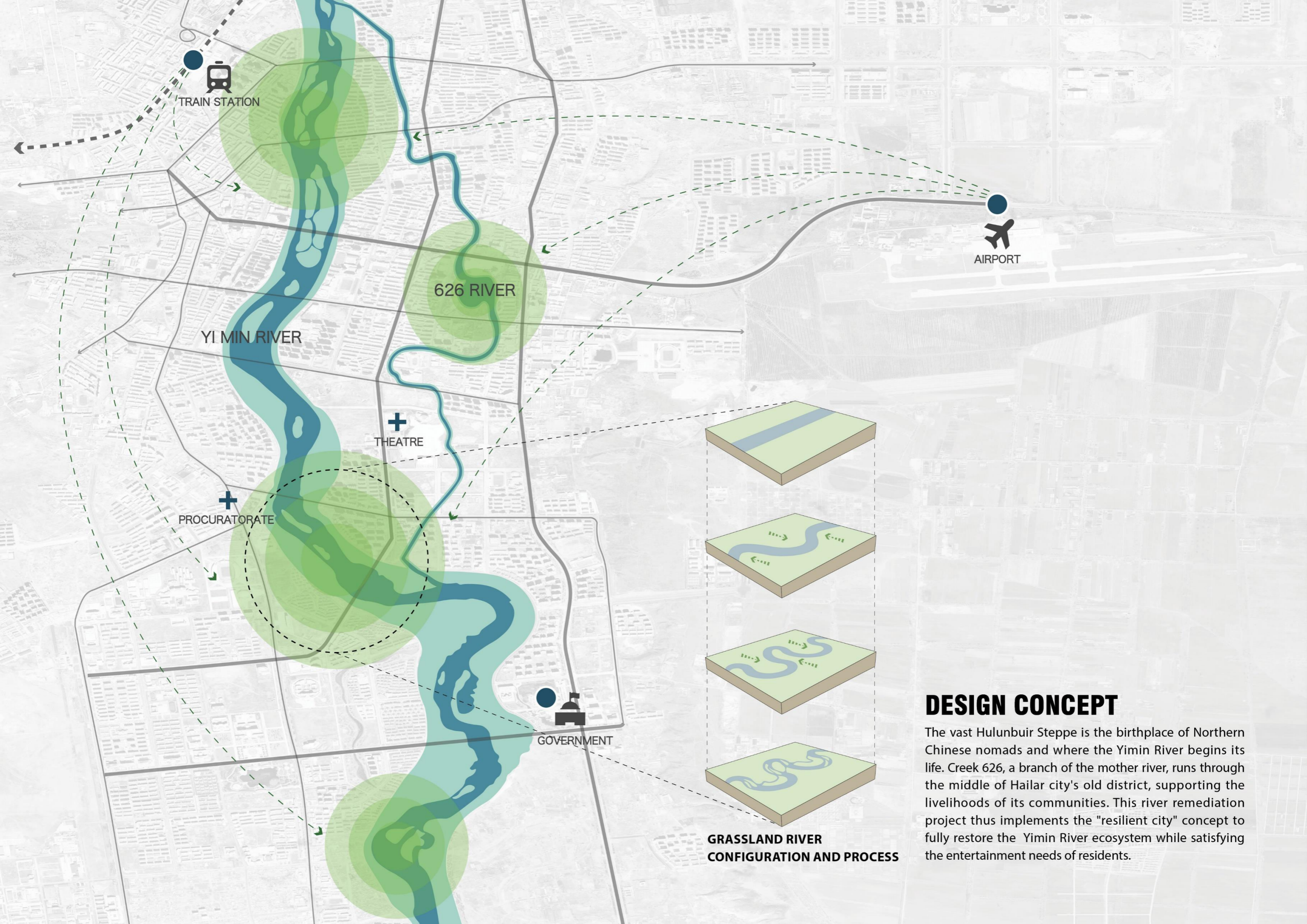


LEARNING THROUGH THE YIMIN RIVER: RESILIENT WATERFRONT DESIGN IN HAILAR, INNER MONGOLIA





TRAIN STATION

AIRPORT

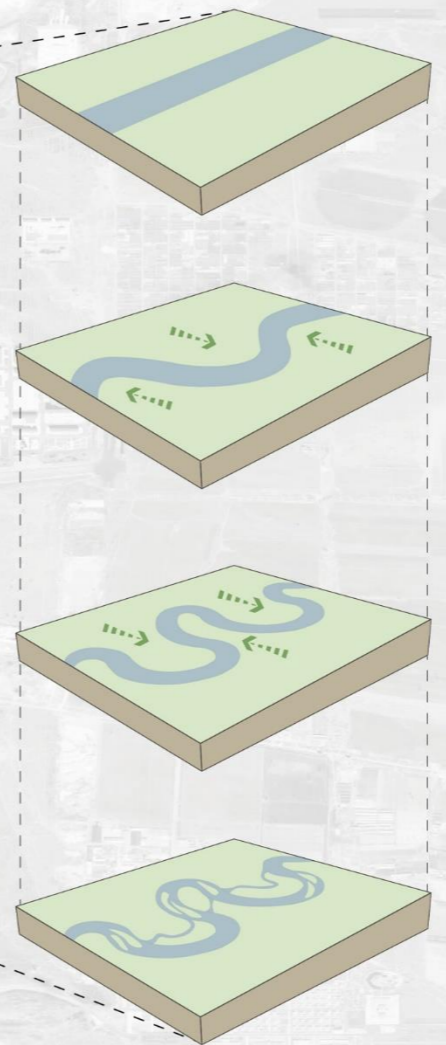
626 RIVER

YI MIN RIVER

THEATRE

PROCURATORATE

GOVERNMENT

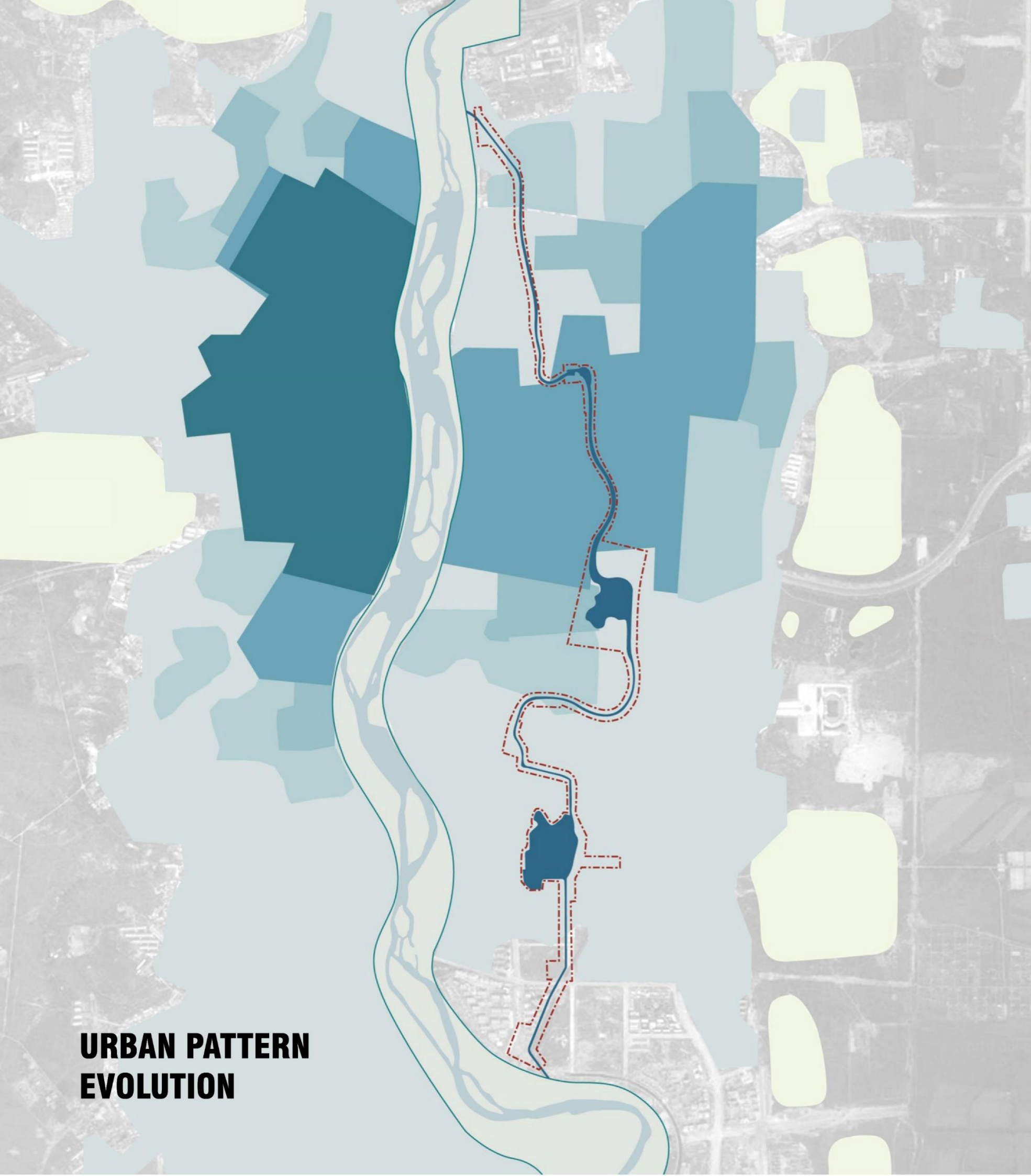


GRASSLAND RIVER CONFIGURATION AND PROCESS

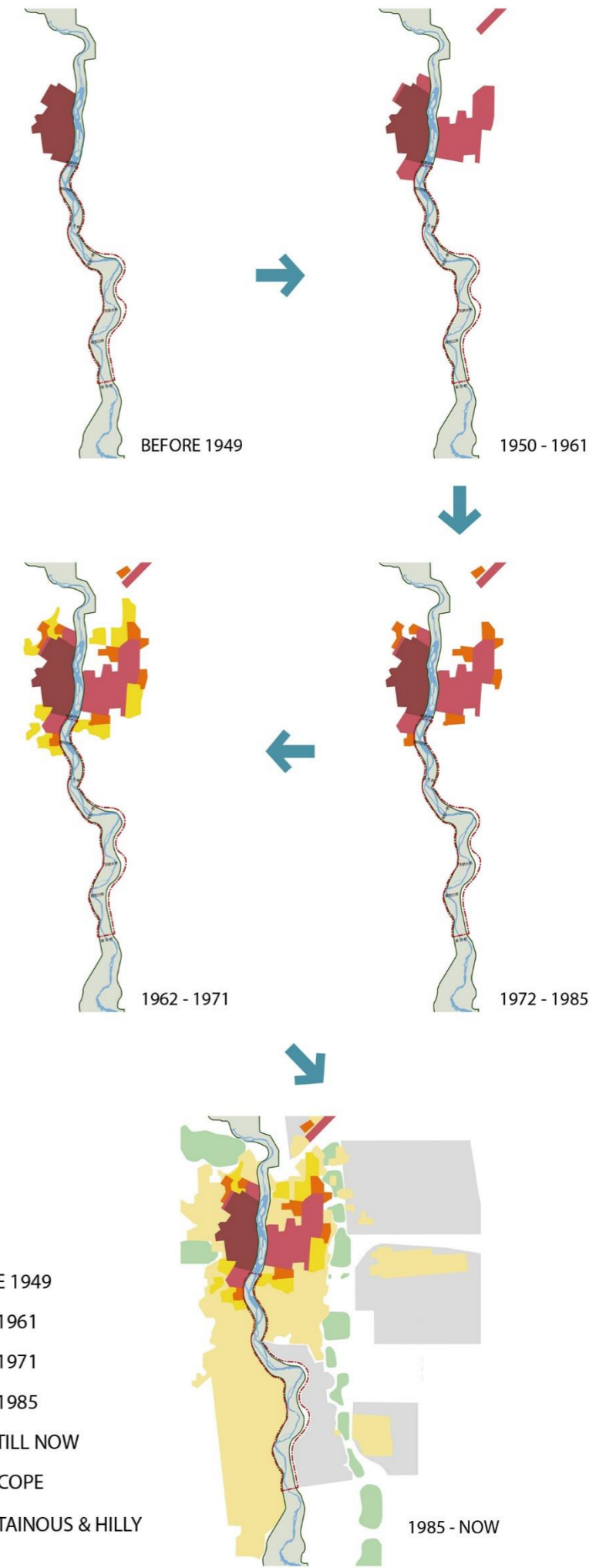
DESIGN CONCEPT

The vast Hulunbuir Steppe is the birthplace of Northern Chinese nomads and where the Yimin River begins its life. Creek 626, a branch of the mother river, runs through the middle of Hailar city's old district, supporting the livelihoods of its communities. This river remediation project thus implements the "resilient city" concept to fully restore the Yimin River ecosystem while satisfying the entertainment needs of residents.

