

10 hectares., 1700 m long, producing 2400 cubic meter of water per day, water for 5000 people

The deep form of ecology: Haikou Meishe River 海口美舍河





The regional plan of an ecological infrastructure



Urban: existing channel



proposed



Urban: existing lake shore



proposed



Computer rendering of the Meishe River and Fengxiang Park



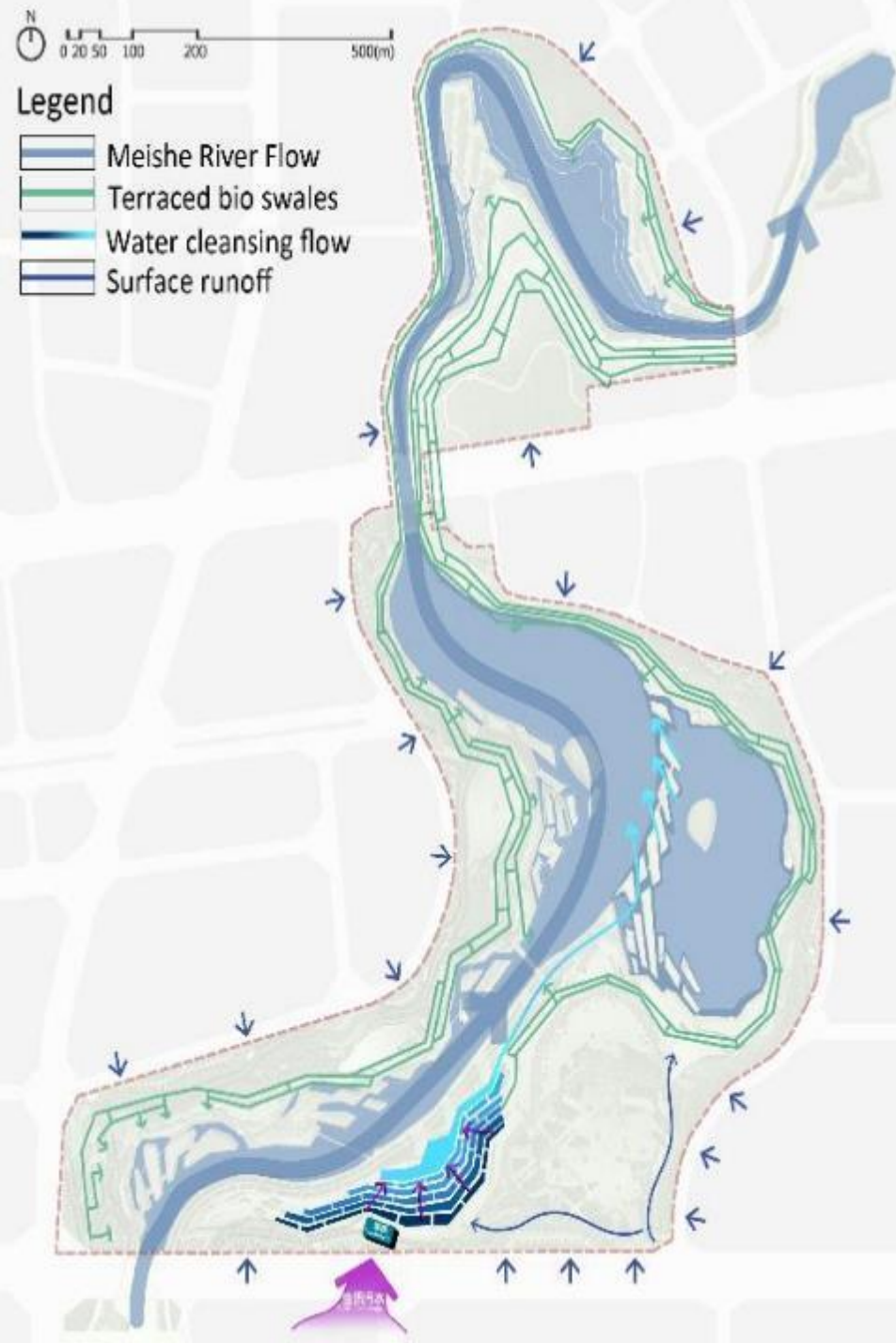
Suburban: existing undeveloped



proposed

The regional strategy: Planning an ecological infrastructure, transforming gray into green integrating flood control, storm water management, habitats and recreational uses,

The Site Plan











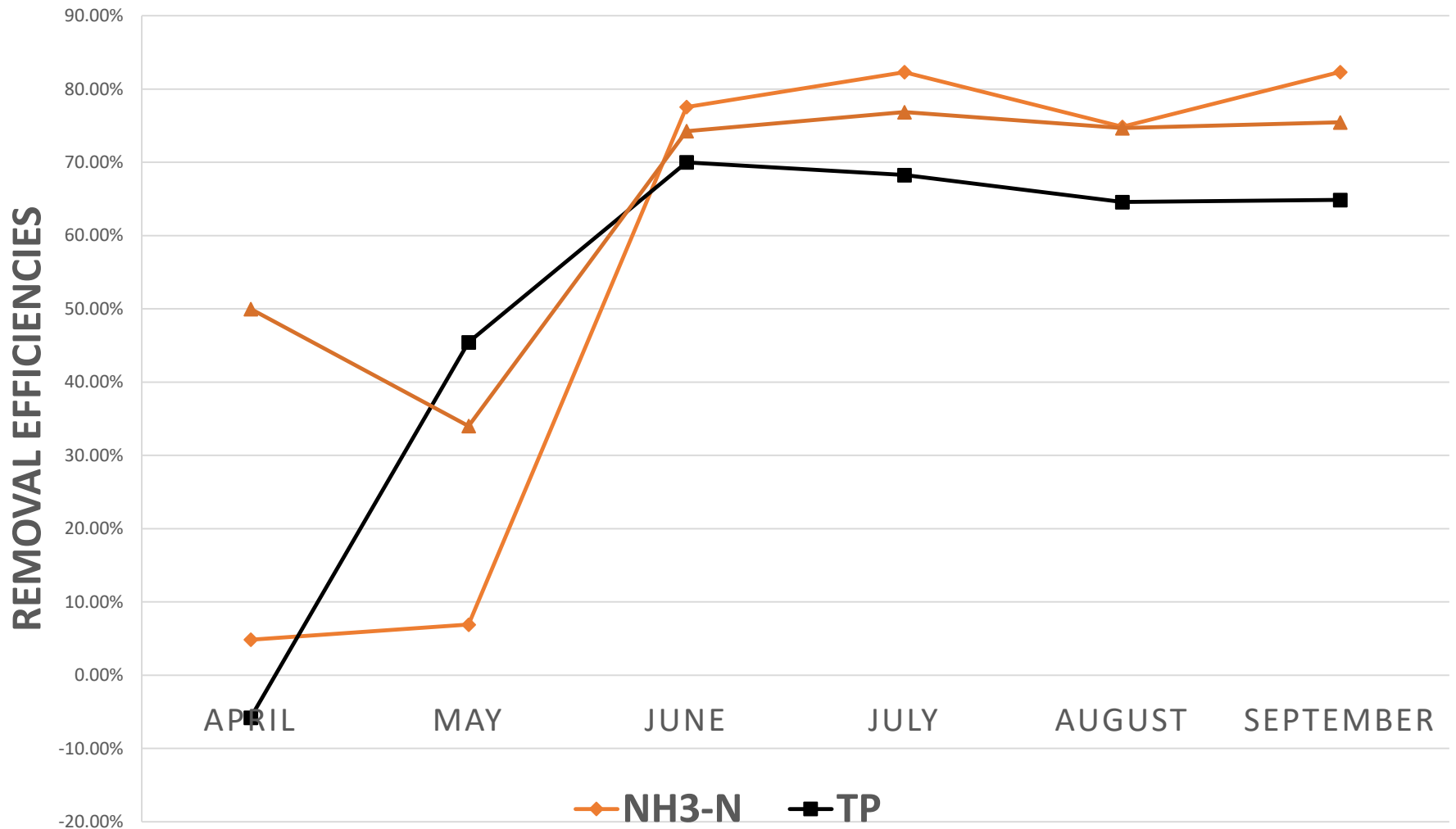










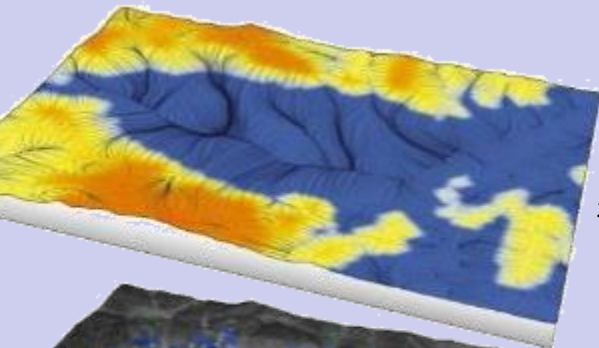


16 Post operational evaluation: Overall Removal effect of pollutant indicators in wetlands

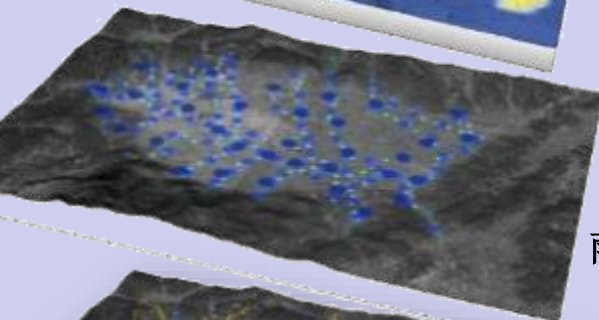
Nature based solution to Soluitons Fiver Waters

