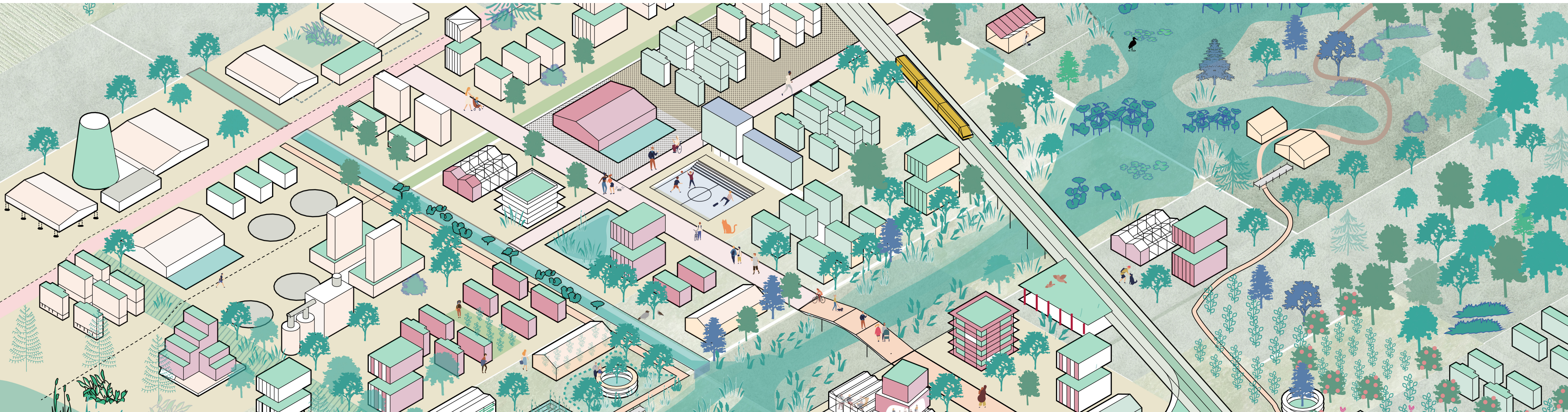
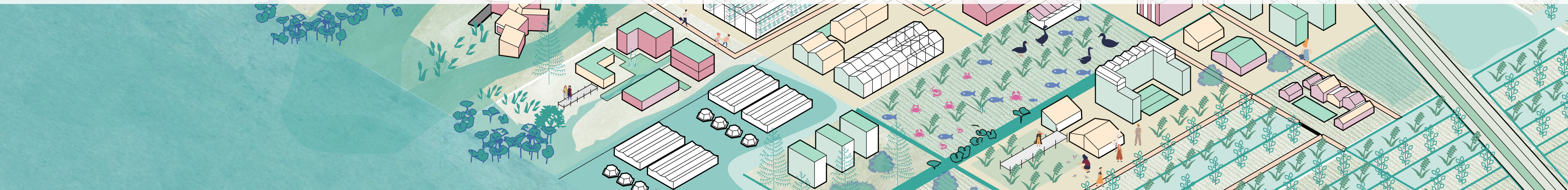




Live with Water 与水共生

A sustainable water-oriented urban development pattern, 以水为导向的城市可持续发展模式,
the Lake Chao Basin as a study case 以巢湖流域为例



Water is everywhere in our life.

水在我们的生活中无处不在。



Irrigation



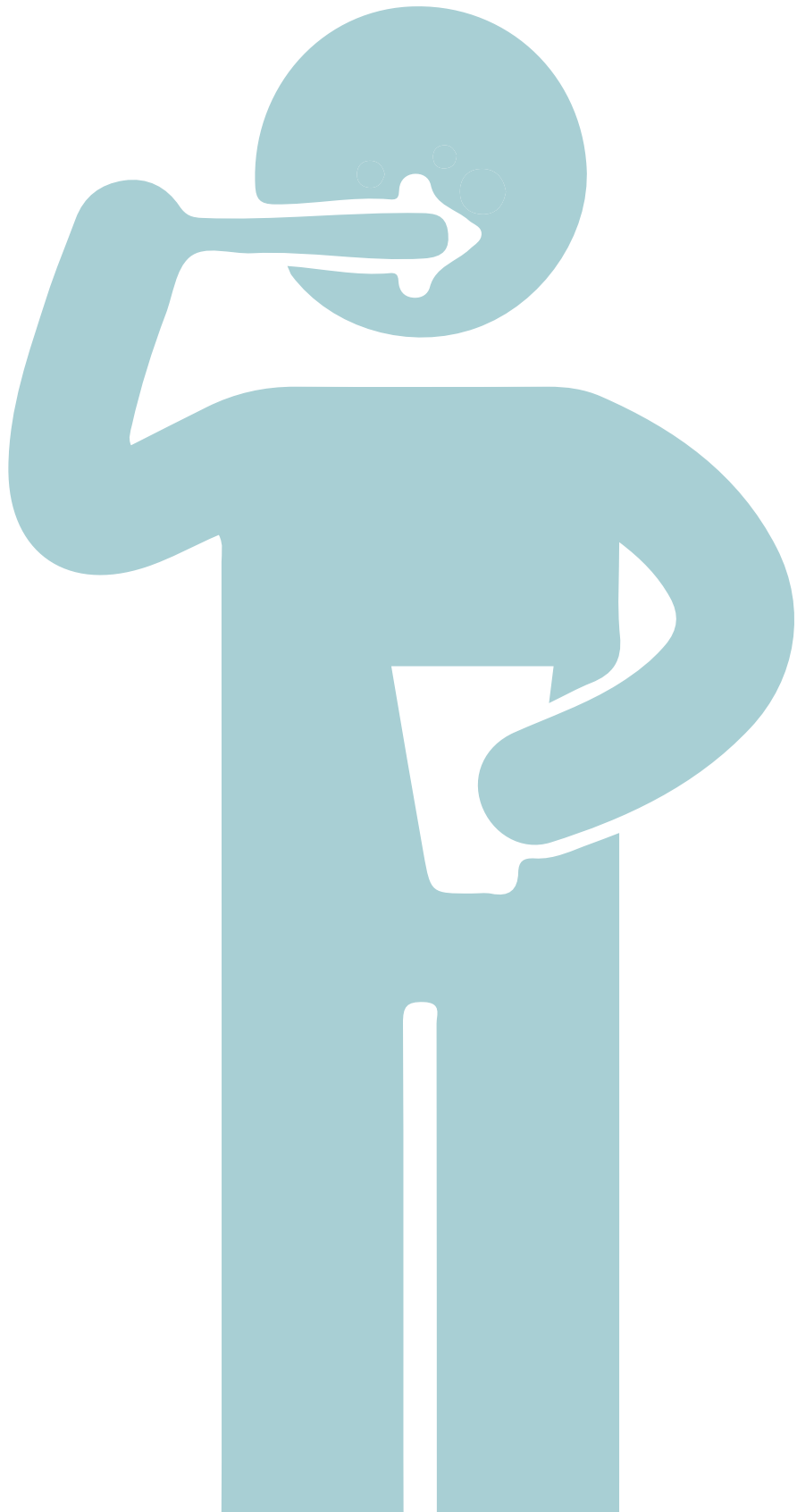
Washing

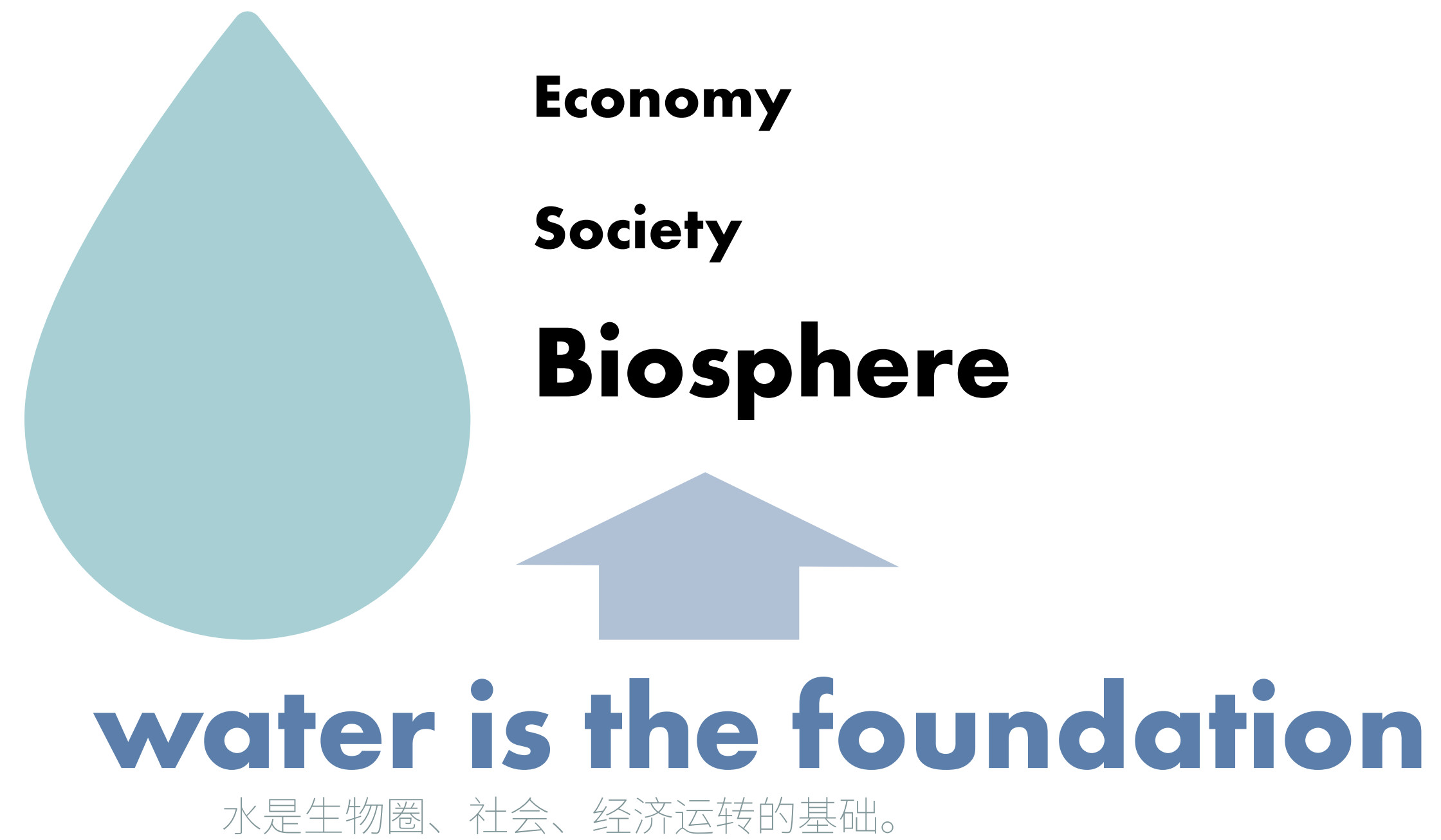


Manufacturing



Drinking





The UN Sustainable Development Goals



A sustainable water system is the foundation for the UN's sustainable development goals.

一个健康可持续的水系统是实现联合国可持续发展目标的根基。



Increasing water issues all over the world.