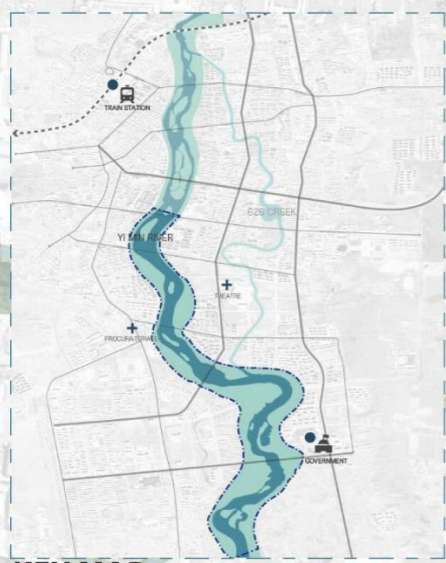
URBAN PATTERN EVOLUTION



- BEFORE 1949
- 1950 - 1961
- 1962 - 1971
- 1972 - 1985
- 1985 - TILL NOW
- BASE SCOPE
- MOUNTAINOUS & HILLY



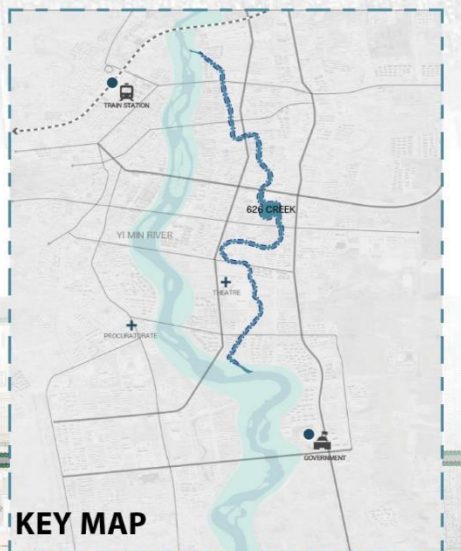
NORTH
0 100 200 500
SCALE: (M)



KEY MAP



- 1 RECREATIONAL TRAILS
- 2 AERIAL TRAILS
- 3 WATERFRONT PLAZA
- 4 SUN LAWN
- 5 CITY GREEN WAY
- 6 CIVIC CENTER
- 7 SITE OF THE PLATFORM
- 8 OUTDOOR THEATER
- 9 NATIONAL UNITY SQUARE
- 10 INDUSTRIAL MARK
- 11 VIEWING TOWER
- 12 ARTIFICIAL BEACH
- 13 GRASSLANDS LAKE
- 14 THE THEME PARK
- 15 MEADOW GRASSLAND
- 16 TIANJIAO LAKE
- 17 TIANJIAO SQUARE
- 18 MUSEUM OF NATURAL HISTORY
- 19 MALL
- 20 ECOLOGICAL CLUB
- 21 THE PRAIRIE RIVER
- 22 SWAN LAKE
- 23 ECOLOGICAL BIRD ISLAND
- 24 FLOWER GARDEN
- 25 KEPUZHAN
- 26 BIRCHES
- 27 DIAOYUTAI
- 28 BIRDWATCHING TEAHOUSE