浙江五水共治首例： 金华浦江， 浦阳江

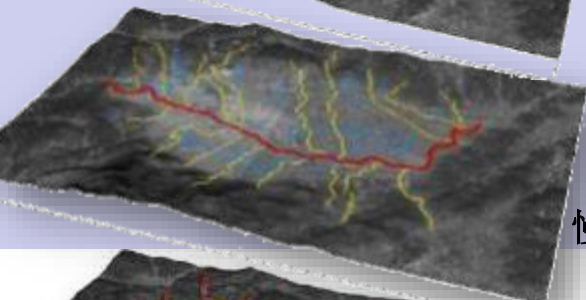




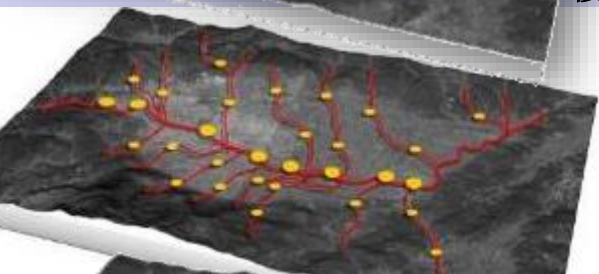
径流分析



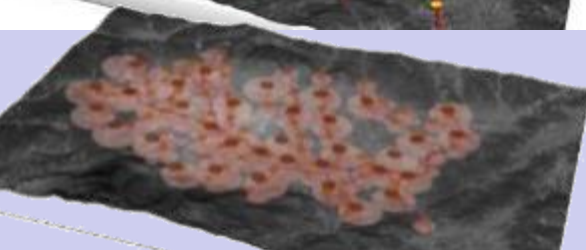
雨水滞留分析



慢行及自行车系统

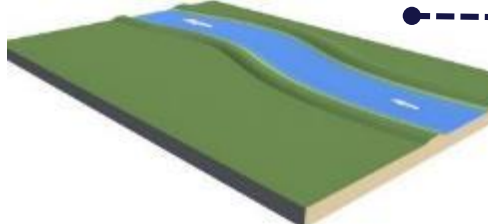


活动空间



可达性分析

典型河道现状



设计意向



典型段设计平面



典型段设计剖透



典型段设计效果







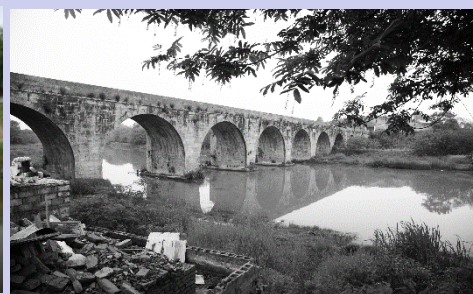
现状



森林灌渠



采砂场和被渠化河道



湿地及物质文化遗存

改造



结合现有结构和森林树木的木栈道



将采砂场改造为内部树岛相连的湖泊



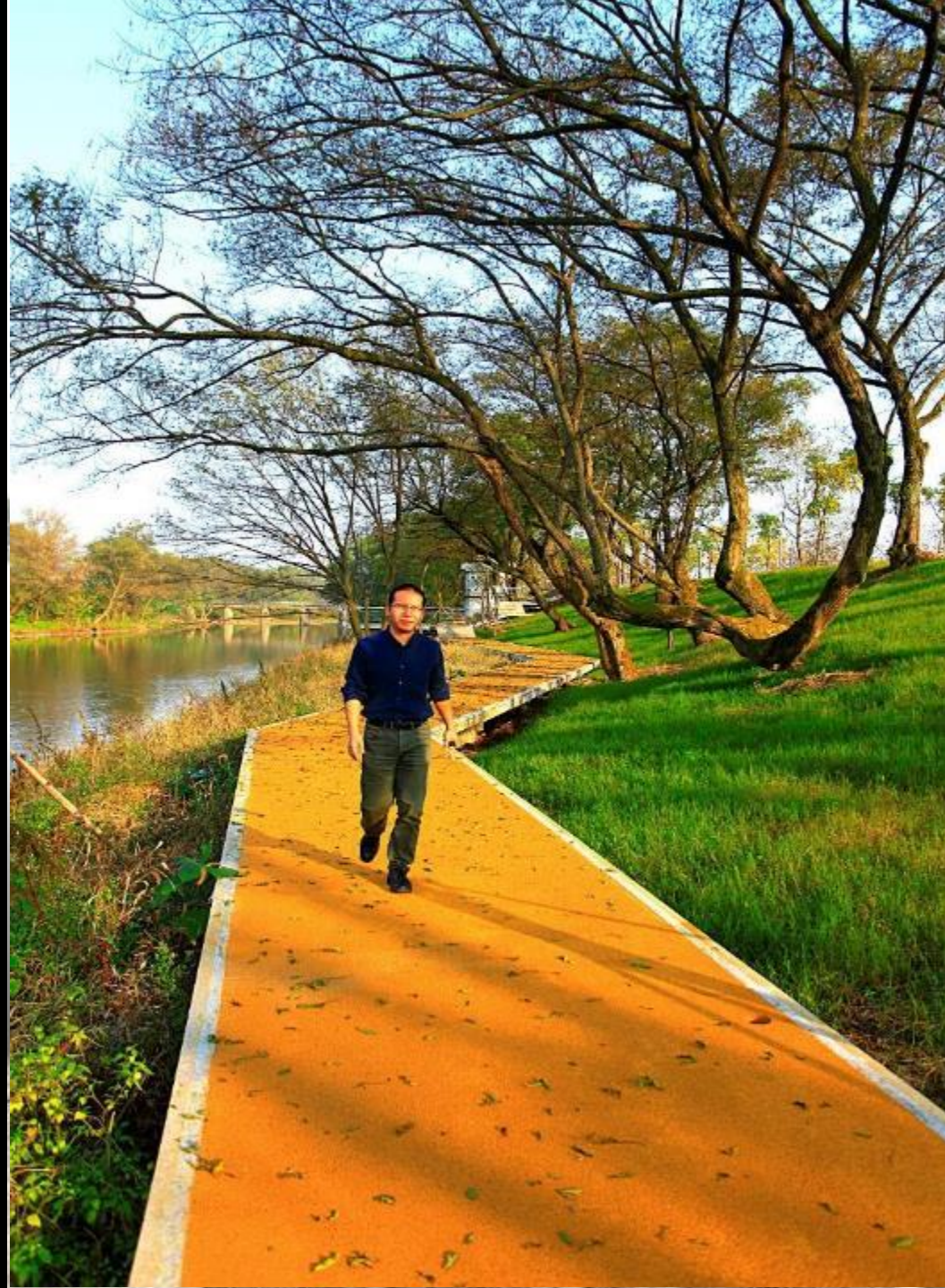
软化河道以增加其可达性和联系



绿道结合并展示文化遗产

02 总平面图: 浦阳江河流绿道, 10英里, 60-390 英尺宽. 现状照片和电脑效果图强烈对比出一条已衰退的河流廊道戏剧化的转变为一条丰富而连续的绿色基础设施。