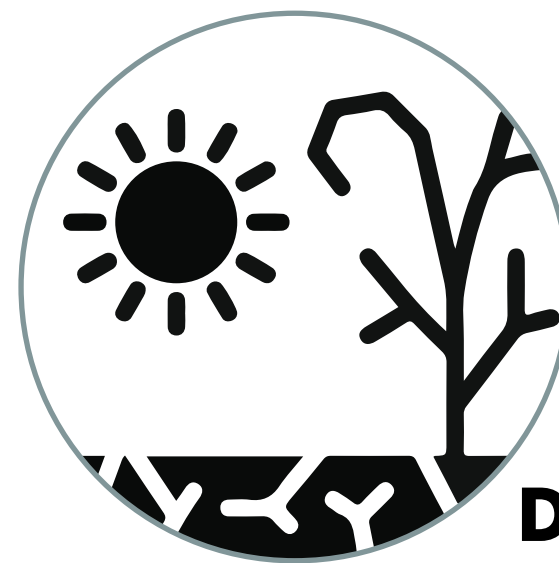
全球范围，我们面临着内越来越多的水问题。



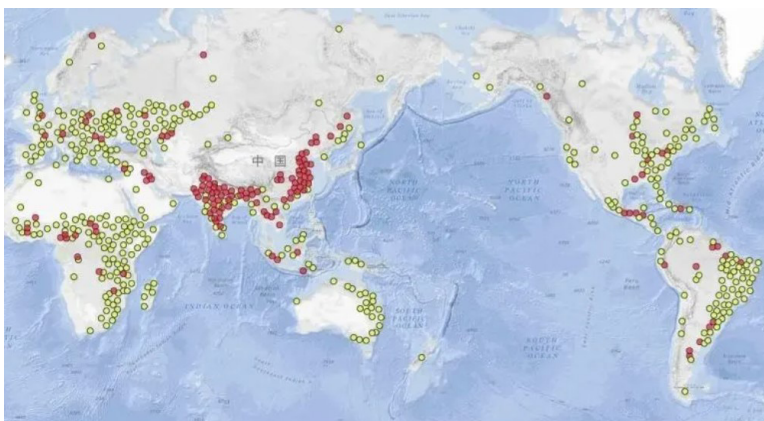
洪涝
Flooding



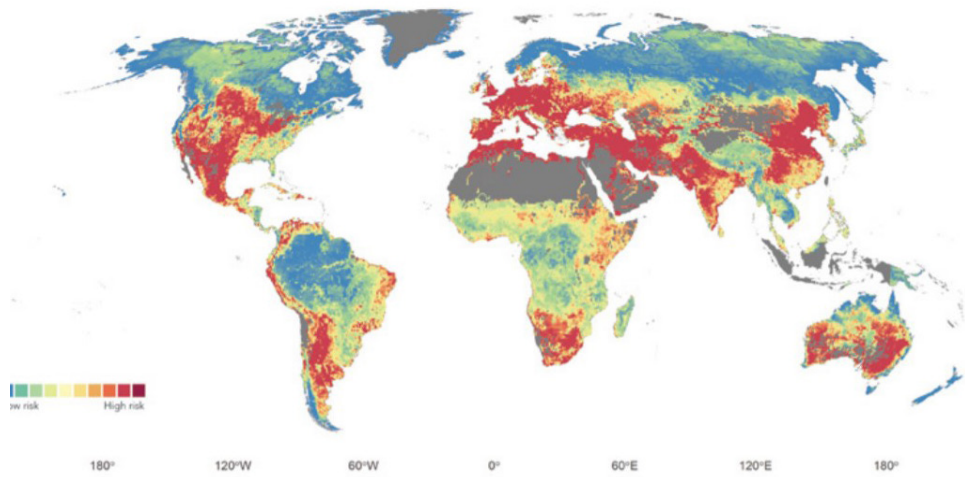
水污染
Water Pollution



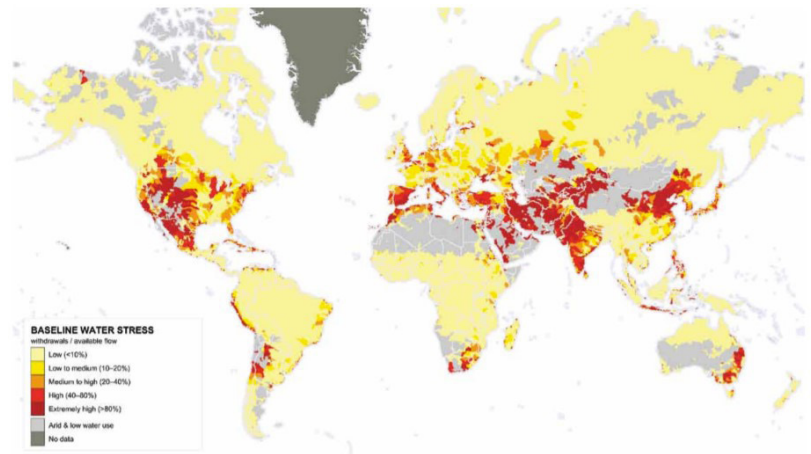
干旱
Drought



Distribution of Floods between 1970 and 2019 around the World
By Shichadao. (2020)
Data Source: The World Bank and Columbia University



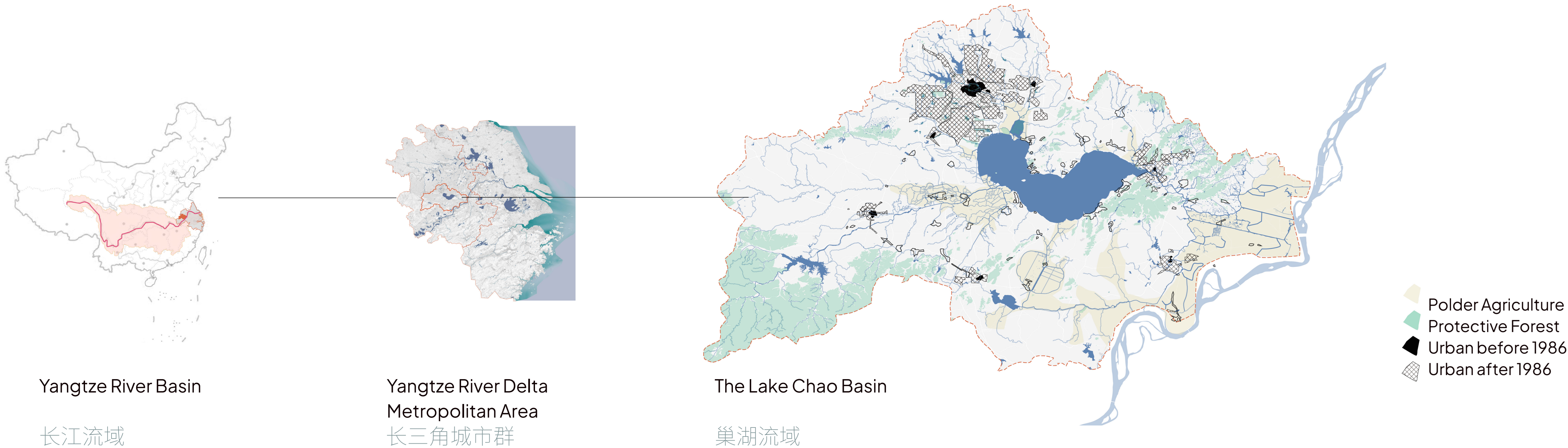
Water Quality Risk
Credit and Data Source:
World Bank. (2019).



Water Scarcity Around the World
Source:World Resources Institute. (2013).

Study location: the Lake Chao Basin

研究区域：巢湖流域



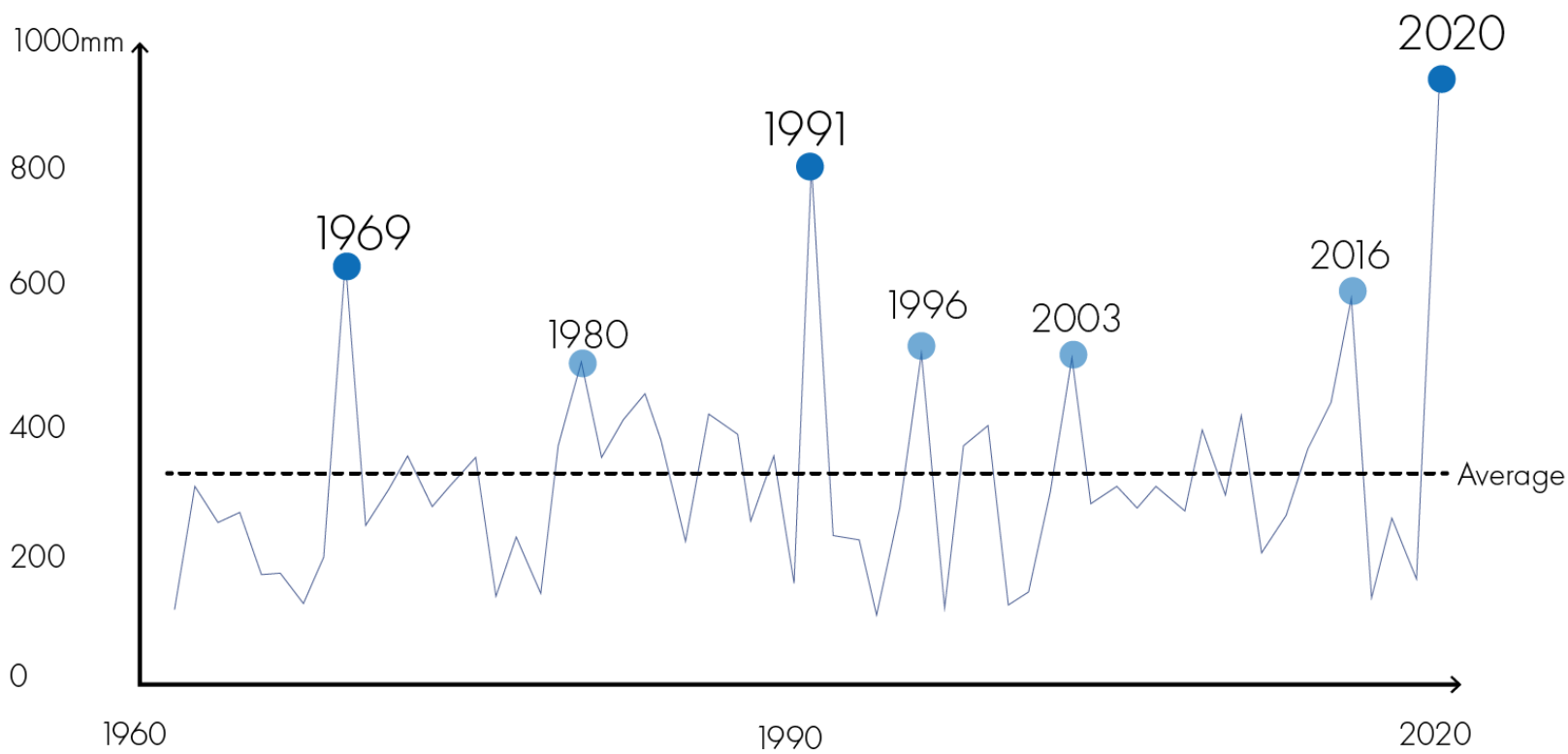


Flooding 洪涝问题 in the Lake Chao Basin

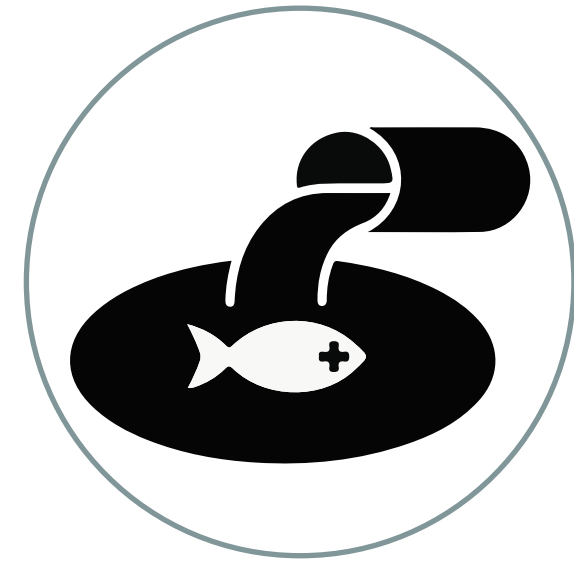


Villages around Chaohu City
during the 2020 flood
from Sinovision.net

Increasing Flooding intensity in the past 60 years:
近 60 年巢湖流域洪水强度



Precipitation in rainy period(10.June–31.July) in the Lake Chao Basin during recent 60 years
Adapted By Author,
Data Source:Anhui Meteorology Service