KEY MAP

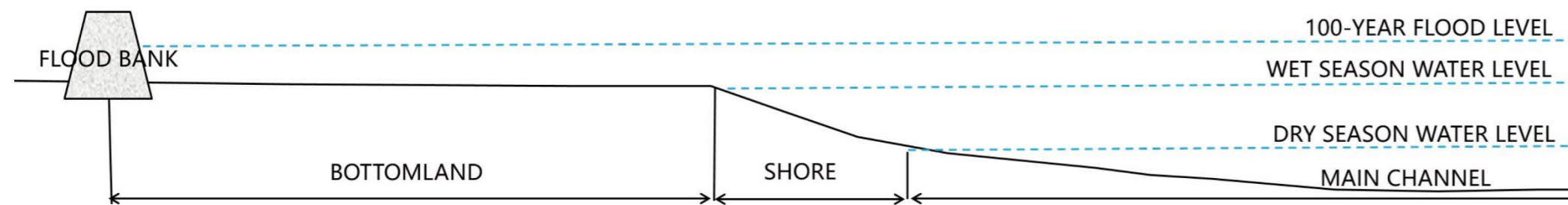
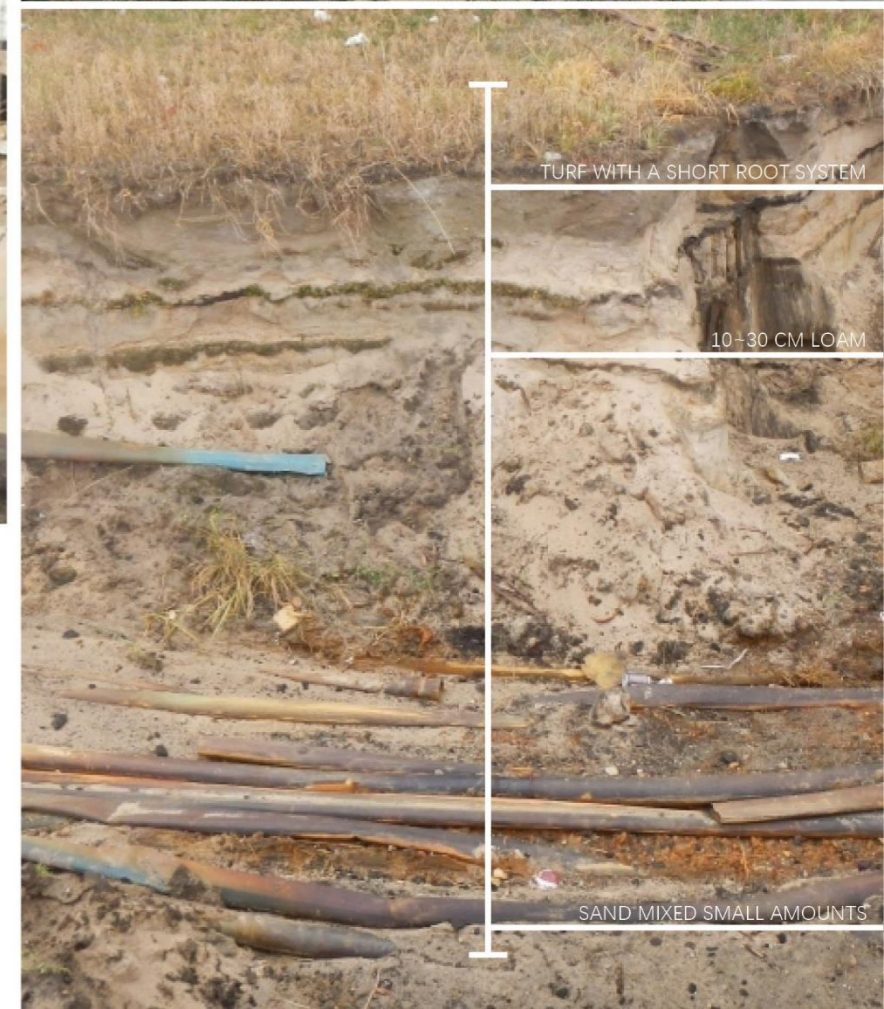
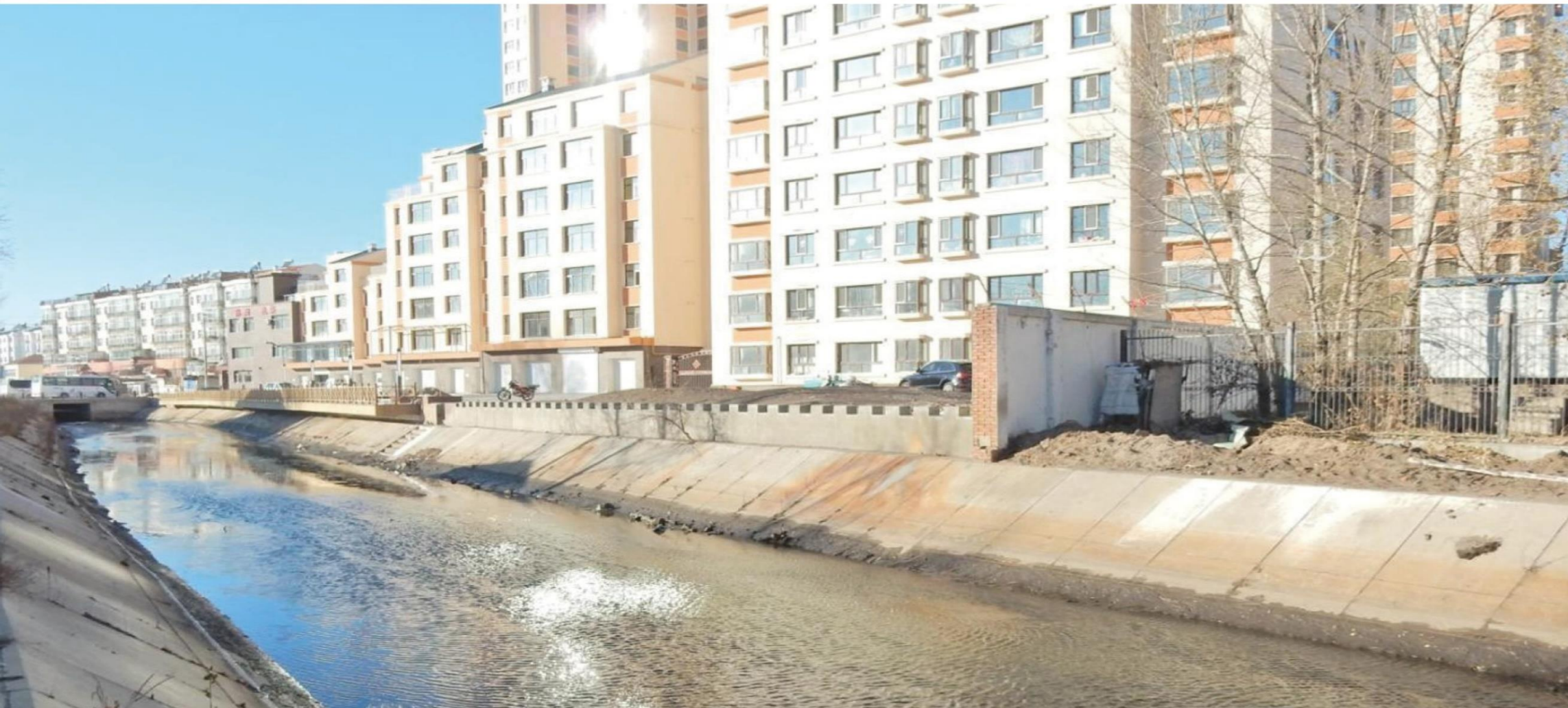


- 1 YINGBIN SQUARE
- 2 RECREATIONAL TRAILS
- 3 GALLERY LOUNGE AREA
- 4 TRAIL ENTRANCE
- 5 CHARACTERISTIC SITS STOOL
- 6 LEISURE LAWN
- 7 WOODEN FOOTWAY
- 8 THE THREE LAKE
- 9 THEME SQUARE
- 10 RAIN GARDEN
- 11 CHILDREN THEME ACTIVITY AREA
- 12 SCENE SCULPTURE SQUARE
- 13 CULTURE AND LEISURE SQUARE
- 14 RAINWATER HARVESTING
- 15 GENGHIS KHAN SQUARE
- 16 DRAMA PERFORMANCE THEATER
- 17 LANDSCAPE SLOW FLOW DROP WATER
- 18 LATENT WATERS
- 19 BARRIER FREE ENTRANCE
- 20 THE CONNECTION BRIDGE
- 21 LANDSCAPE FOUNTAIN
- 22 COMMERCIAL BUILDINGS
- 23 LEISURE SQUARE
- 24 ECOLOGICAL WATER DROP LANDSCAPE
- 25 BOTANICAL GARDENS
- 26 WOODEN PLATFORM FOR VIEWING
- 27 THE FOG GARDEN

NORTH
0 100 300 500
SCALE: (M)