Recovering Mother River: Qian'an Sanlihe Greenway

迁安三里河



*The Sanlihe River, 11 Kilometers long, Qian'an City,
Hebei Province*

• ***Before***









#7 “Green sponge” to remediate the soil contamination

60% of the urban soil is contaminated

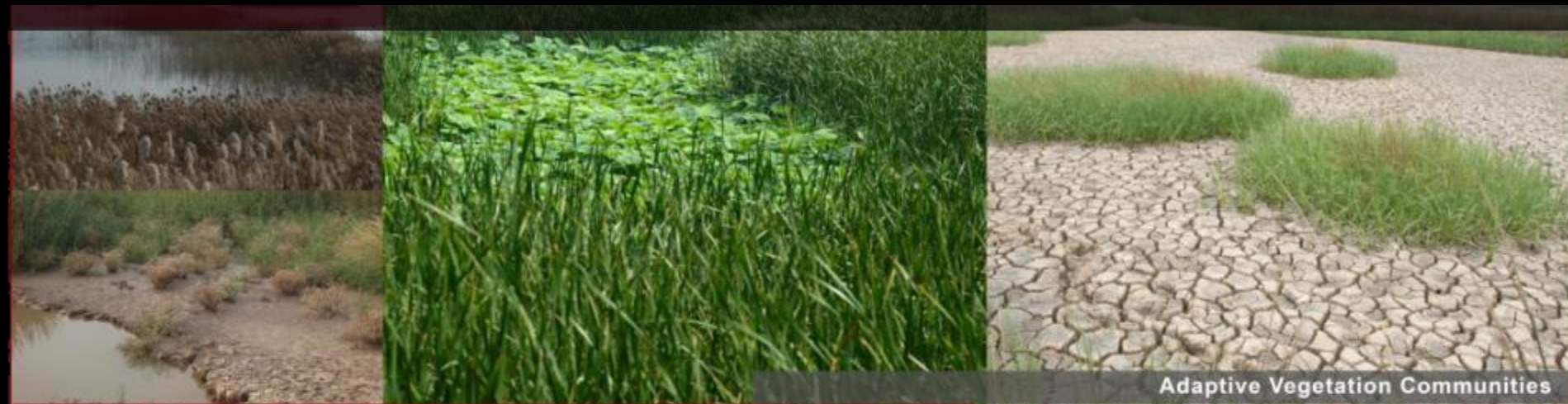
城市污染地治理，天津桥园



Qiaoyuan Park, Tianjin City

• *Before*

改变PH 值



Adaptive Vegetation Communities

Different PH Cleans Different Pollutants

Different Pond Depth Allows Different Species

Deep Water Pond

S 1



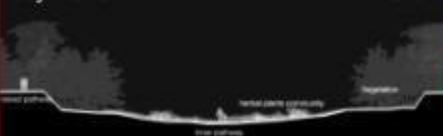
Shallow Water Pond

S 2



Dry Pond

S 3



Inverted Pond

S 4



Pond Plan Diagram



Adaptive Vegetation Species

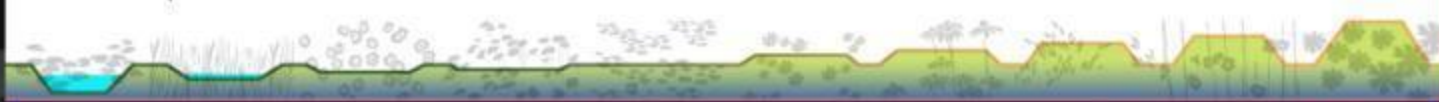


Different PH Levels

Acid

Alkaline

Different Pond Depth



Inspiration: Adaptive vegetation communities that dot the regional landscape in patches sensitive to water and soil PH values