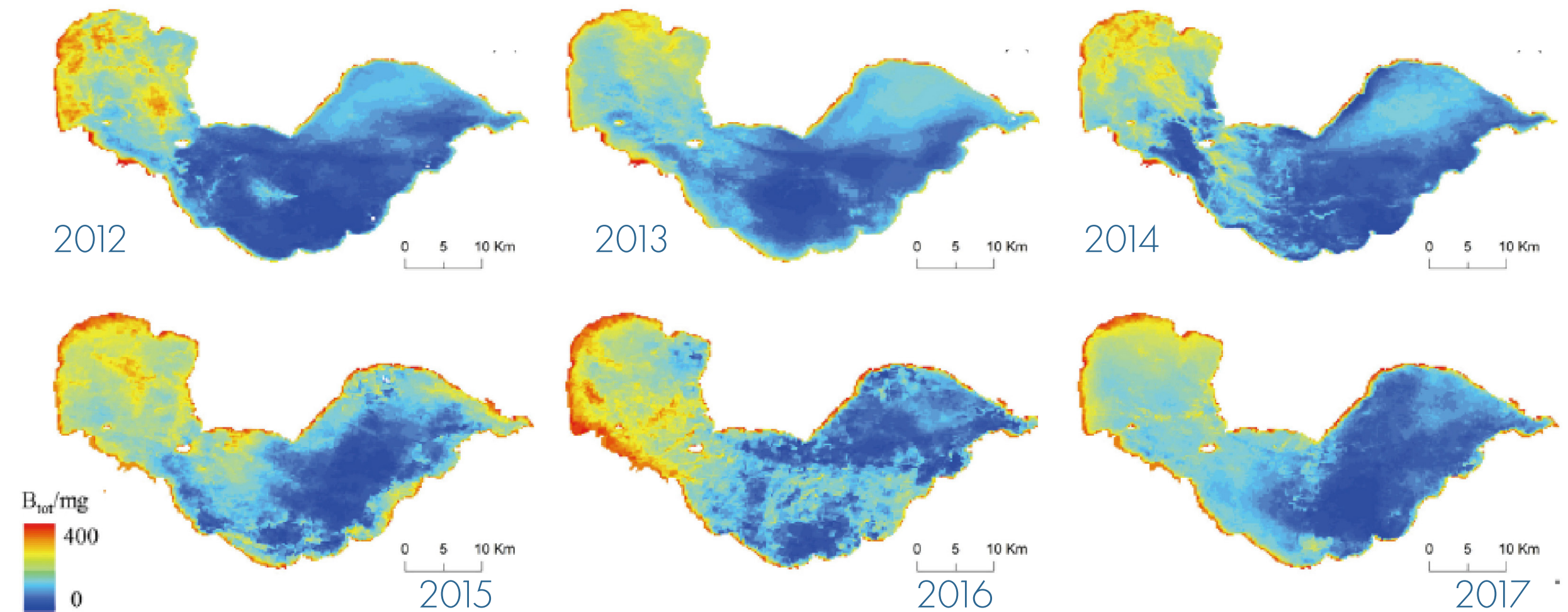


Water Pollution 水污染 in the Lake Chao Basin

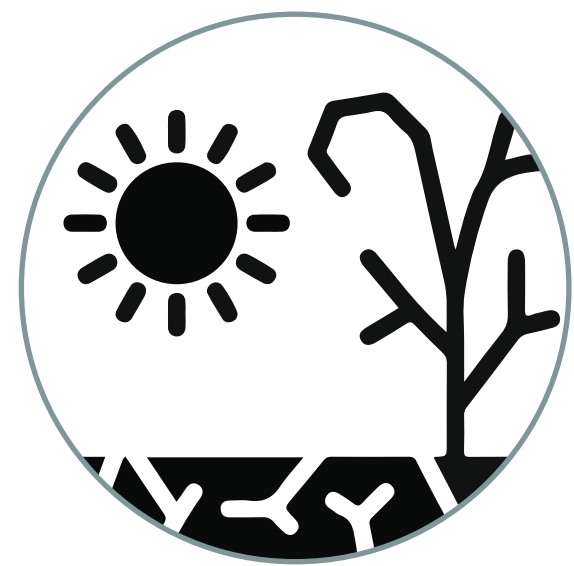


Water pollution, Photo by :Ping Xie(2008)

巢湖富营养化情况 The Eutrophication of the Lake Chao



Spatial distribution of Total Algal Biomass in Lake Chao from 2012 to 2017.
By M. Hu, Y. Zhang, R. Ma et al. (2021)



Water Scarcity

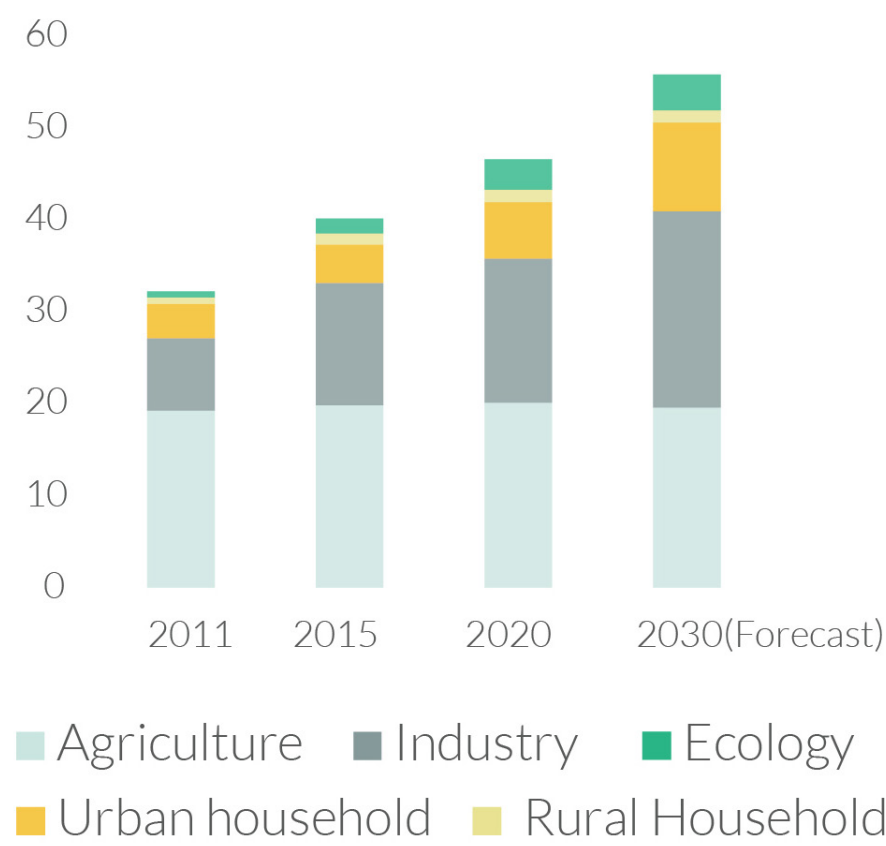
水资源短缺

in the Lake Chao Basin

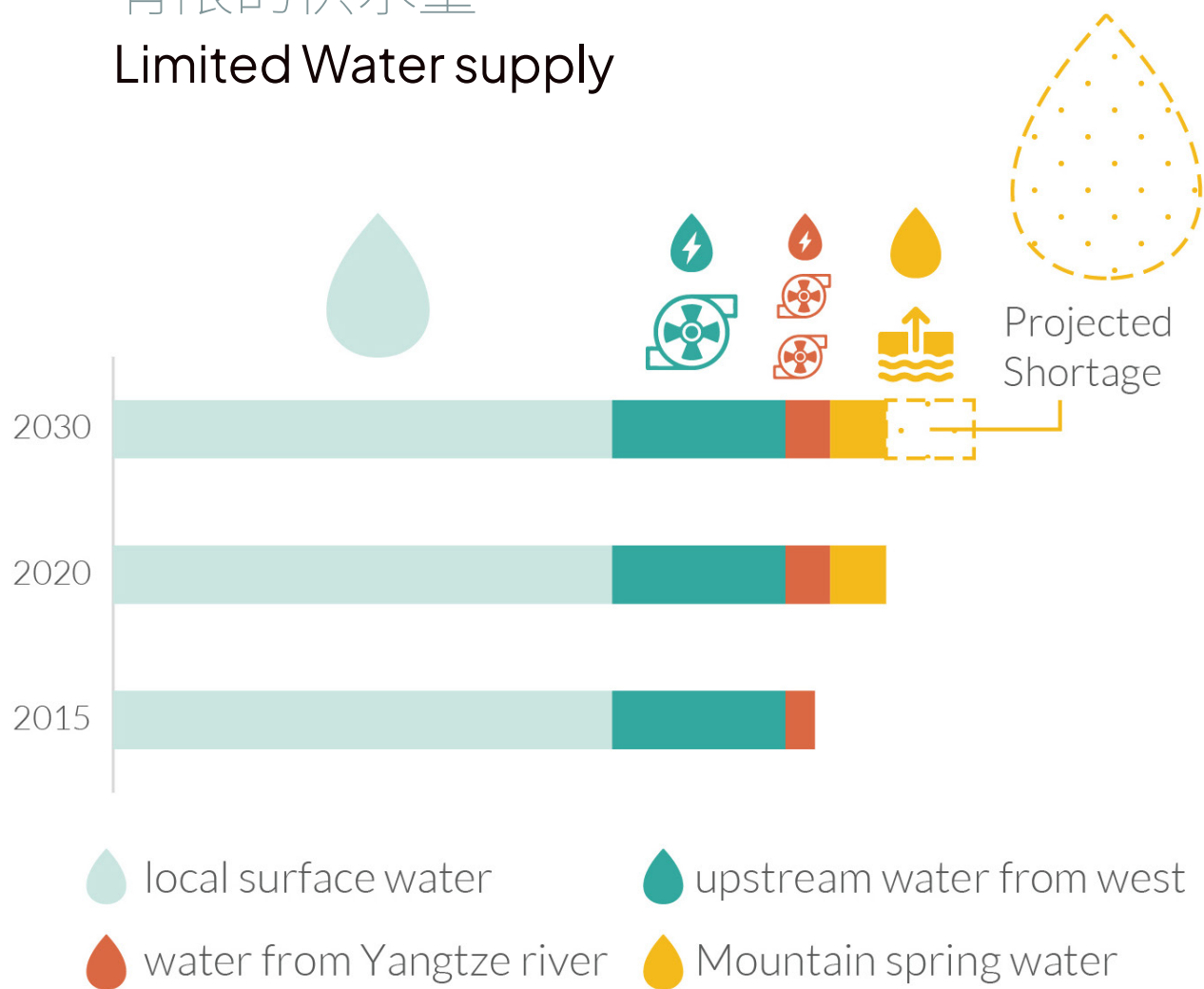


Water Scarcity, Photo by Congyu Shu(2007)

持续增长的用水量
Increasing Water Demand



有限的供水量
Limited Water supply

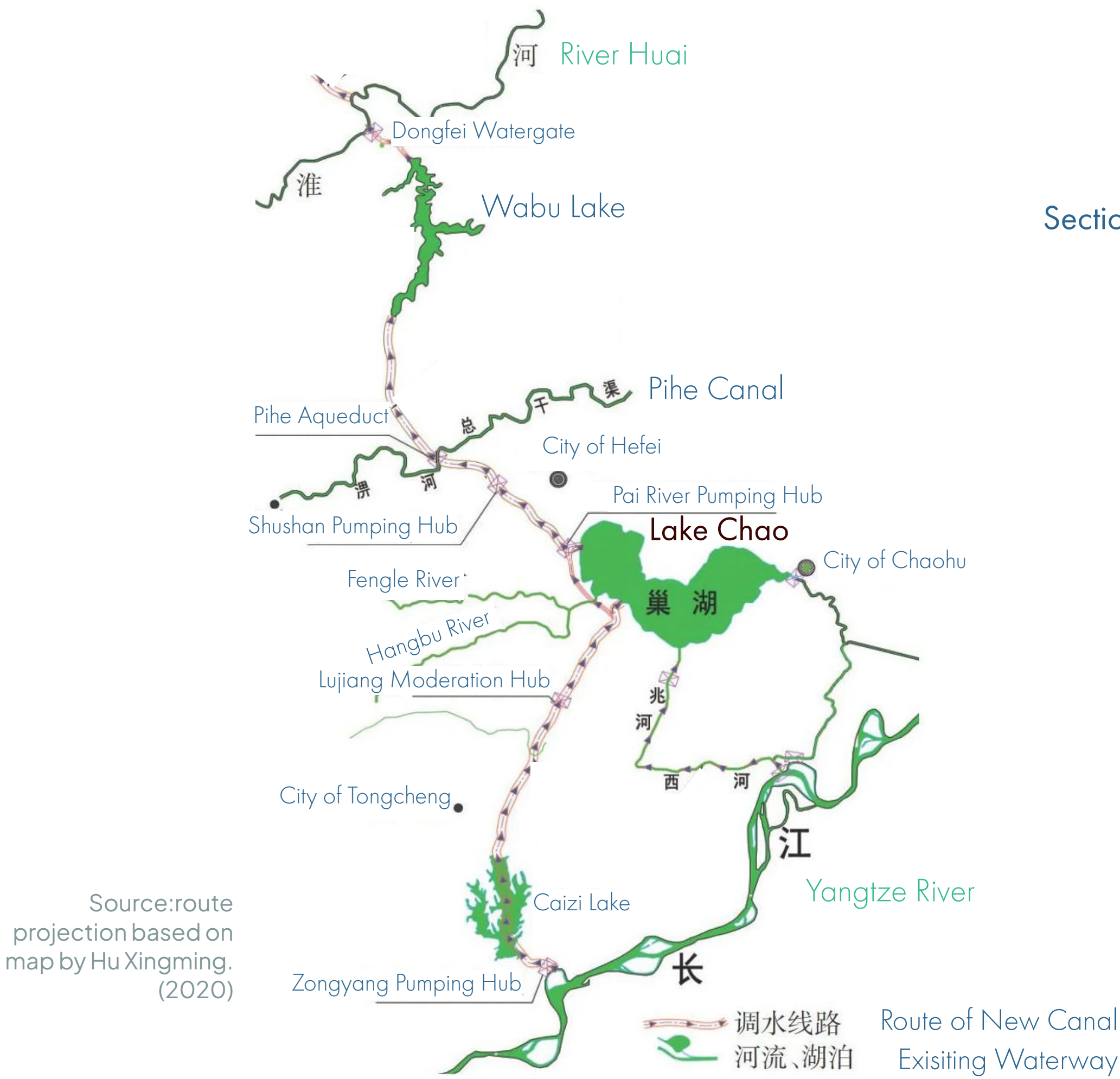


Water Supply and Demand Status and Forecast in Municipality of Hefei Data based on Xu et al(2015)
Illustrated By Author