DESIGN CHALLENGES

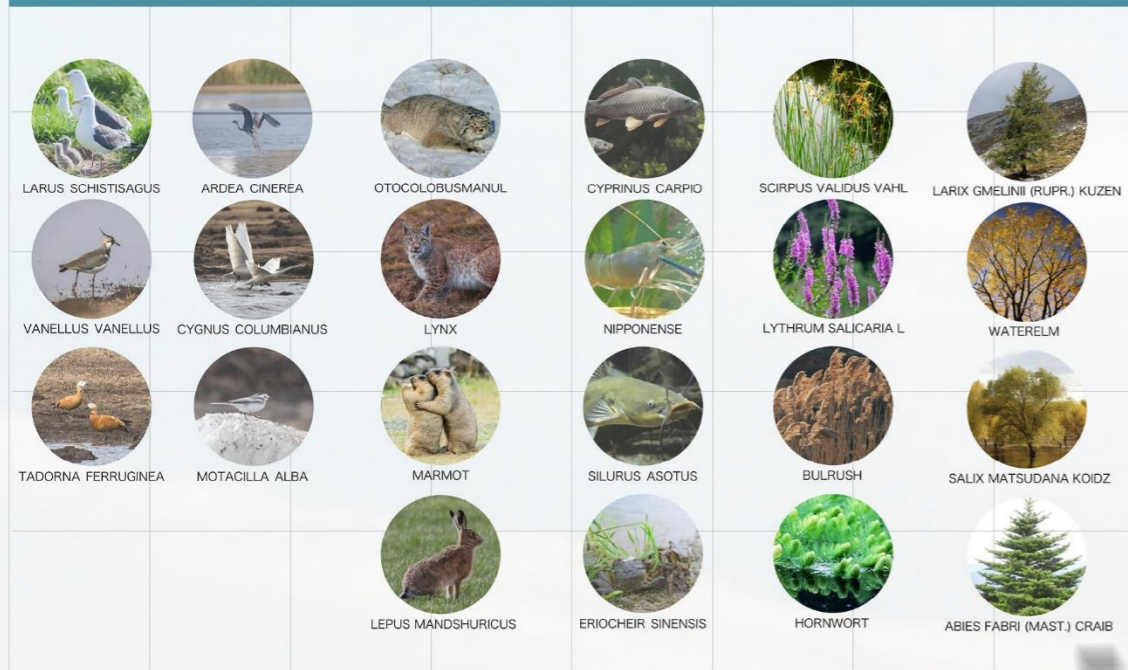
As a meandering, grassland river, river experiences seasonal riverways, extensive floodplains, and sensitive soil and vegetation structures. While urban development has reshaped and channelized riverbeds to effectively maintain flood control, it has also severely harmed the river's once thriving ecosystem.



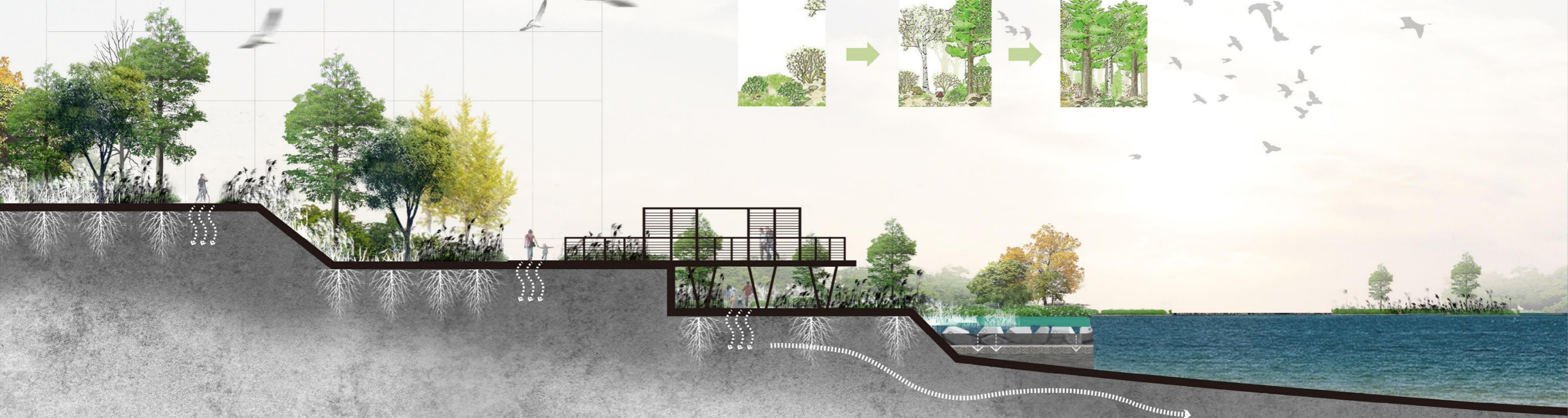
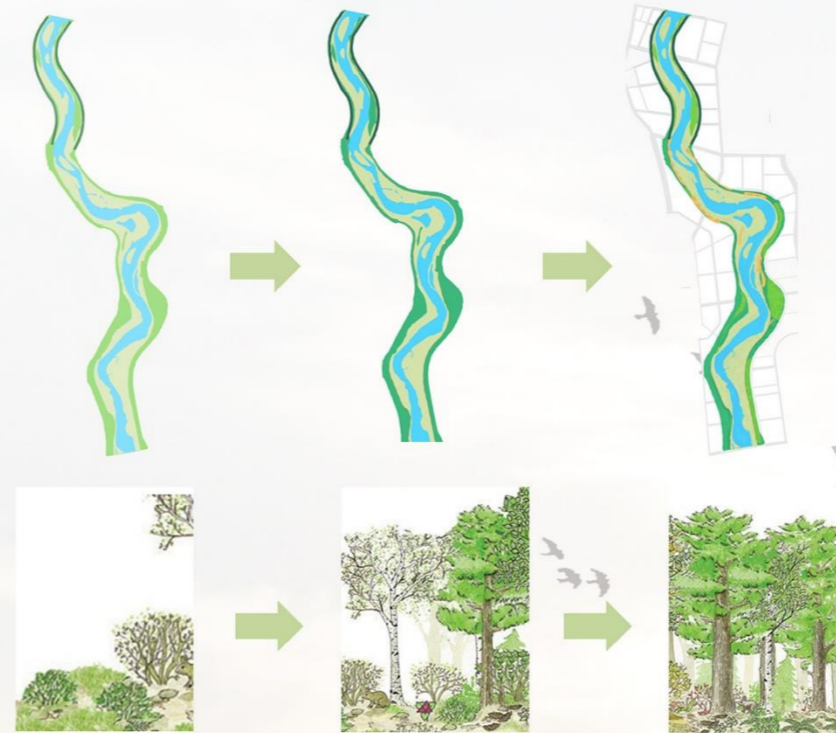
ECOSYSTEM RESTORATION

The design team implemented a systematic restoration of the water system. First, in respecting the river's hydrology and native vegetation, next, the design team reconstructed the ecological environment along the river by replacing and consolidating the topsoil.

BIODIVERSITY



PLANT SYSTEM SONSTRUCTION





Wetlands were rehabilitated, its sediments contributing to the water's purification and the reduction of surface run-off during flooding.