Management of PH and water



PH Values



Water Flow

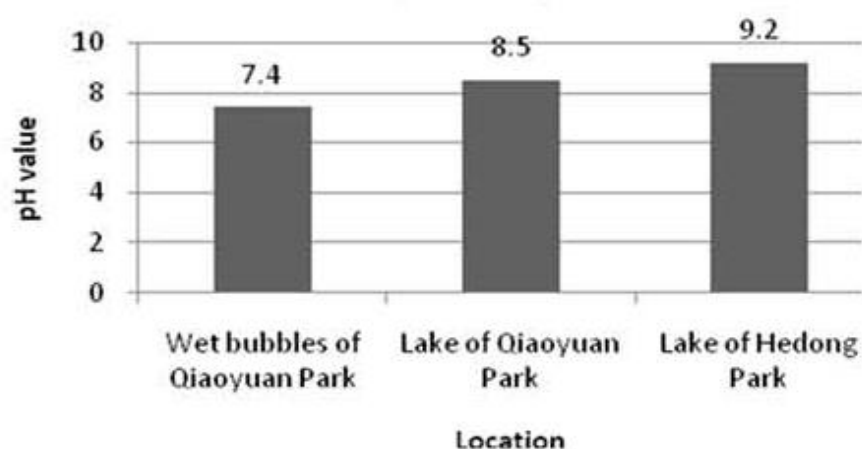






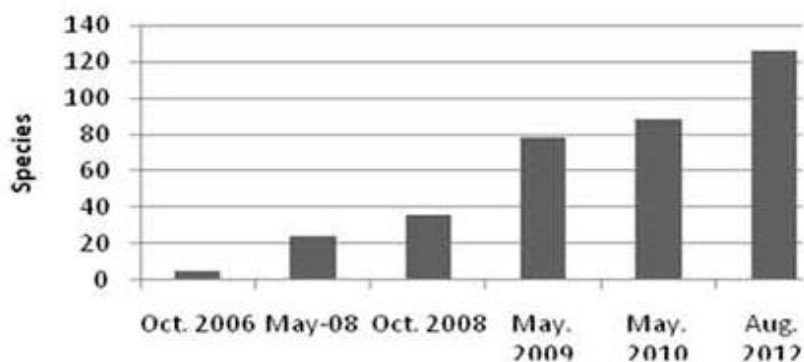
3 雨水流

Average water pH



5 与其他水体对比，生态服务仿生技术对场地盐碱度明显改善

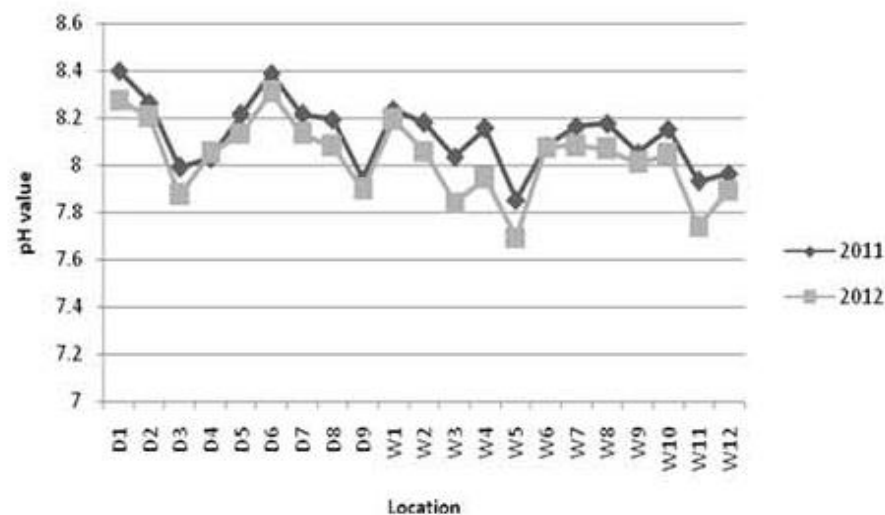
Biodiversity trends



7 恢复后的生境，生物多样性逐年提高

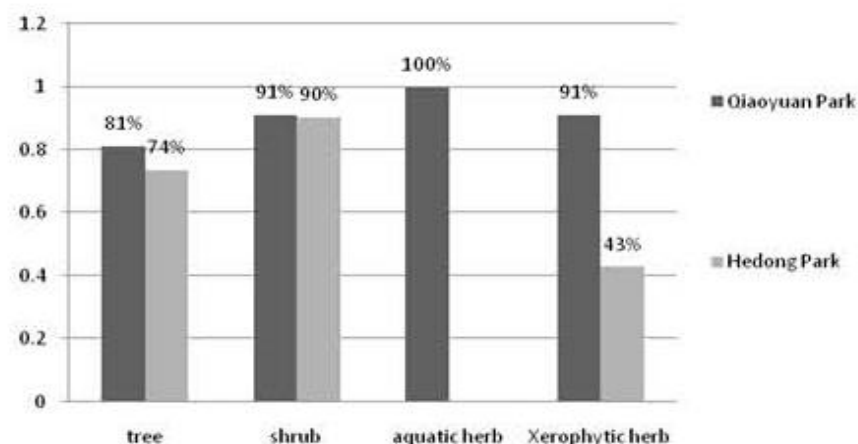
4 土壤 PH 值变化

Trends of soil pH



6 2011-2012 对每个水泡测定的 PH 值的变化结果碱性明显下降

Percentage of native species



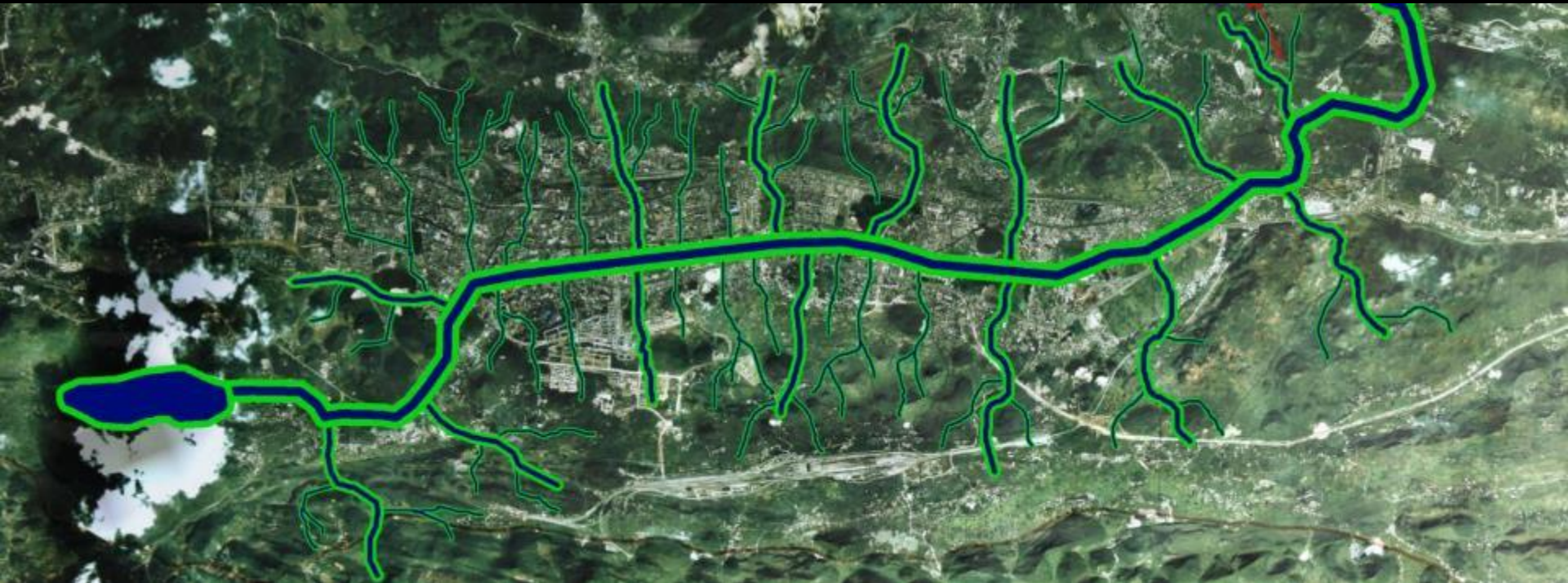
#9 Green Solutions to Transform A City

Liupanhsui City, *Guizhou*, 贵州六盘水

















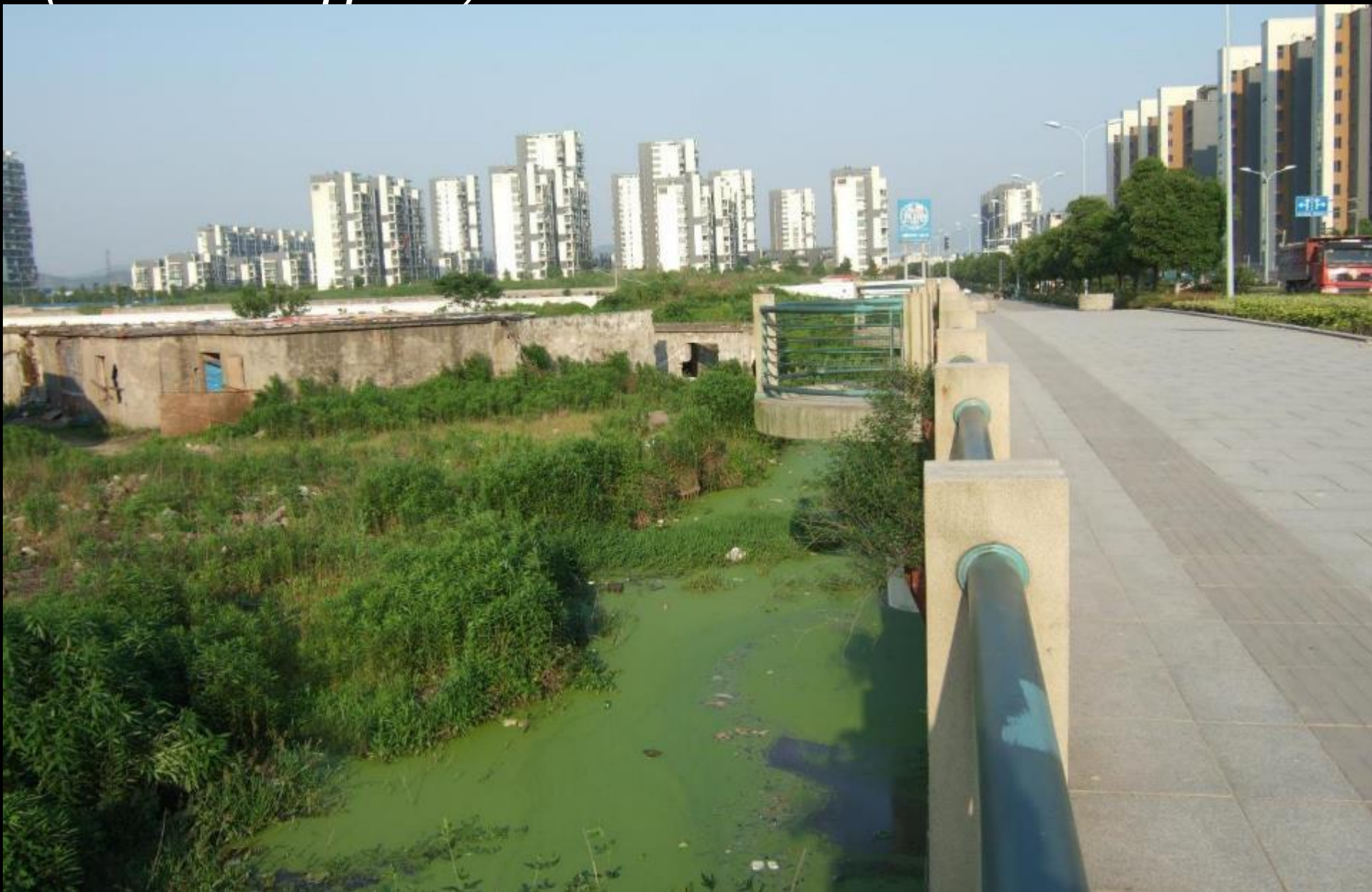


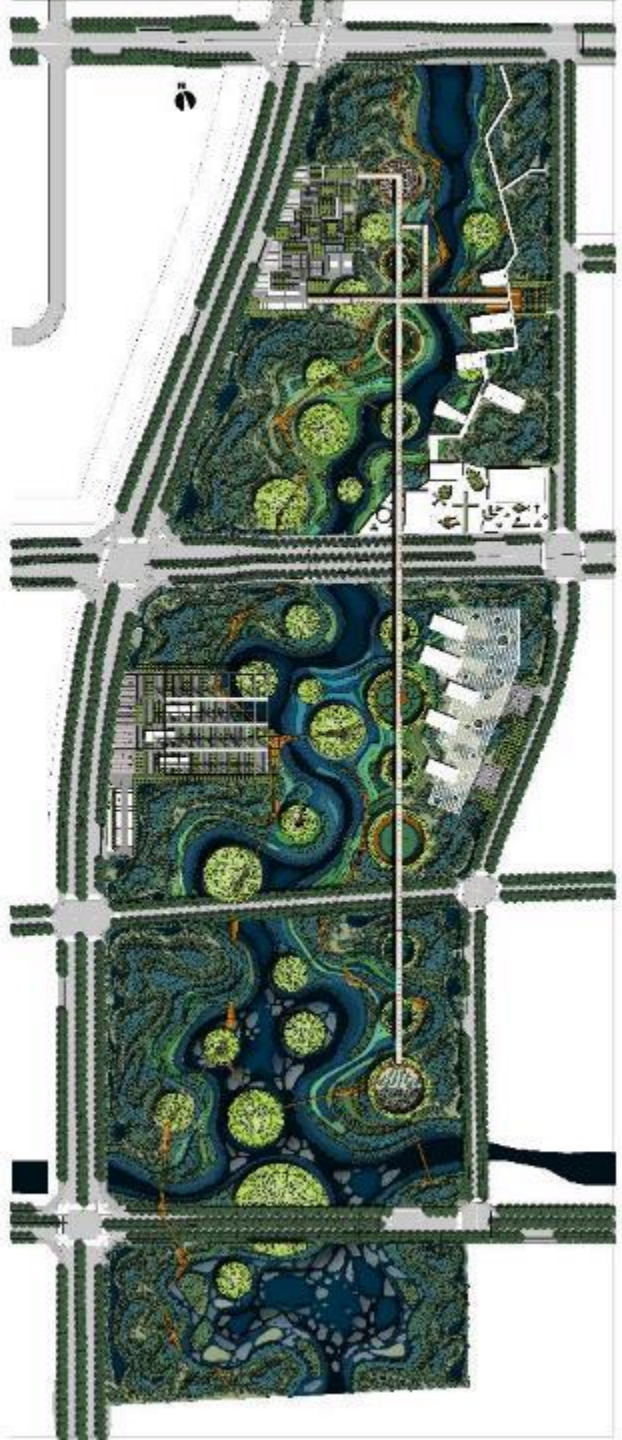


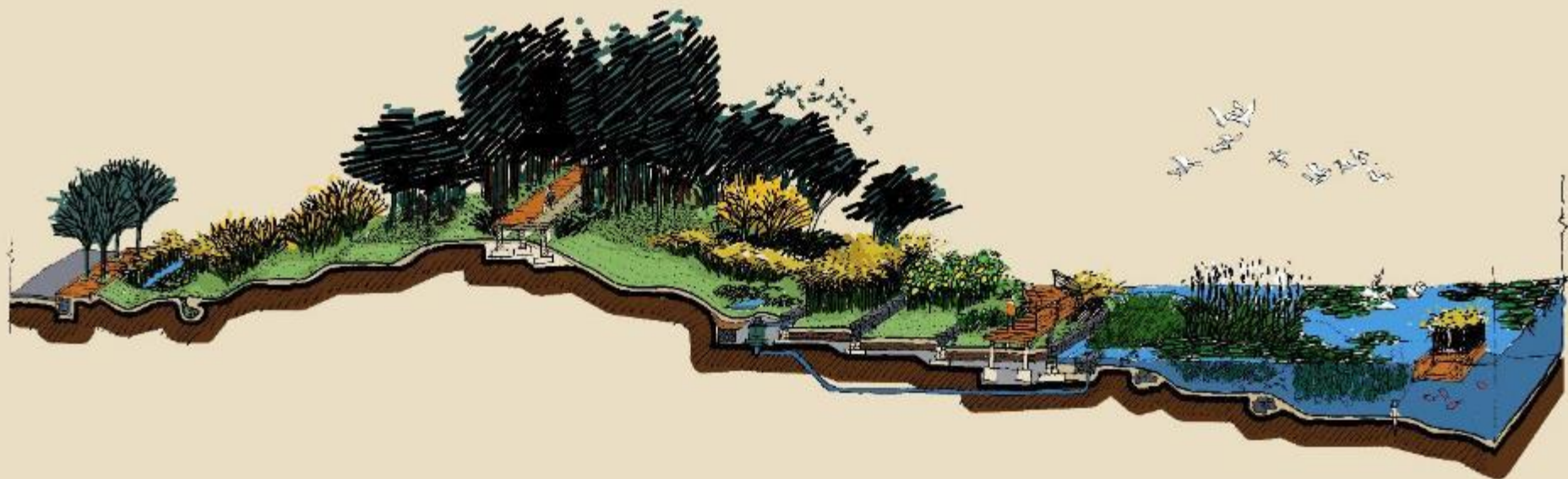


宁波东部新城生态廊道Ningbo East New Town

(World Bank supported)

















10 Go Productive

China has 20% of the world's population, but only 8% of world's arable land, 10% of which was lost in the past 30 years due to urban development.