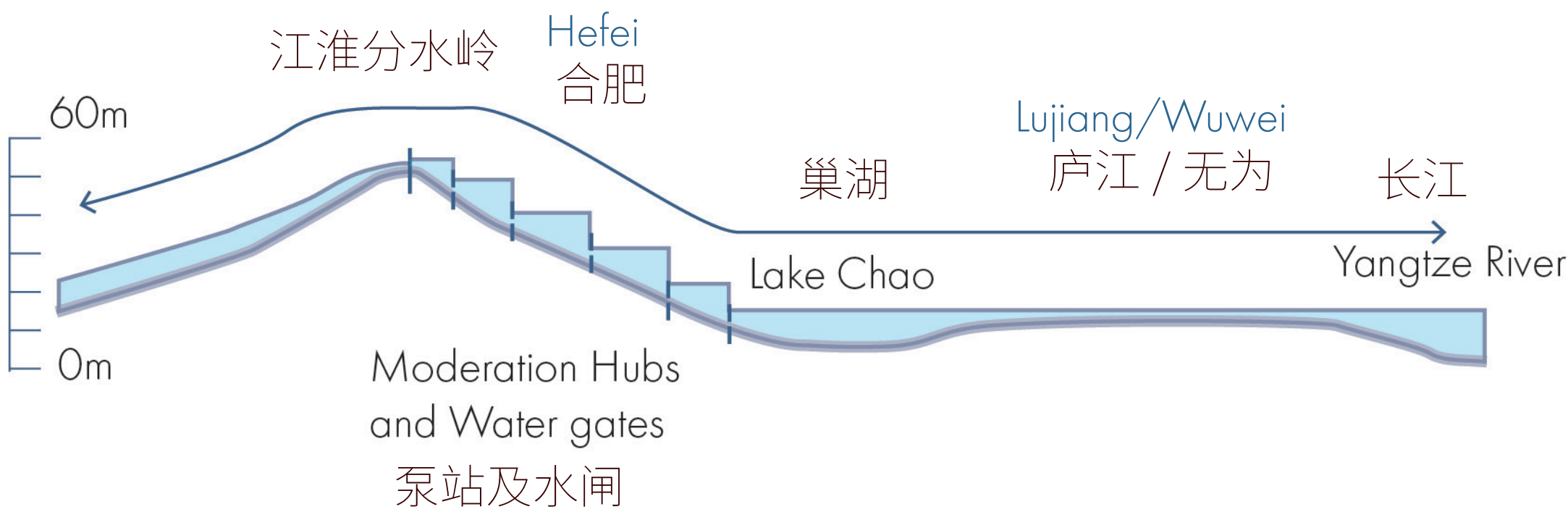
A once-for-all solution?

一劳永逸的解决方案?

Projection Map of Yangtze-to-Huai Canal 引江济淮工程示意图



Section Diagram 剖面示意图



Or the beginning of a vicious circle?

还是恶性循环的开始？



正在扩张中的合肥港

The Expanding Port of Hefei
By Chinaports (2020)

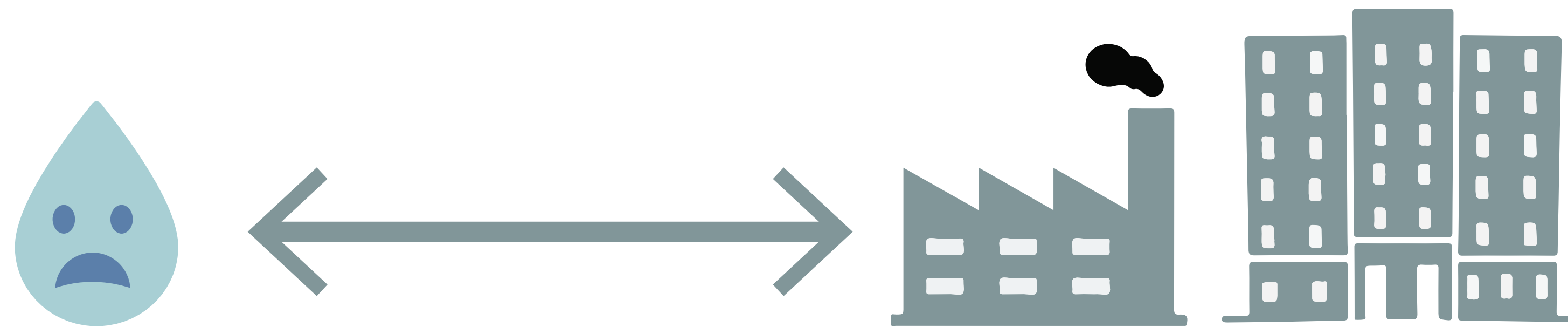


**the next round of
urbanization**

下一轮城市化

**More
Water Issues**

更多的水问题



**The water issues we face today are not solely about water,
but about how we urbanise.**

我们目前面临的水问题不仅关乎水本身
更关于我们如何城市化。



What we need now is a systemic solution!

我们需要一个系统性的解决方案。



Why not consider a more water-oriented urban development?

为什么不考虑一个以水为导向的城市发展策略呢？

How can a water-oriented urban development pattern be designed and contribute to a future-proof water system in the Lake Chao Basin

如何设计以水为导向的城市发展模式，
为巢湖流域水系统的未来无虞做出贡献？





1. The Vision: 愿景



2. The Diagnosis 诊断



3. The Toolbox: 设计工具



4. The Implementation: 执行办法

Conclusions 结论



The Vision:

1. What is water-oriented urban development?

愿景：什么是以水为导向的城市发展？



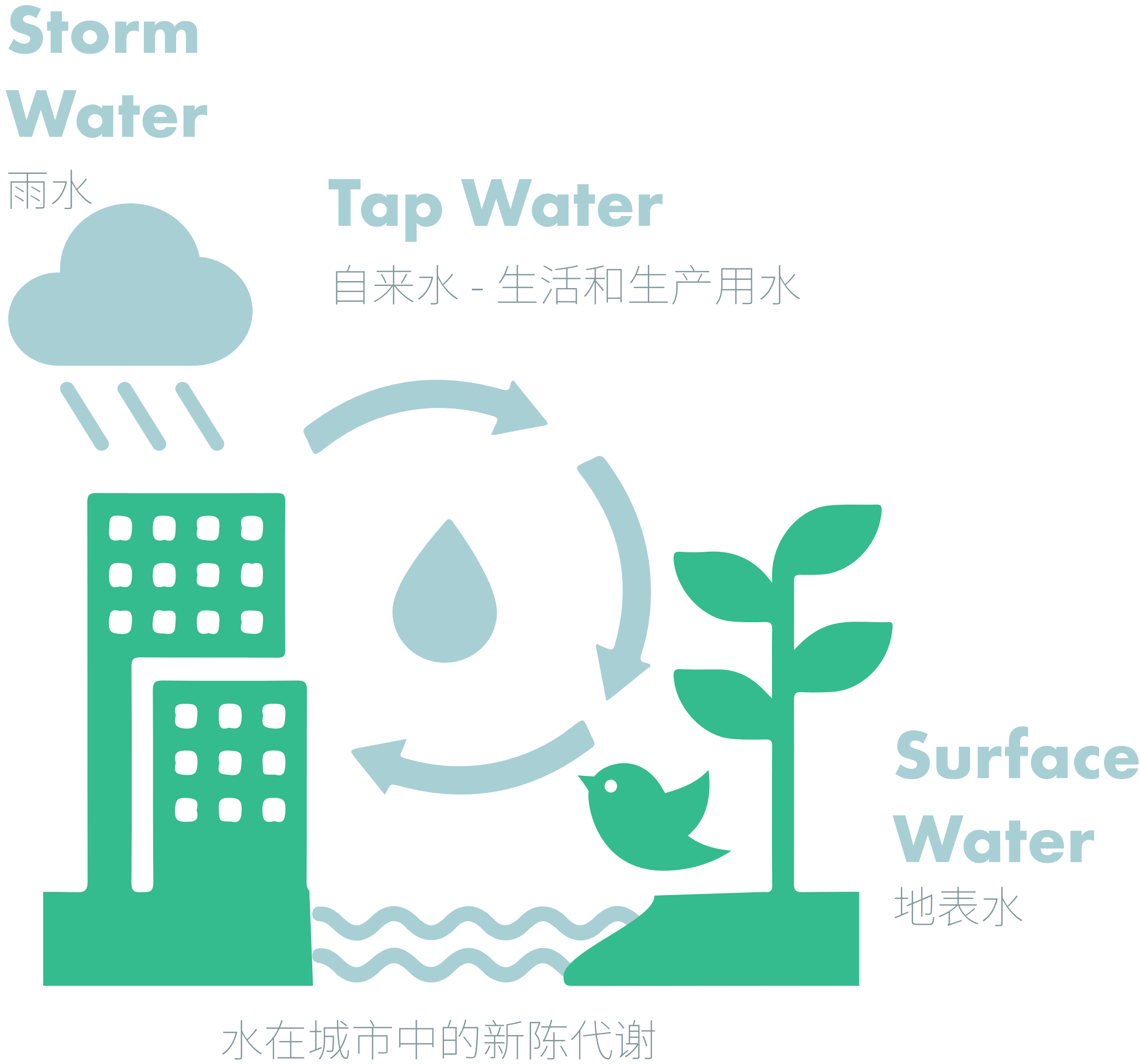
1. What is water-oriented urban development?



水在城市中的新陈代谢



1. What is water-oriented urban development?





1. What is water-oriented urban development?

Water Sensitive City

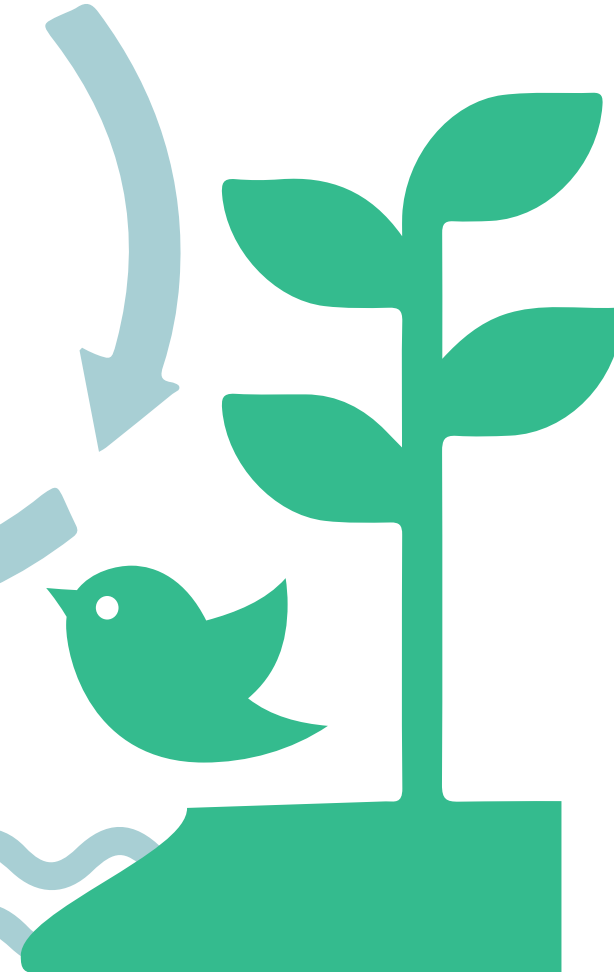
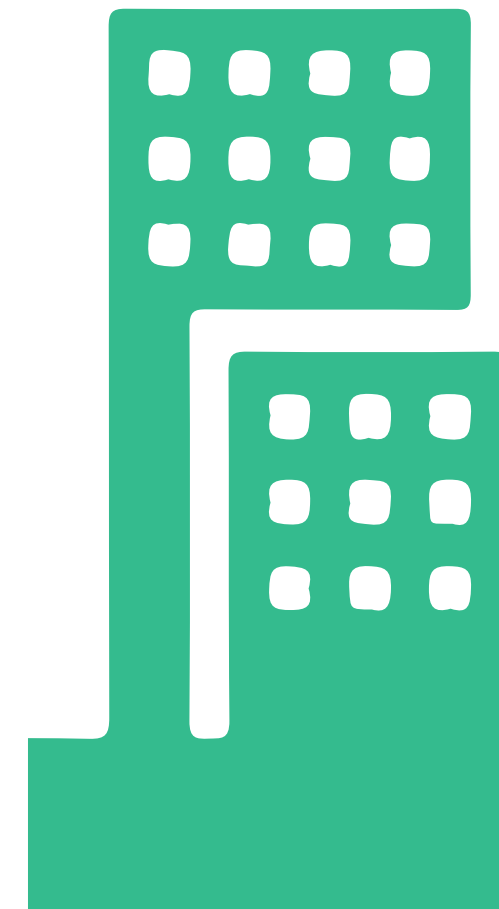


Circular Water Loop



水敏感型城市
循环用水
生态健全的水景

Ecologically Sound Waterscape



Three Guiding Principles
三大指导原则

1. What is water-oriented urban development?

A Systemic solution

That can lead to a behavioural change and self-organization process of the individuals in the system.