BEFORE



AFTER

WETLANDS REHABILITATION

Wetlands were rehabilitated, its sediments contributing to the water's purification and the reduction of surface run-off during flooding.



BEFORE



BEFORE



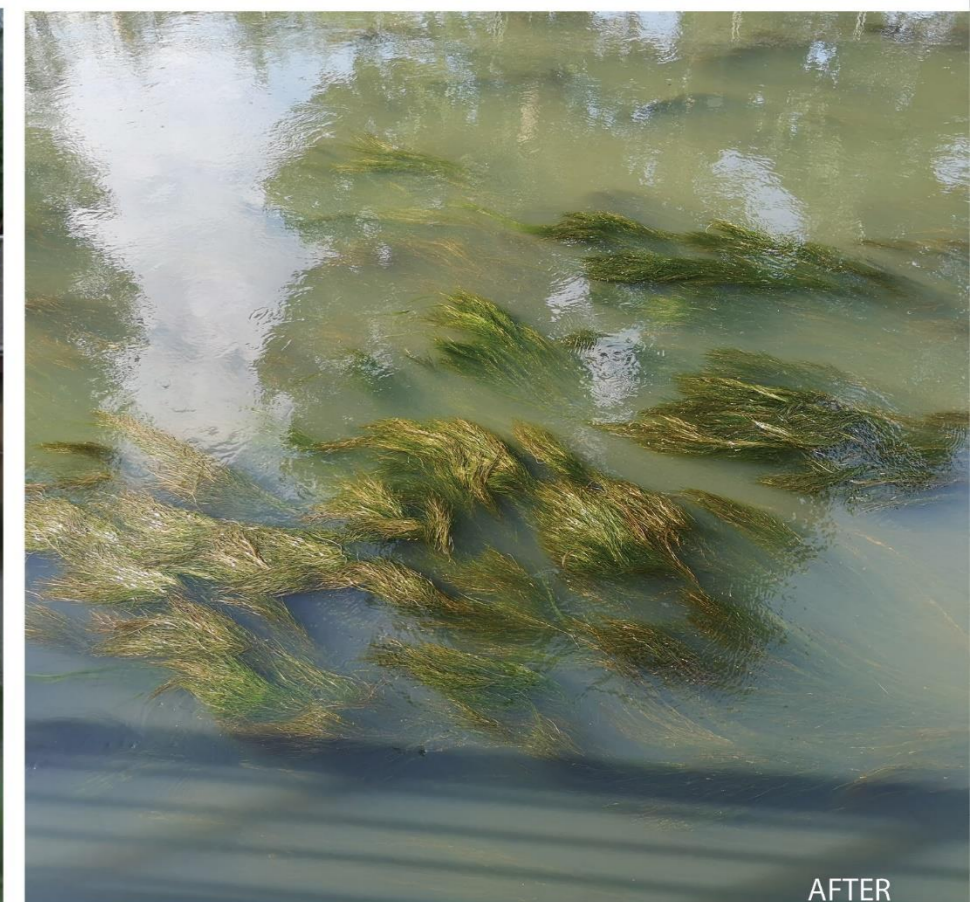
BEFORE



AFTER



AFTER



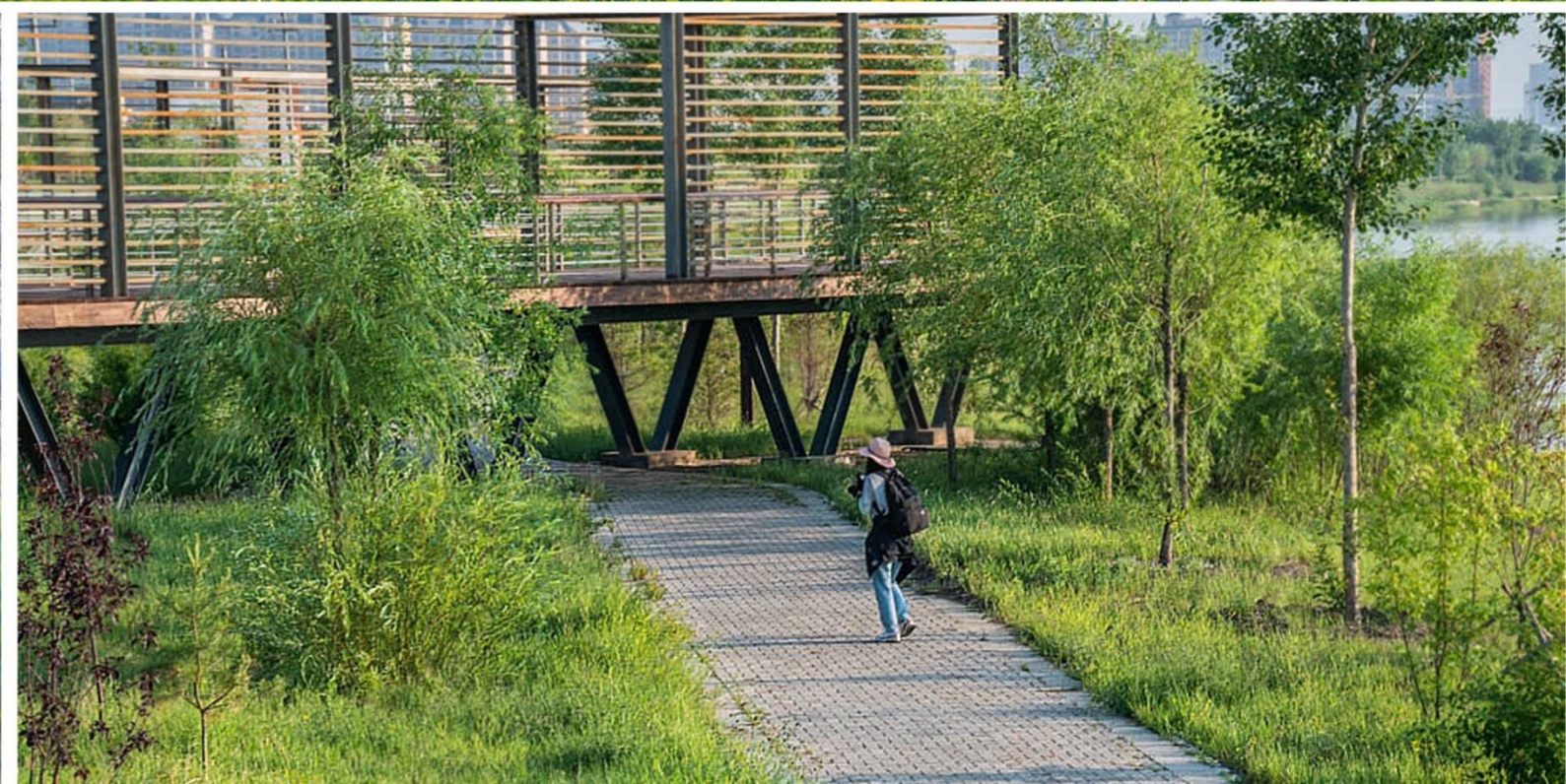
AFTER

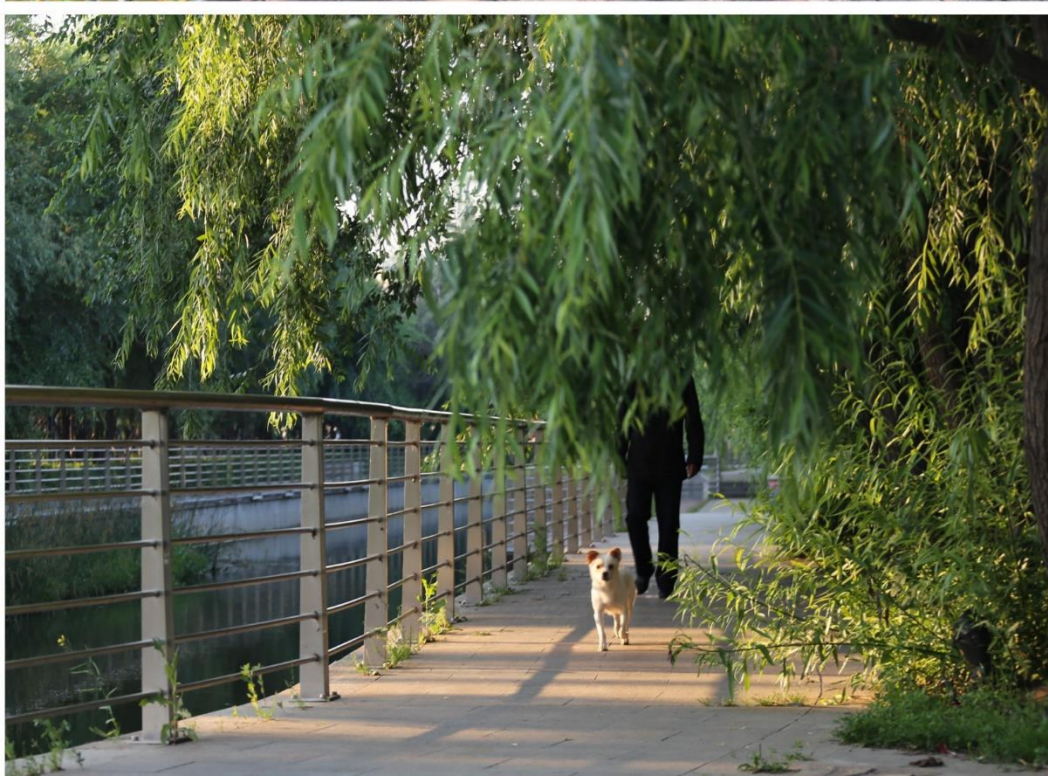


A 7-HECTARE LAGOON WAS FORMED AT THE BEACH AREA



Existing poplars were preserved, and new trees were added to establish an attractive arborous community. A five-meter-wide trail was designed along the riverside with permeable bricks that can withstand