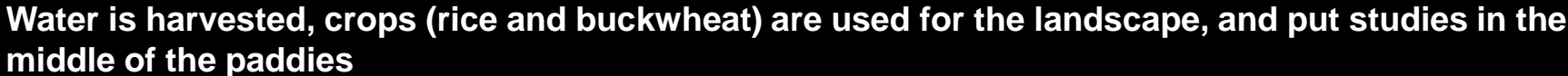
Shenyang Jianzhu University, Liaoning Province 2003



- 01. Central Pond
- 02. Dry Crop Area
- 03. Rice Fields
- 04. Library
- 05. Laboratory
- 06. Classroom
- 07. Architectural corridor
- 08. Student Dormitory
- 09. Sports Center
- 10. Cafeteria



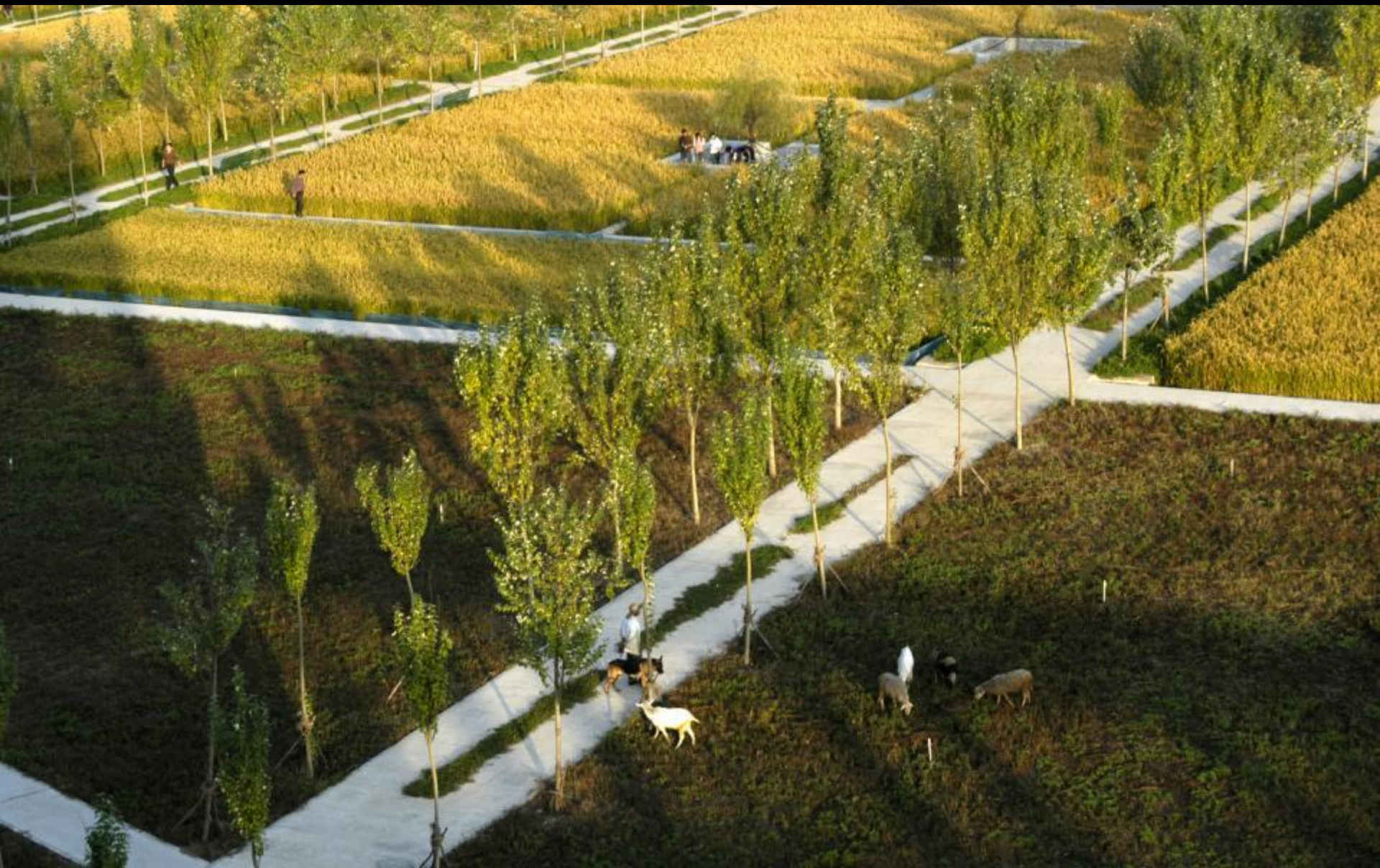
1:15 000













Rice fields are made penetrable using concrete narrow paths, that allow students and faculty to touch and feel the rice.



A professor on his way to class



The Rice Planting Day







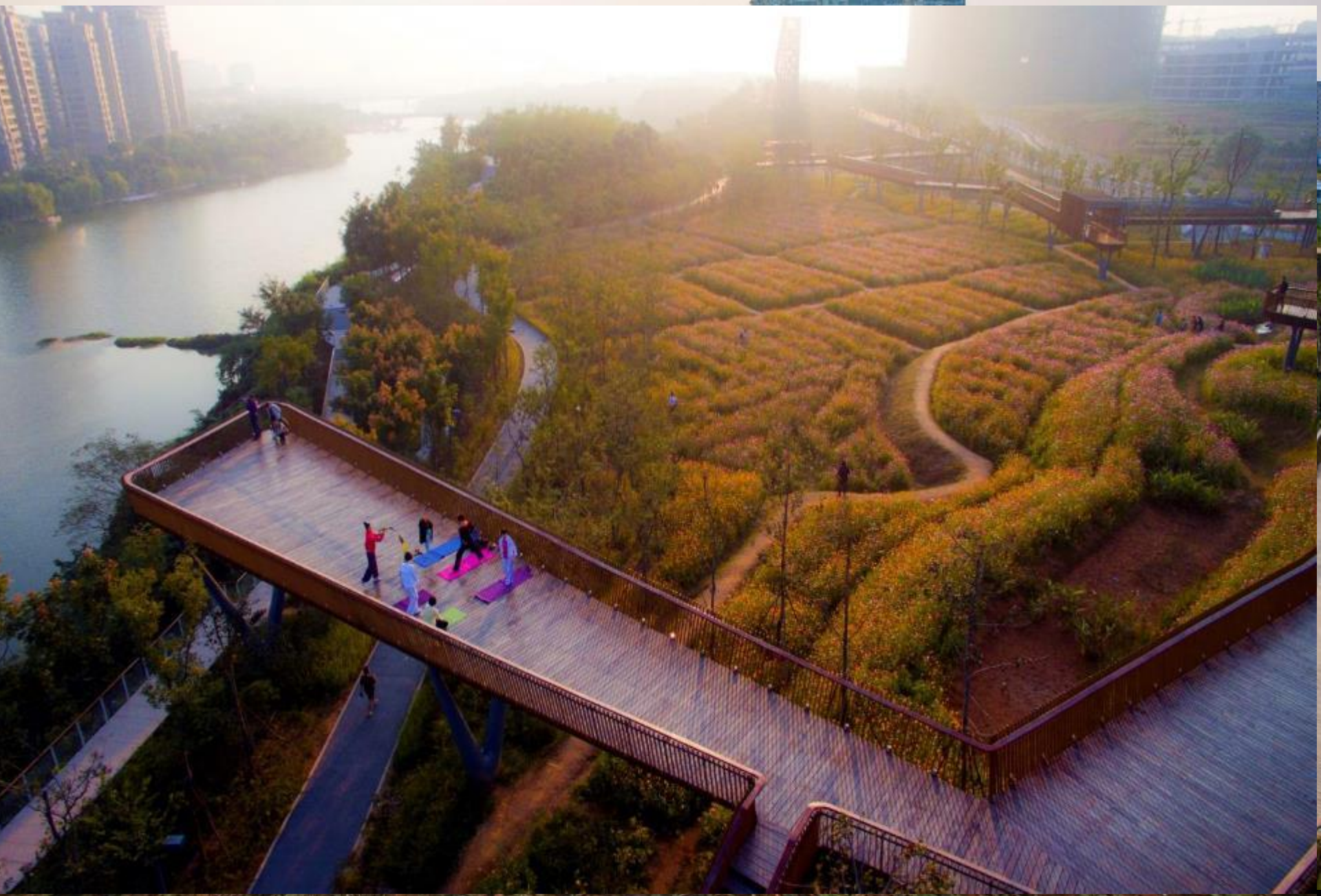
Golden Rice becomes an icon: the rice produced on the campus is harvested and distributed as “Golden Rice,” serving both as a keepsake for visitors of the school, and also as a source of identity for the newly established, urban campus.