系统性的解决方案：
引导系统中不同个体的行为变化
和自组织的过程。

1. What is water-oriented urban development?

Three Leverage Points
to encourage more people to take their responsibility.



三大杠杆点：去鼓励更多的人肩负起自己的责任

Three Leverage Points

to encourage more people to take their responsibility.



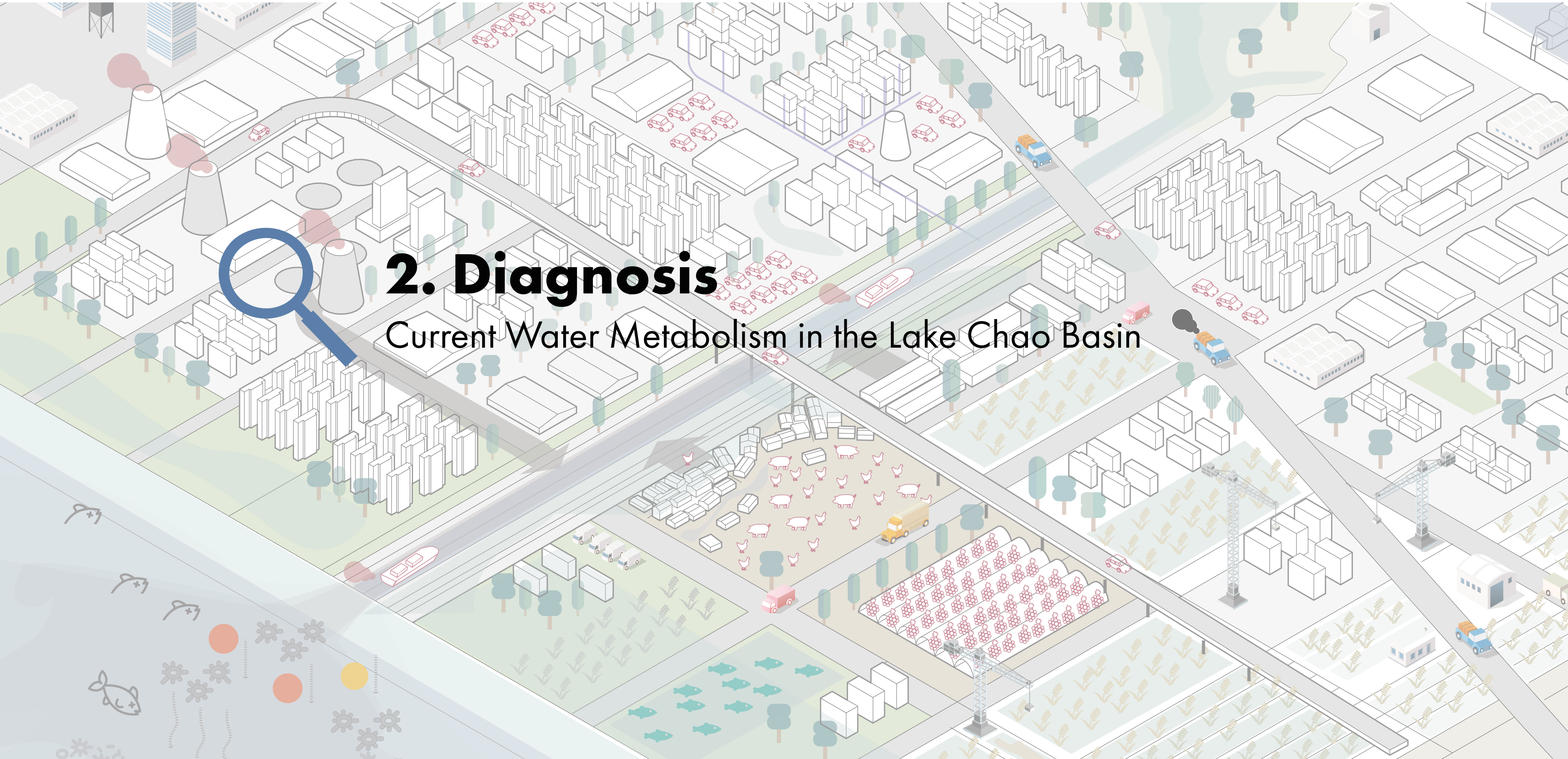
1. What is water-oriented urban development?

重塑公众认知 重新连结人与自然 激发知识共享和创新

我们要建立的不仅仅是一个可持续的水系统，更重要的是激起人们在未来发展中对水持久的承诺。

Water-oriented urban development
is not only about creating a sustainable
water system, but also about stimulating
people's sustained commitment to the
water.





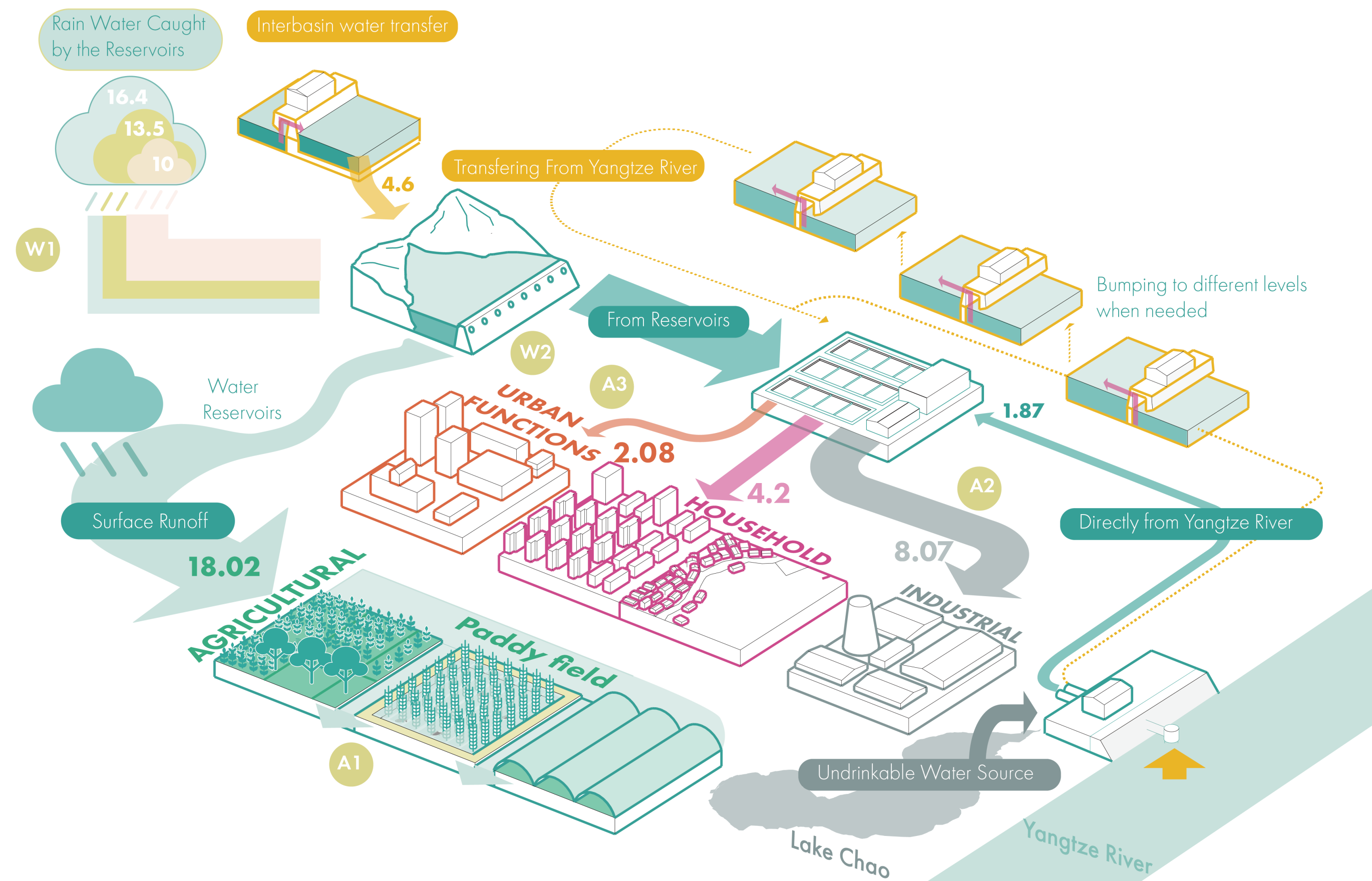
2. Diagnosis

Current Water Metabolism in the Lake Chao Basin

Problems from Water Quantity: Man-made Water Loop

人工水循环：用水量问题

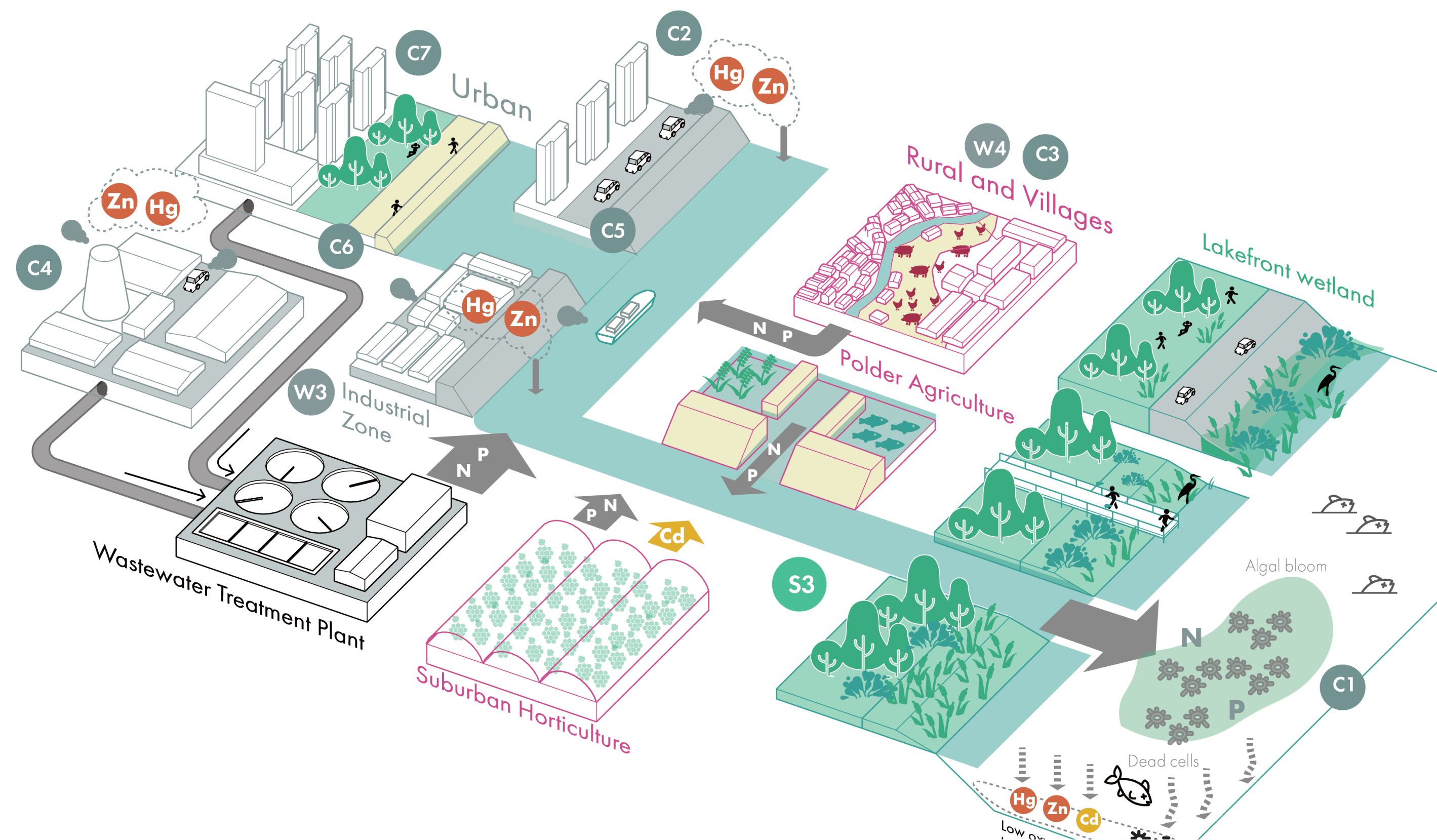
- A1** Water Intensive Paddy Field
- A2** Water Intensive Industry
- A3** Inaccessibility to Sustainable Water Source