flooding. Finally, a 7-hectare lagoon was formed at the beach area to further reduce the effects of flooding while also supporting bird habitats and sport fishing.





PROGRAMMING IMPROVMENT

"Dike Park Belt" is an urban park outside the floodplain designed for residents' and visitors' recreation and sightseeing needs.



BEFORE



AFTER

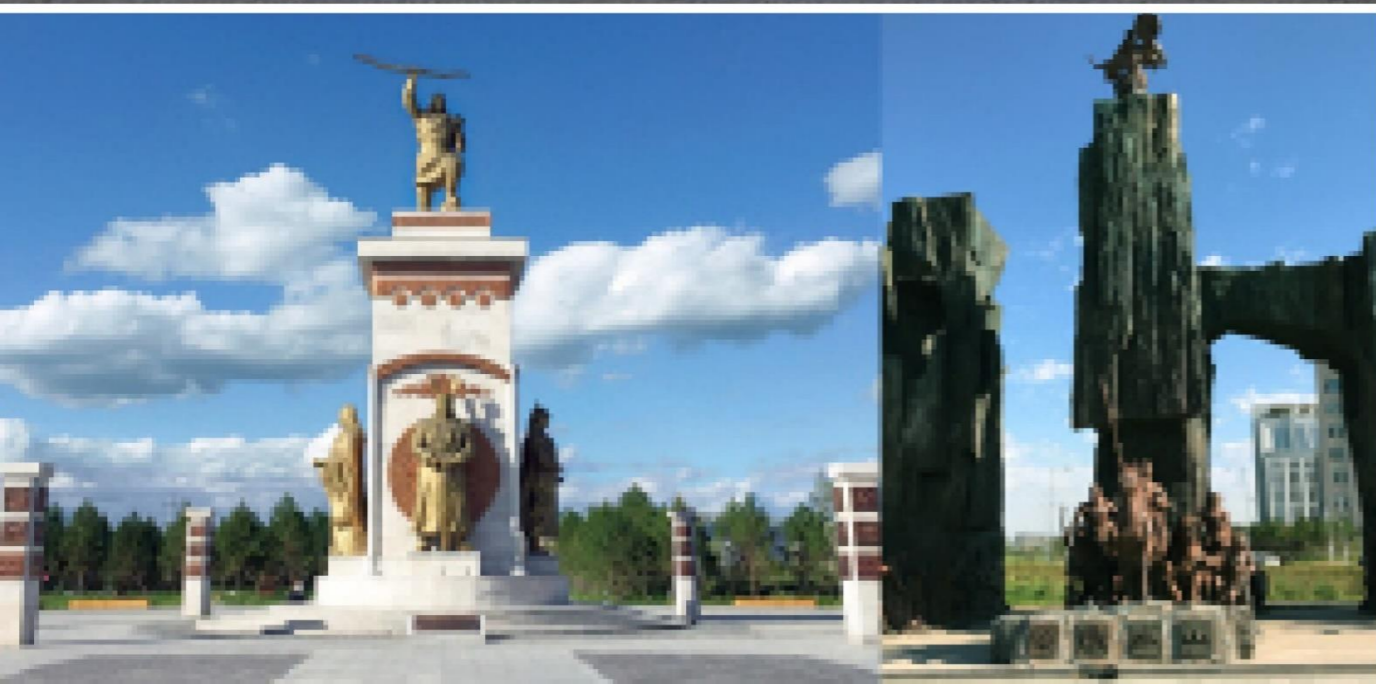


Its newly created cultural square, sports fields, open lawn, amphitheater, outdoor fitness centers, and other service facilities are connected by walking trails that can be explored by visitors throughout the day and night.