Agricultural Urbanism: Quzhou Luming Park, Zhejiang Province, 2014



Pre-existing landscape: a remnant landscape patchwork surrounded with high density development



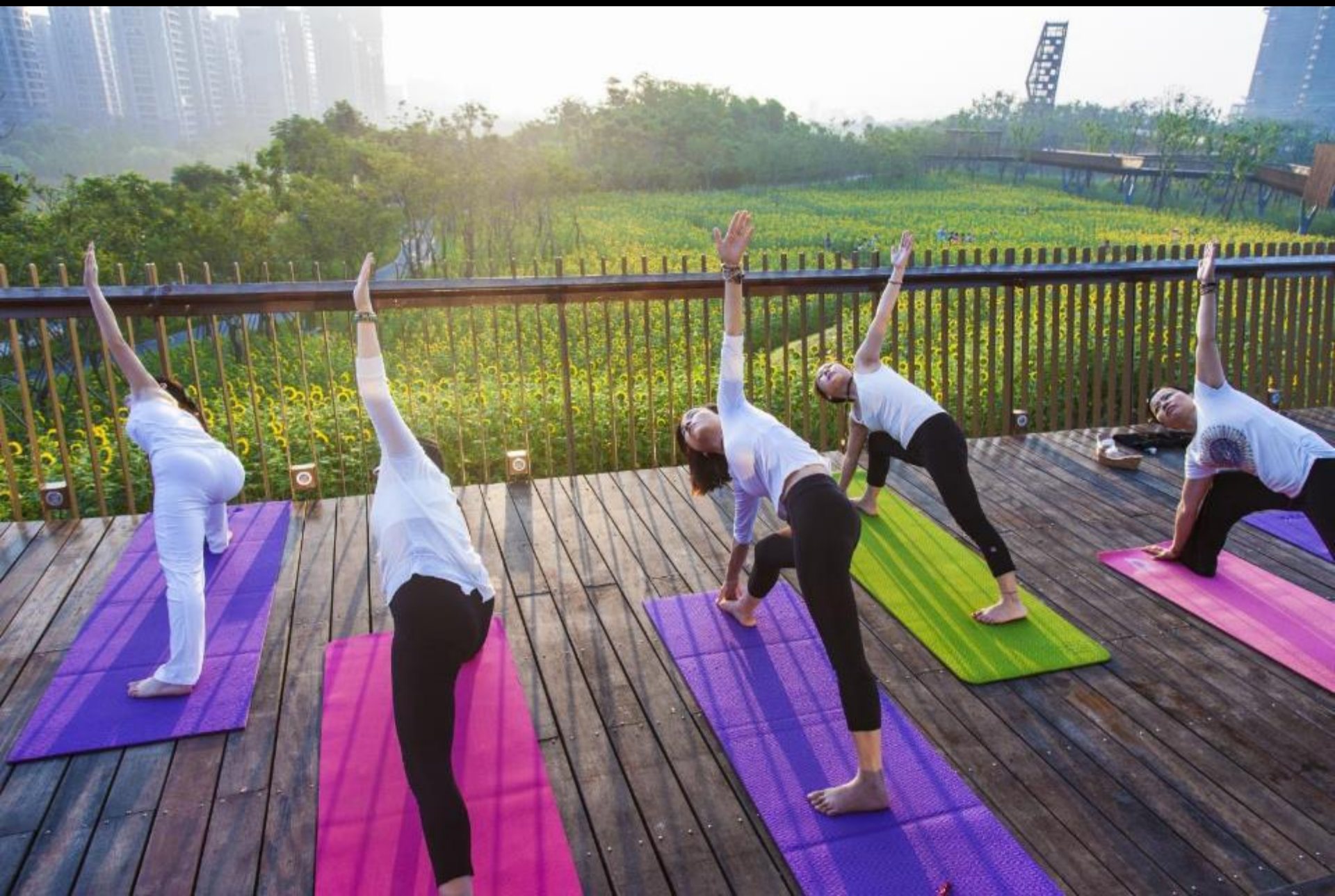




A planting palate is programmed around the seasons that combining productive crops, traditional medical herbs, nutrient fixing plants, and beautiful



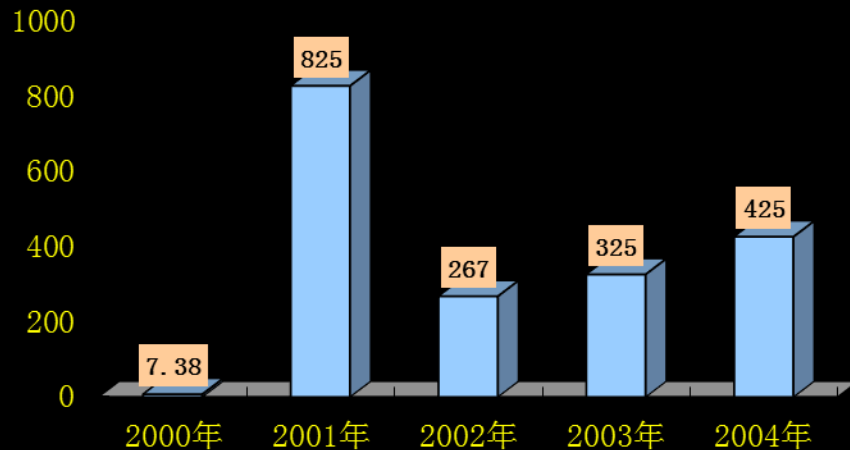




#11 Value the Ordinary Reuse and Recycle

Hundreds of millions of square meters were built, and significant amount had been torn down. Thousands of villages and factories wiped out. What can you do?

■ annual building square meters (million sq.m)