Problems from Water Quality: Surface Water Ecology

地表生态循环：水质问题

- C1 Uncontrolled Nutrients
- C3 Waste from Livestock
- C4 Emissions from Industry
- C2 Emissions from Mobility
- C5 Man-made embankment
- C6 Fragmented Blue Ecological Network
- C7 Fragile Riparian Ecosystem



Diagnosis Outcome

Vulnerable grey infrastructure

脆弱的灰色基础设施



- B1** Low Permeability
- B2** Disappearing surface water
- B3** Limited Interception
- B4** No Retention Buffer
- B5** Relying On Temporary Evacuation

Linear and intensive water consumption

用水模式的线性、过量



- A1** Water Intensive Paddy Field
- A2** Water Intensive Industry
- A3** Inaccessibility to Sustainable Water Source
- C1** Uncontrolled Nutrients
- C3** Waste from Livestock
- C4** Emissions from Industry

Fragile and fragmented ecosystem.

脆弱的碎片化的水岸生态系统



- C2** Emissions from Mobility
- C5** Man-made embankment
- C6** Fragmented Blue Ecological Network
- C7** Fragile Riparian Ecosystem



3. The Toolbox: 设计工具包

A Pattern language for water oriented urban development

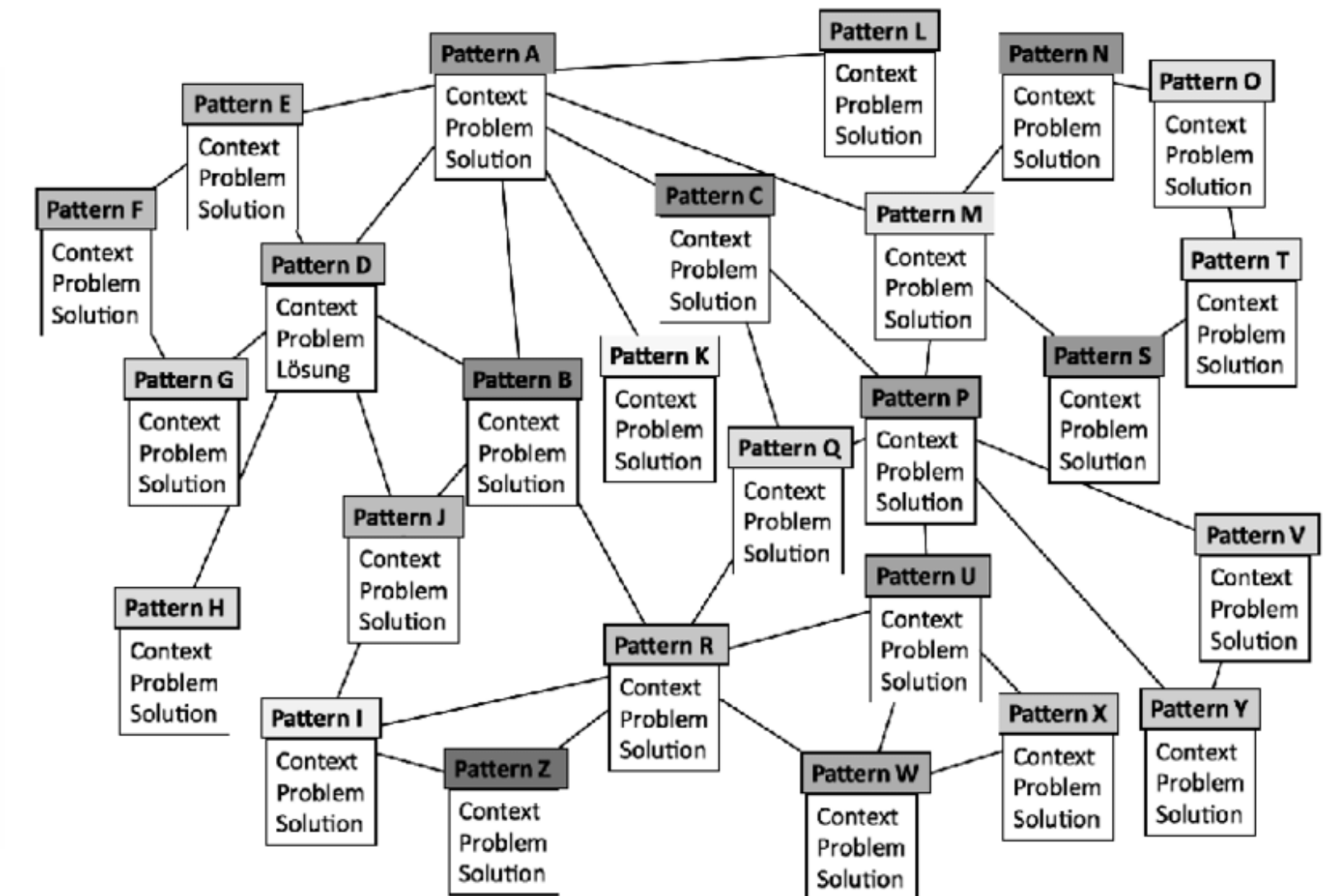
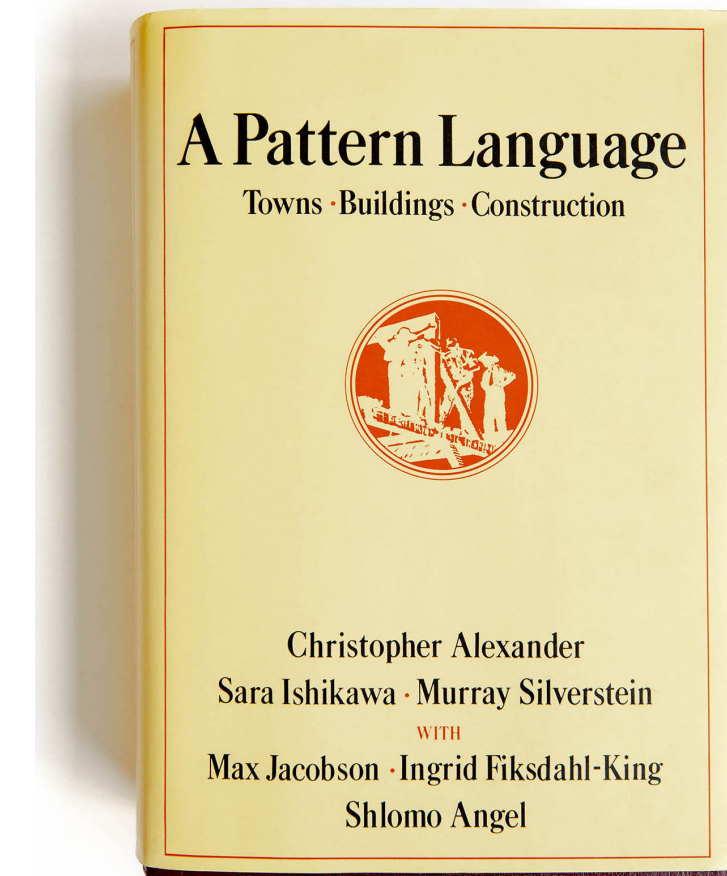
以水为导向的城市发展模式语言



3. The Toolbox:

A Pattern language can be compared to a natural language, which has its own syntax and vocabulary.