Two historical-themed squares are designed to pay homage to Mongolian history, and earth-covered architecture is created to be reminiscent of the steppe topography; these elements offer a taste of local ethnic culture and engage visitors with the stories of the region's last three living tribes.



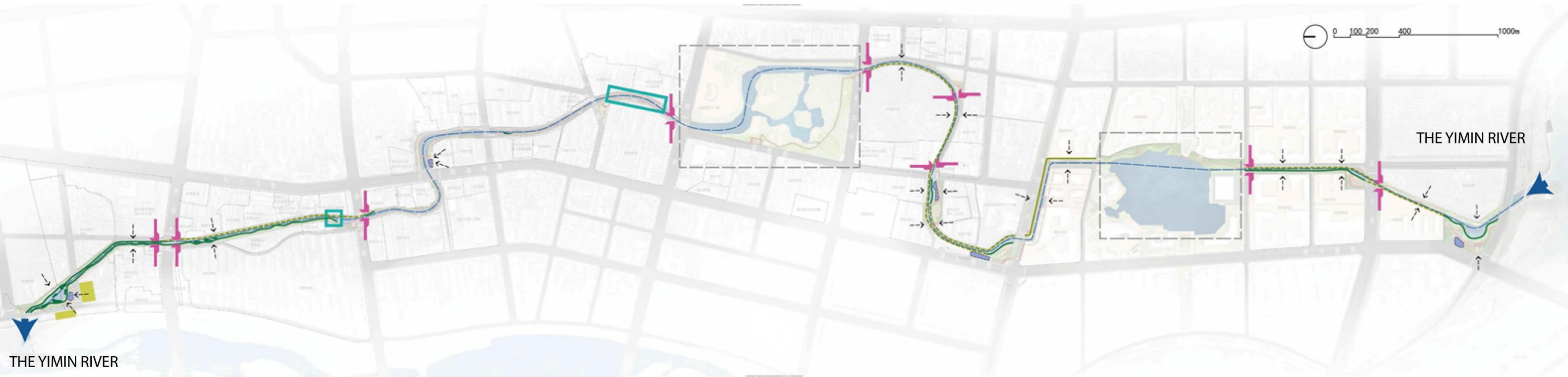




These elements offer a taste of local ethnic culture and engage visitors with the stories of the region's last three living tribes.







COMMUNITY INTEGRATION



The successful restoration of the riverside through this project has played an important role in initiating a comprehensive renovation of the Yimin River.





 FILLING WATER
 WETLAND PURIFICATION

 BUFFER GREENBELT
 UNDERWATER ECOLOGICAL DITCH

 STORM DRAIN
 RAIN GARDEN

 SURFACE RUNOFF
 ADD PURIFICATION BLOCK

 SEWAGE TREATMENT PLANT
 DROP

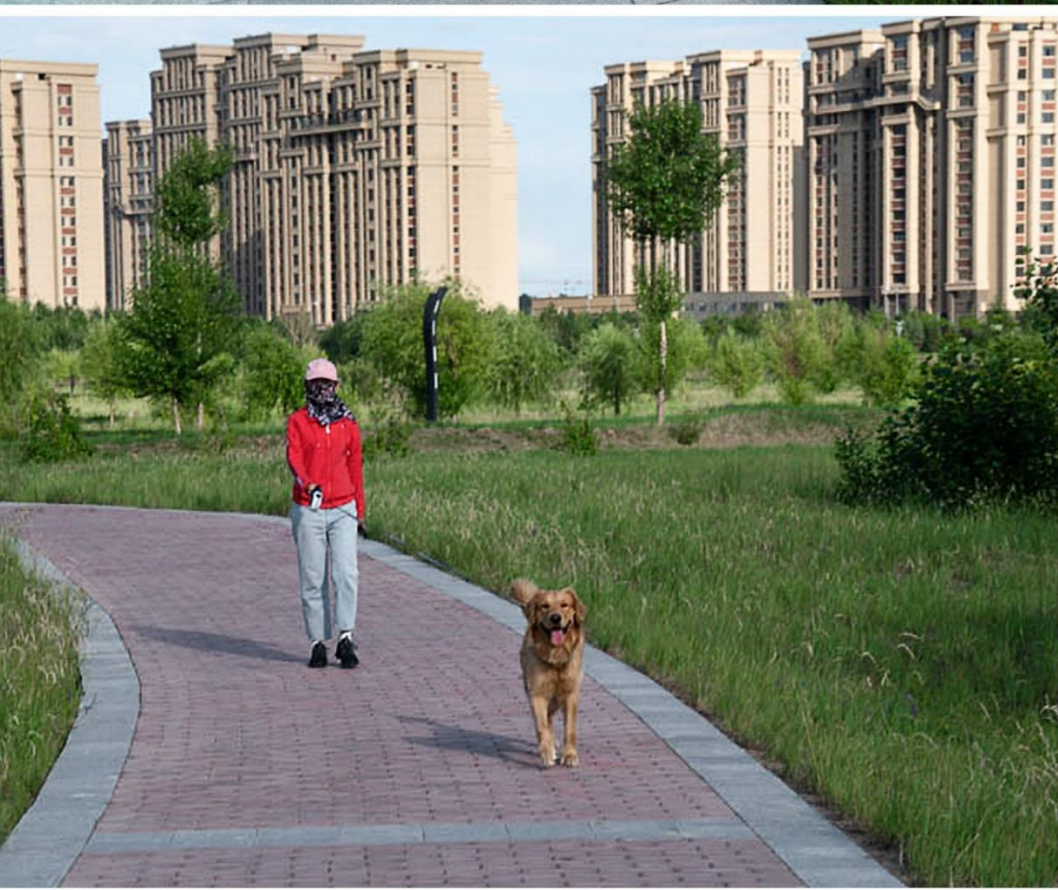


Moving forward, the city will continue curbing water pollution, promoting flood control, and preserving the ecological environment to further improve the water system.





Through this project, the design team achieved urban space integration, culture revitalization, and city renewal.





The successful rehabilitation of Yimin River and Creek 626 produced a coherent waterfront greenway that enhances flood discharge and urban vitality.