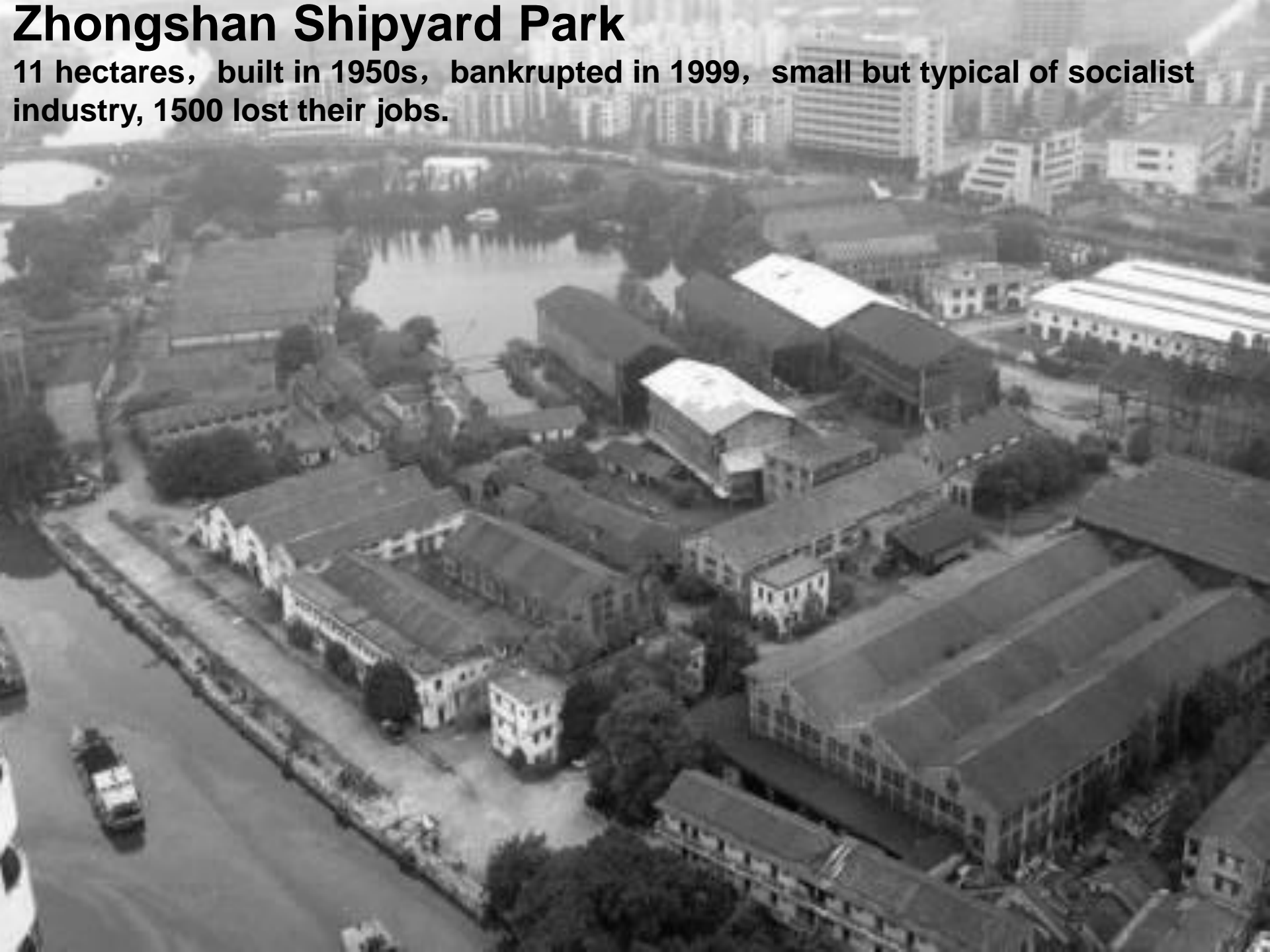


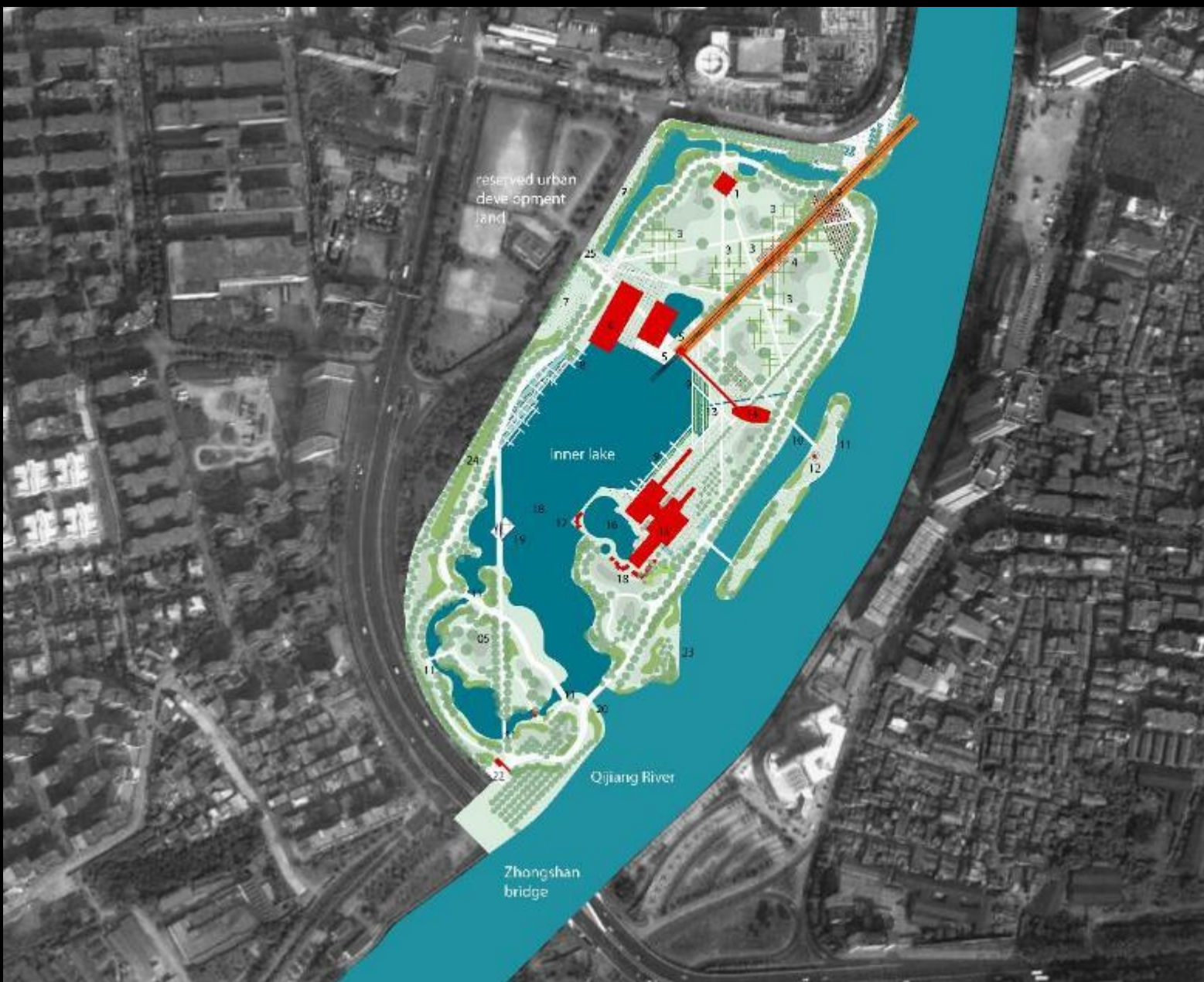
Destroyed:
156 million square meters (2003)



Zhongshan Shipyard Park

11 hectares, built in 1950s, bankrupted in 1999, small but typical of socialist industry, 1500 lost their jobs.