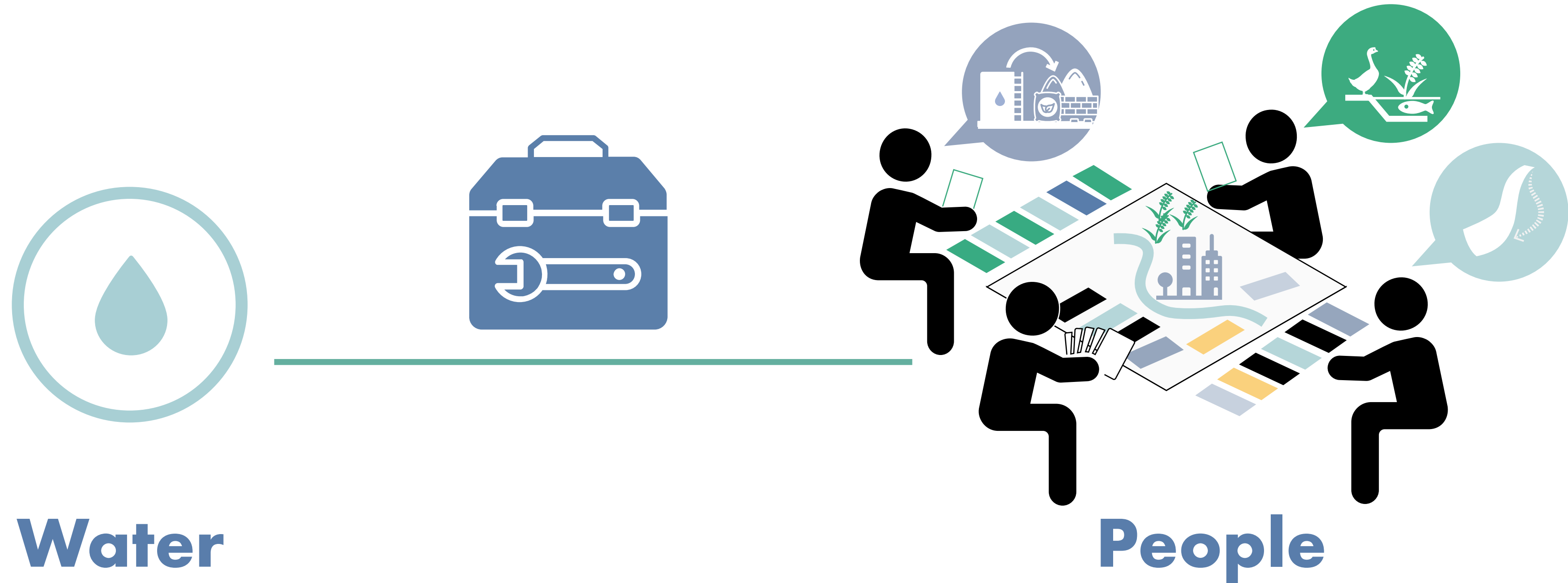
模式语言像自然语言一样，它有自己的语法和词汇，去连结各个不同的模块。



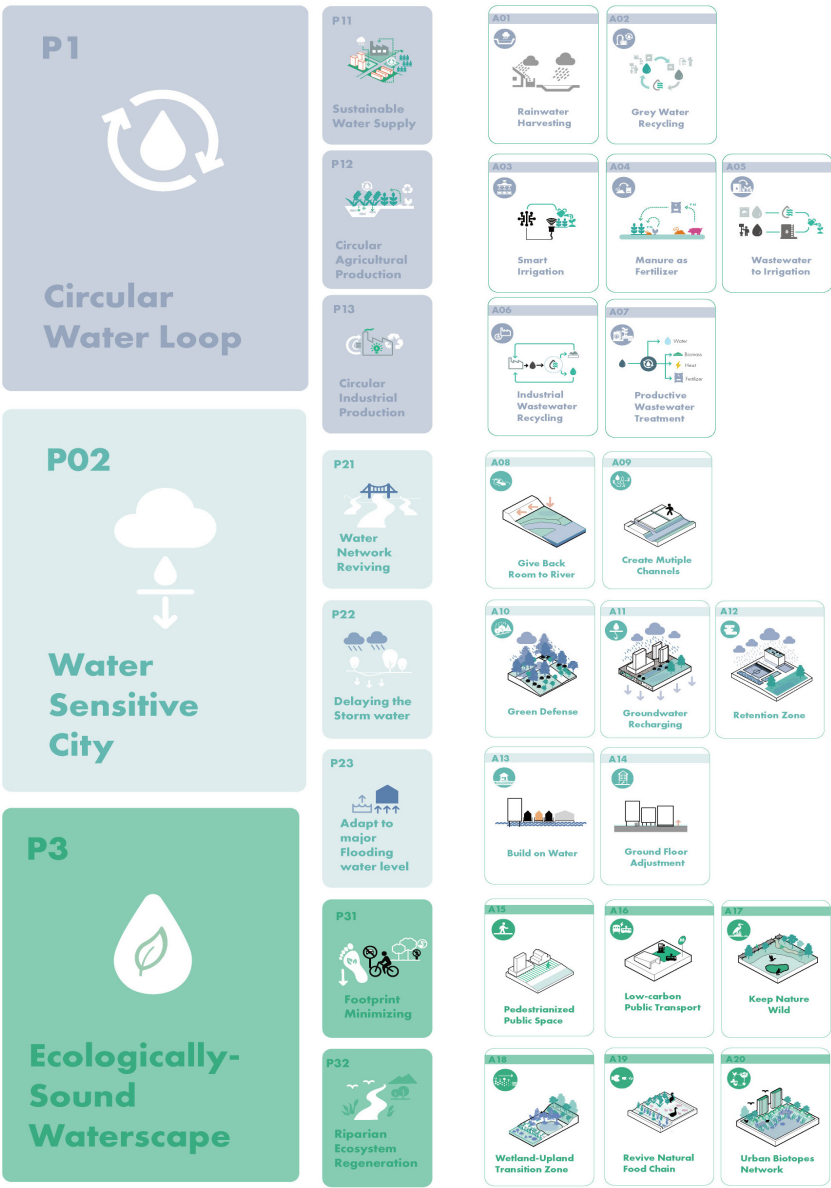
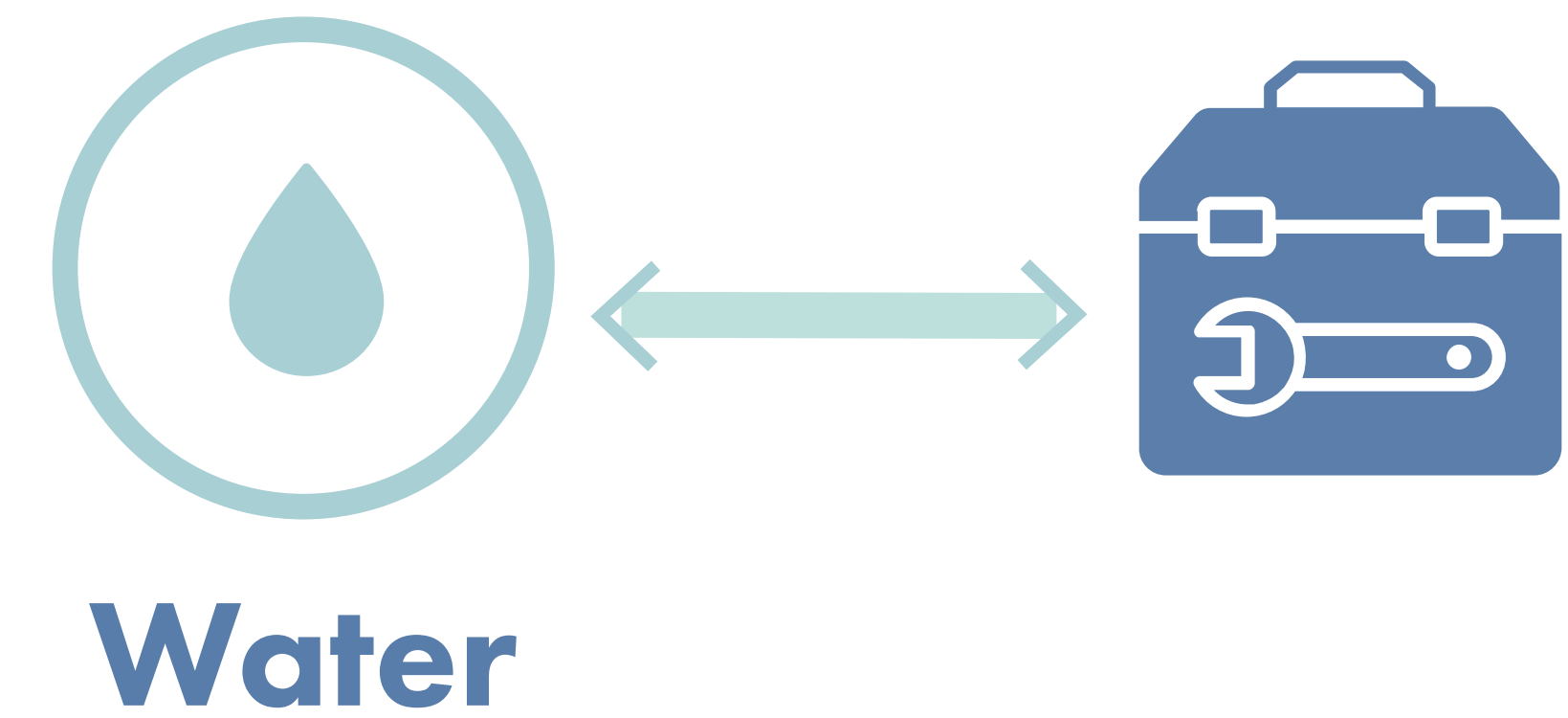
Bollier, D., & Helfrich, S. (Eds.). (2015). Patterns of commoning. Commons Strategy Group and Off the Common Press.
Alexander, C. (1977). A pattern language: towns, buildings, construction. Oxford university press.

The Pattern Language for the Water Oriented Urban
Development is designed to connect people with water.

以水为导向的城市发展模式语言 可以将水 和 人 联结在一起。



The pattern language translates the needs of water into 'principles' and 'actions'.
一方面，它将水的需求翻译成了“原则”和“行动”。



Principles 11 项原则
Actions 20 种行动

Current Issues

现有问题

Linear and intensive water consumption

- A1 Water Intensive Paddy Field
- A2 Water Intensive Industry
- A3 Inaccessibility to Sustainable Water Source
- C1 Uncontrolled Nutrients
- C3 Waste from Livestock
- C4 Emissions from Industry

Vulnerable grey infrastructure

- B1 Low Permeability
- B2 Disappearing surface water
- B3 Limited Interception
- B4 No Retention Buffer
- B5 Relying On Temporary Evacuation

Fragile and fragmented ecosystem.

- C2 Emissions from Mobility
- C5 Man-made embankment
- C6 Fragmented Blue Ecological Network
- C7 Fragile Riparian Ecosystem

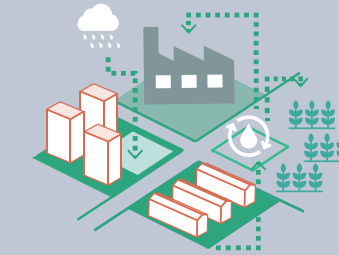
Principles

设计原则



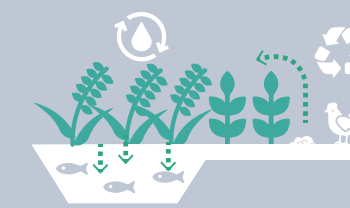
Circular Water Loop

P11



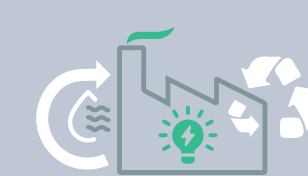
Sustainable Water Supply

P12



Circular Agricultural Production

P13



Circular Industrial Production



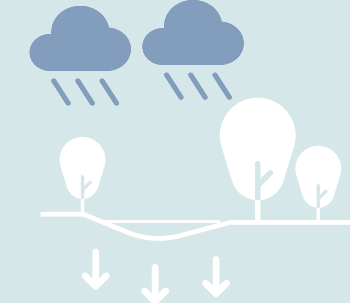
Water Sensitive City

P21



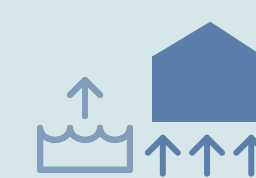
Water Network Reviving

P22



Delaying the Storm water

P23



Adapt to major Flooding water level



Ecologically Sound Waterscape

P31



Footprint Minimizing

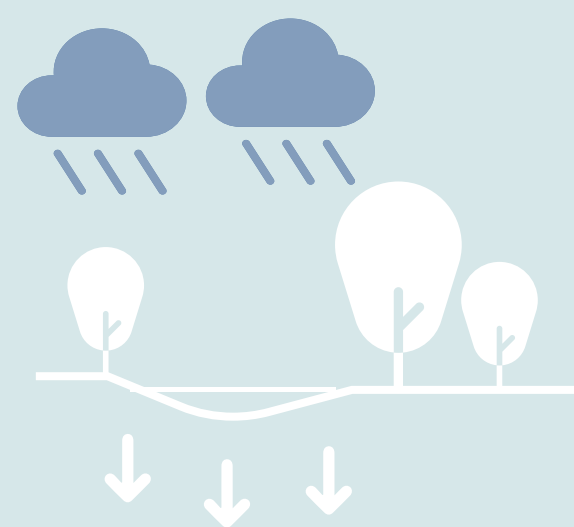
P32



Riparian Ecosystem Regeneration

Principles

P22



**Delaying the
Storm water**

减缓雨水径流

**Translate
into**

Actions

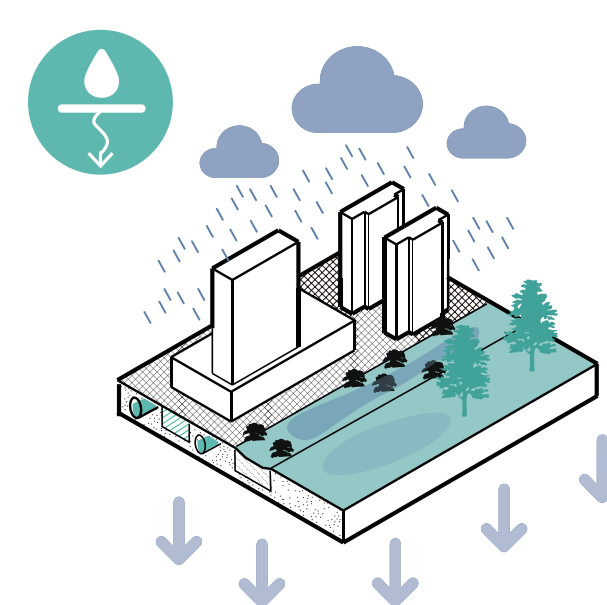
A10



Green Defense

建立绿色屏障

A11



**Groundwater
Recharging**

增加下渗

A12

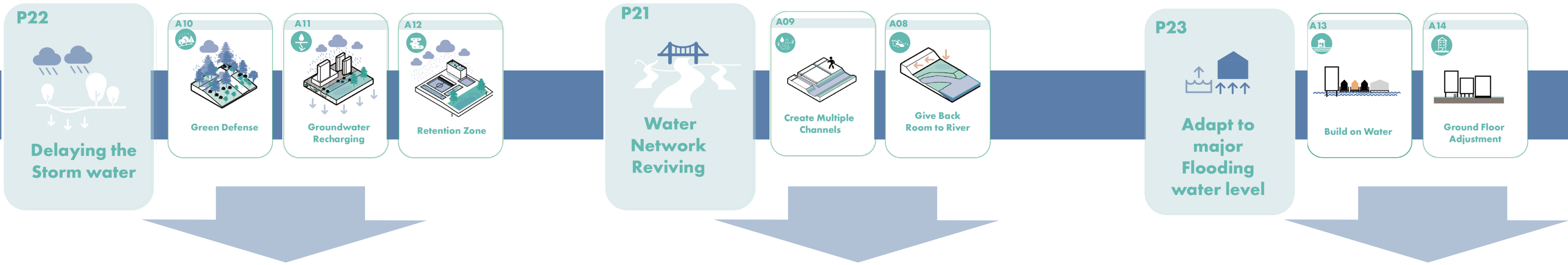
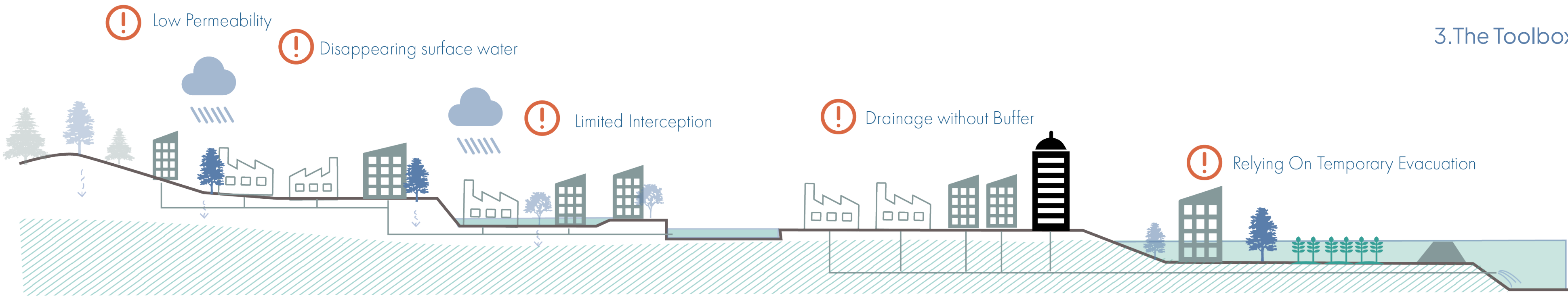