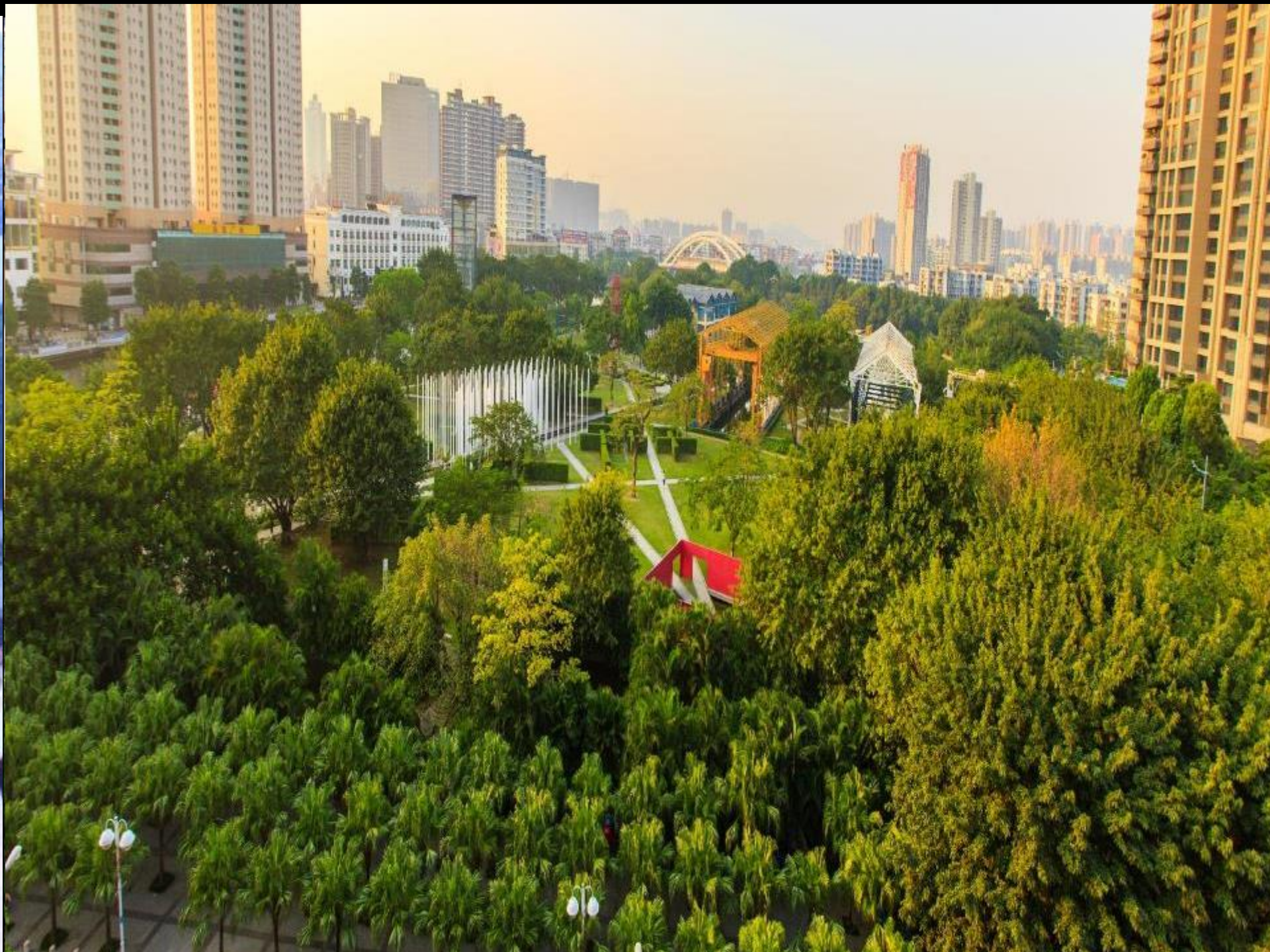




- 01. Red Box
- 02. Fog Fountain Square
- 03. Hedge
- 04. Column matrix
- 05. Sculpture
- 06. Yacht Club
- 07. Parking Lot
- 08. Boating Service Facilities
- 09. Terraced Bridges
- 10. Bridge
- 11. Dock
- 12. Light Tower (re-use of Water Tower)
- 13. Skeleton Tower
- 14. Playground on the ancient boat
- 15. Treehouse
- 16. Swimming pool
- 17. Pavillon (Polymar tent)
- 18. Fountain
- 19. Island
- 20. Bridge (floodgate)
- 21. Ecological bank
- 22. Structure of the South entrance
- 23. Hard Water Edge
- 24. Ringroad
- 25. Northwest Entrance



Reserve, Reuse, Recycle























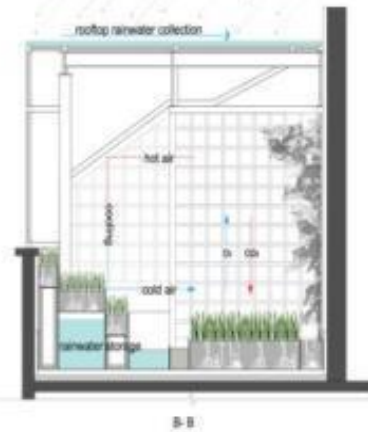
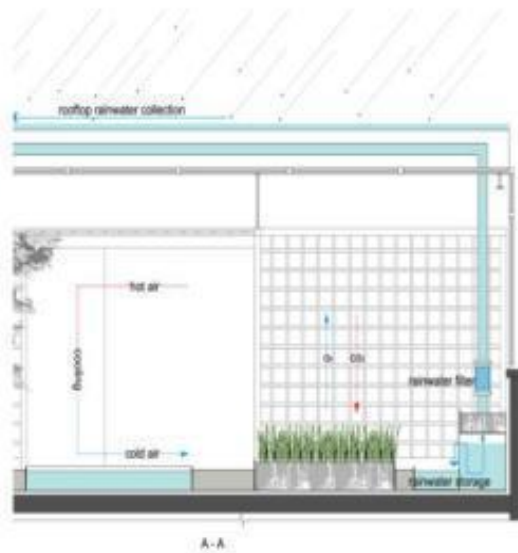
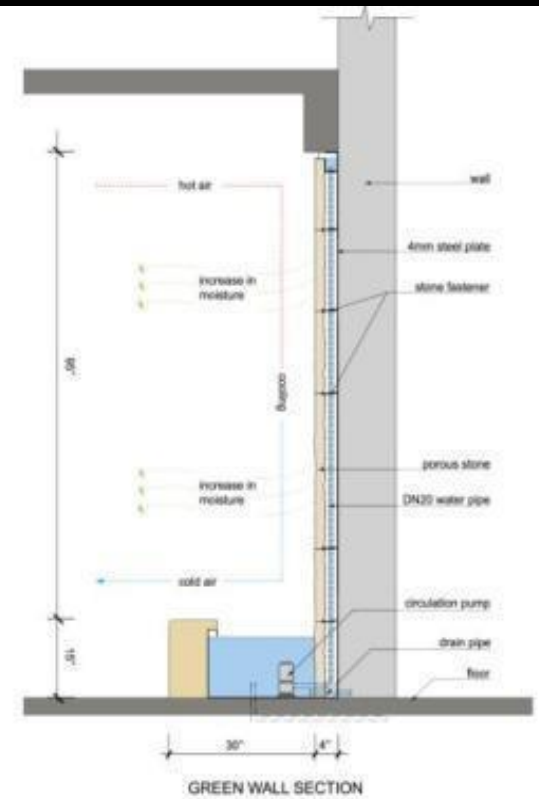




#12 Begin From my home: Small solution to big problem

40 billion square meters of building, 2 billions increase every year, 99% of them are energy inefficient, how can we help?

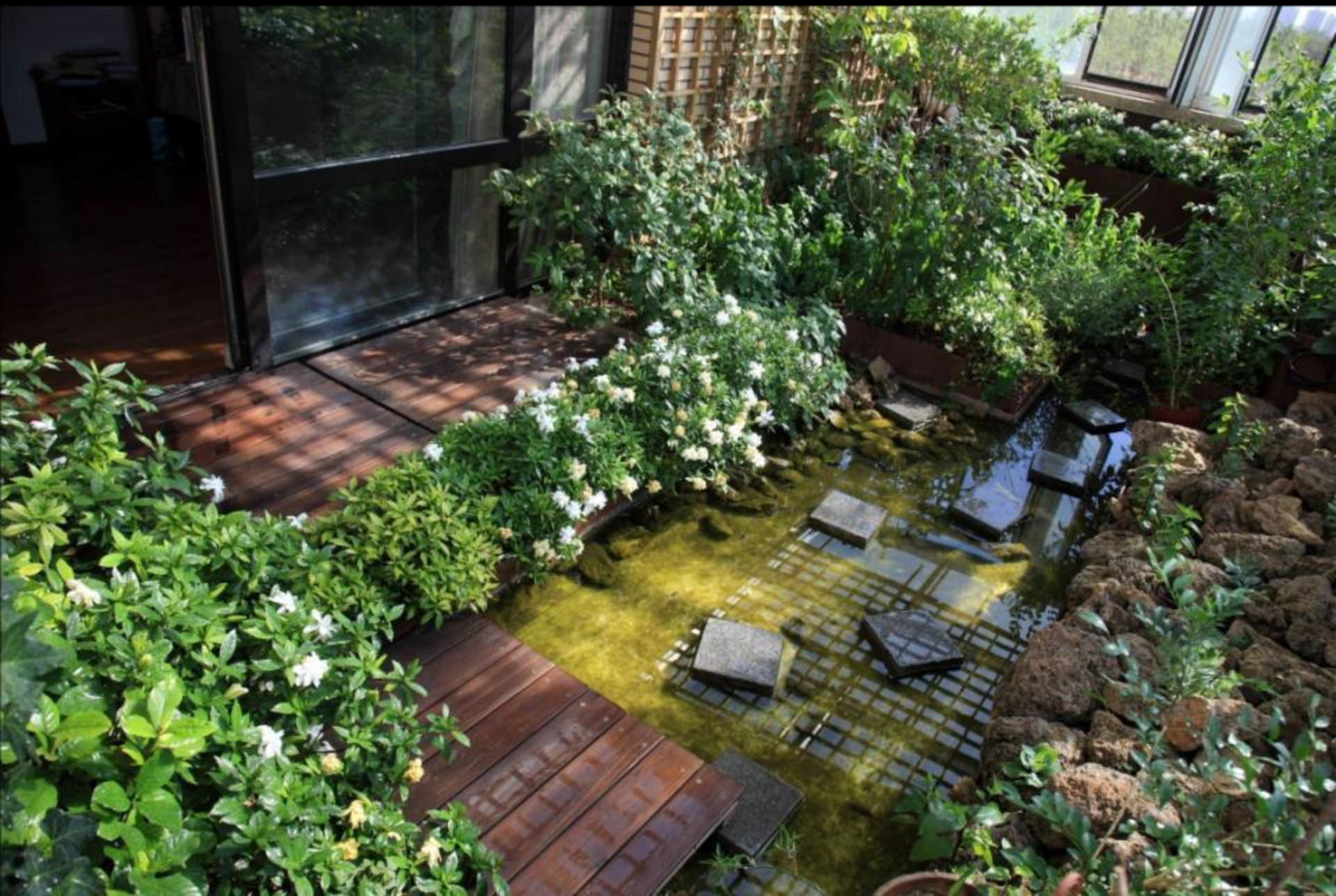




VEGETABLE GARDEN SECTION



08 The vegetable garden: productive ecosystems that provide fresh fruits and vegetables for the kitchen







2010



2013



2014





Community education: Small solution to big problem



Small solution to big problem
This home
collects 52 tons of rain water
saves 2000 KW of electricity
produces 32kg of vegetable

If every building is green, we
can save the energy equivalent
to 10 Three Gorge Dams, 30% of
national energy consumption

We think like a king, but act like peasants



Peasants who change the national landscape



Turenscape Group Photo



**Bring Nature to city to create deep forms,
with city and nature in harmony:**

**Through
Planning,
Design and Engineering and management**

Thank you!