Retention Zone

腾出蓄洪空间

设计原则可以被进一步翻译成不同的“行动”。

Current
现状



Ideal Future
理想化的未来状态



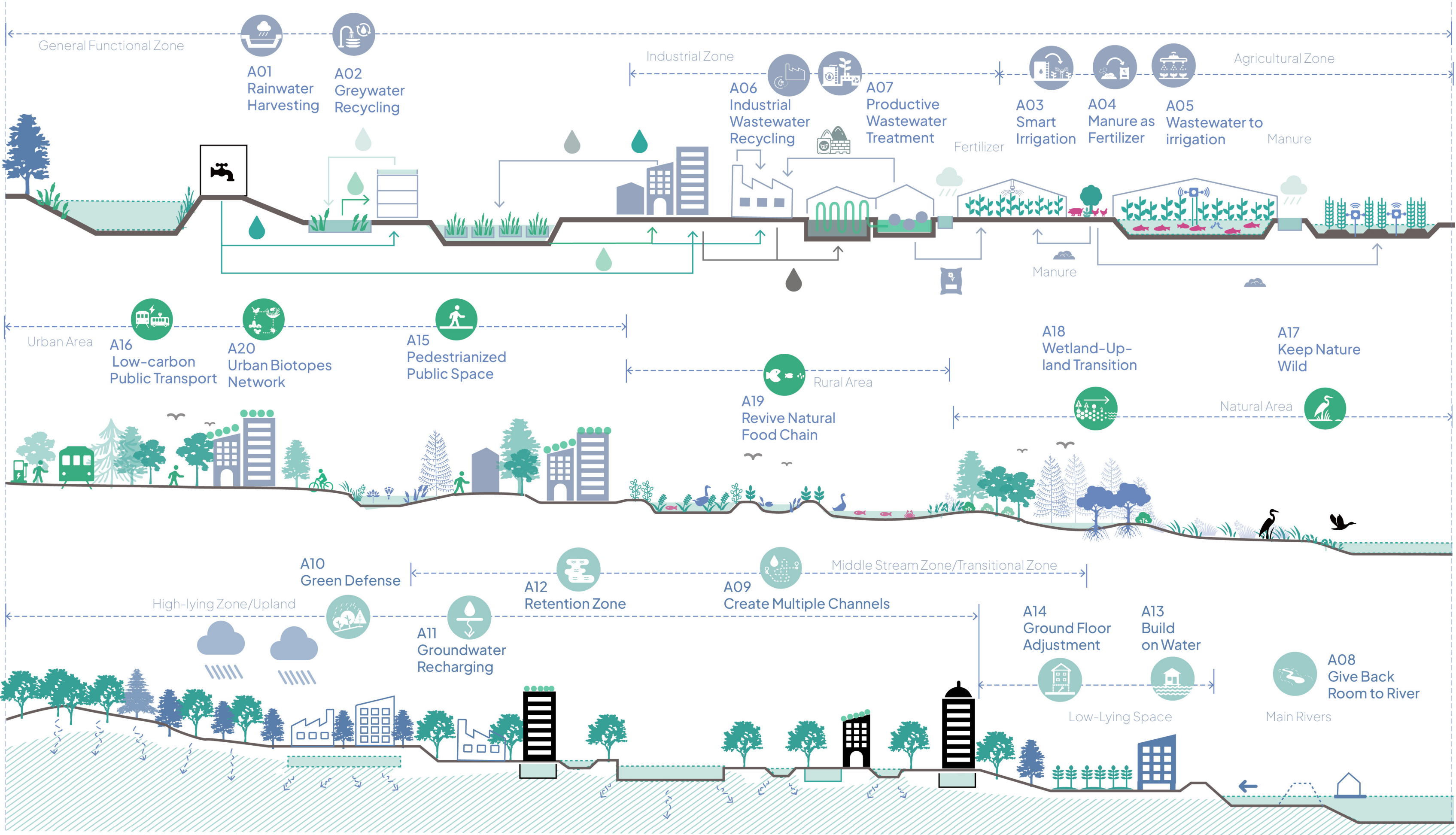
Who is to act?

谁来行动?

Circular
Water
Loop

Water
Sensitive
City

Ecologically
Sound
Waterscape

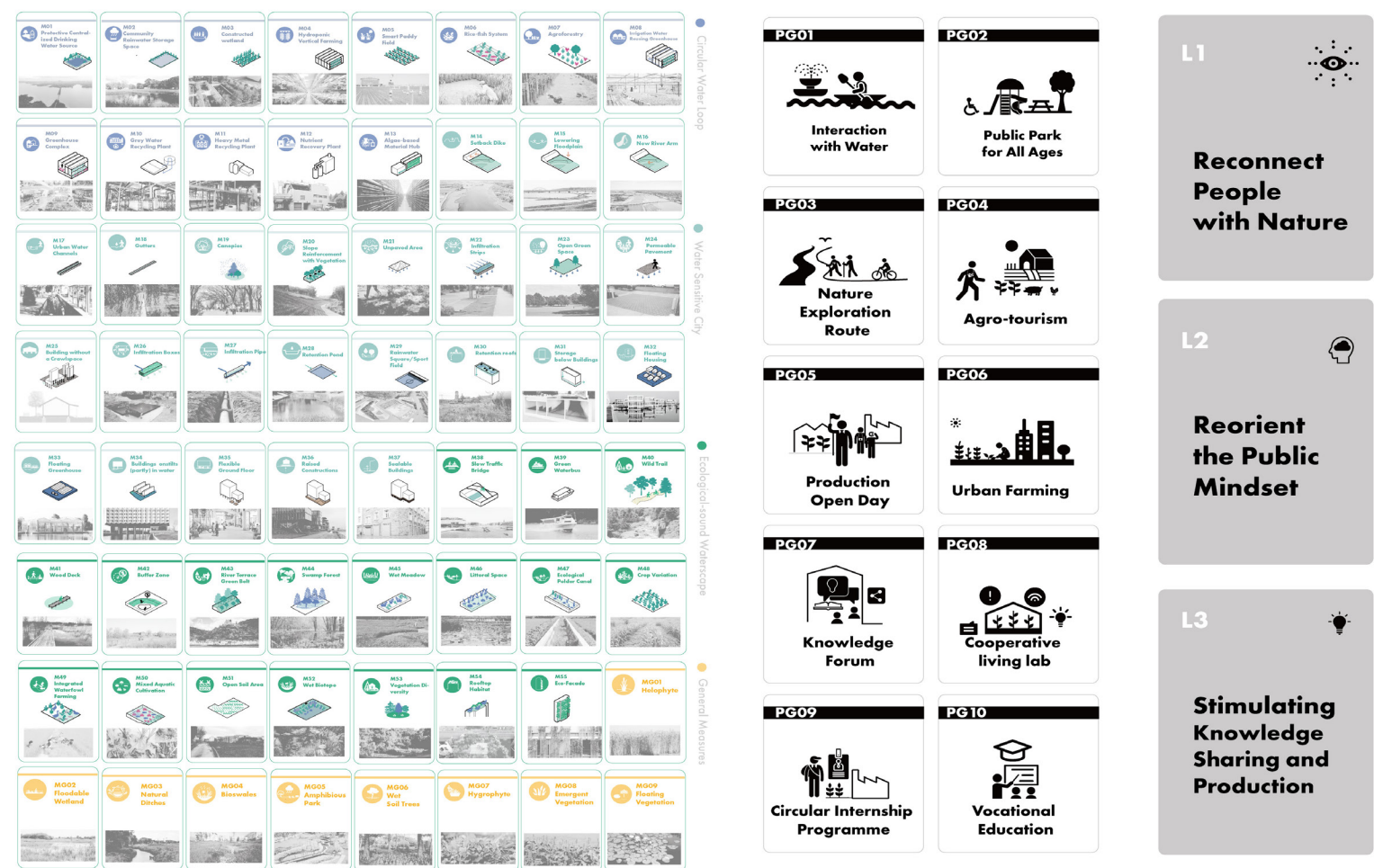


56 项具体措施

10 种项目策划 +3 个杠杆点

56 × Measures

10×Programmes+3×Leverage Points

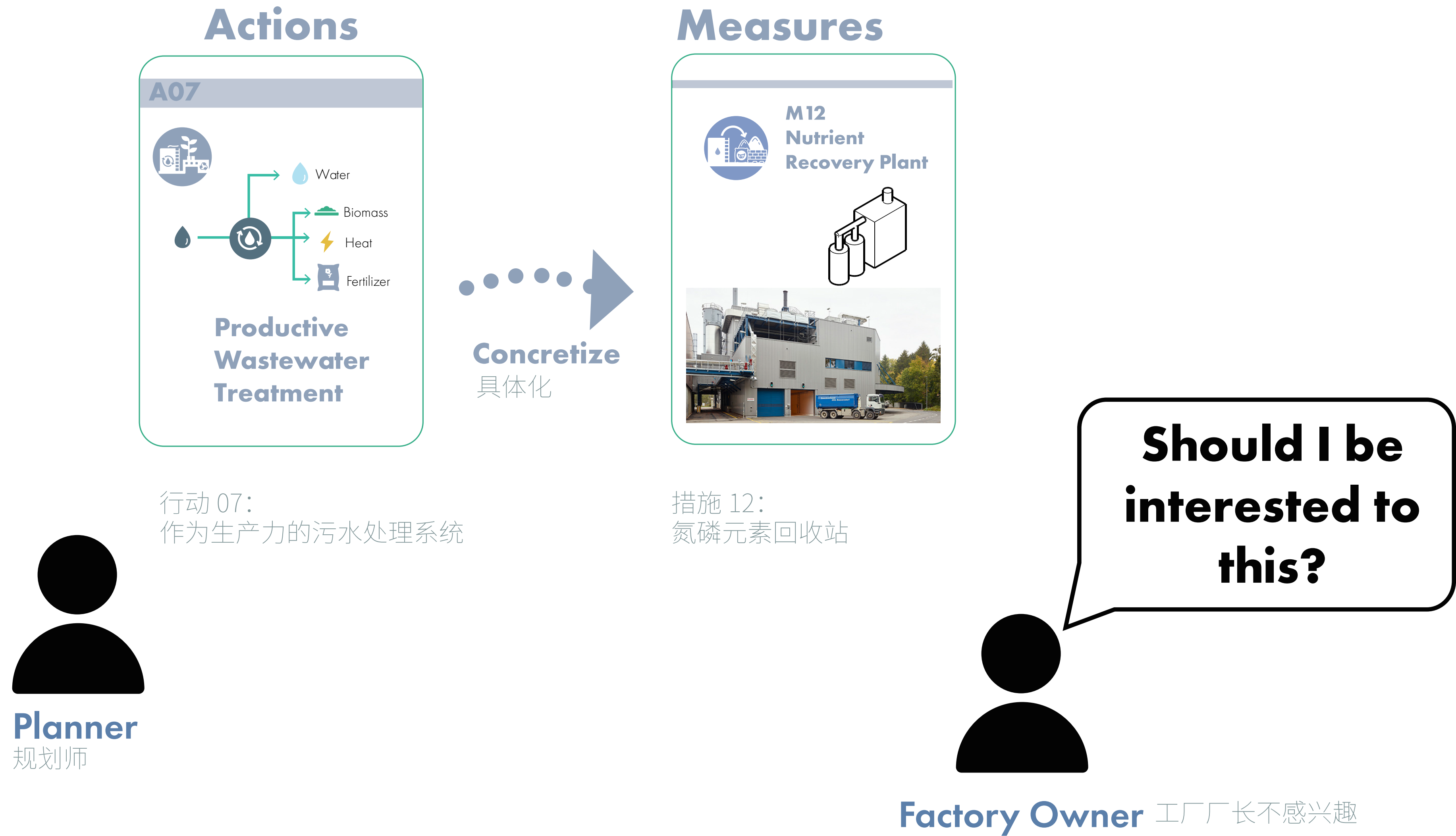


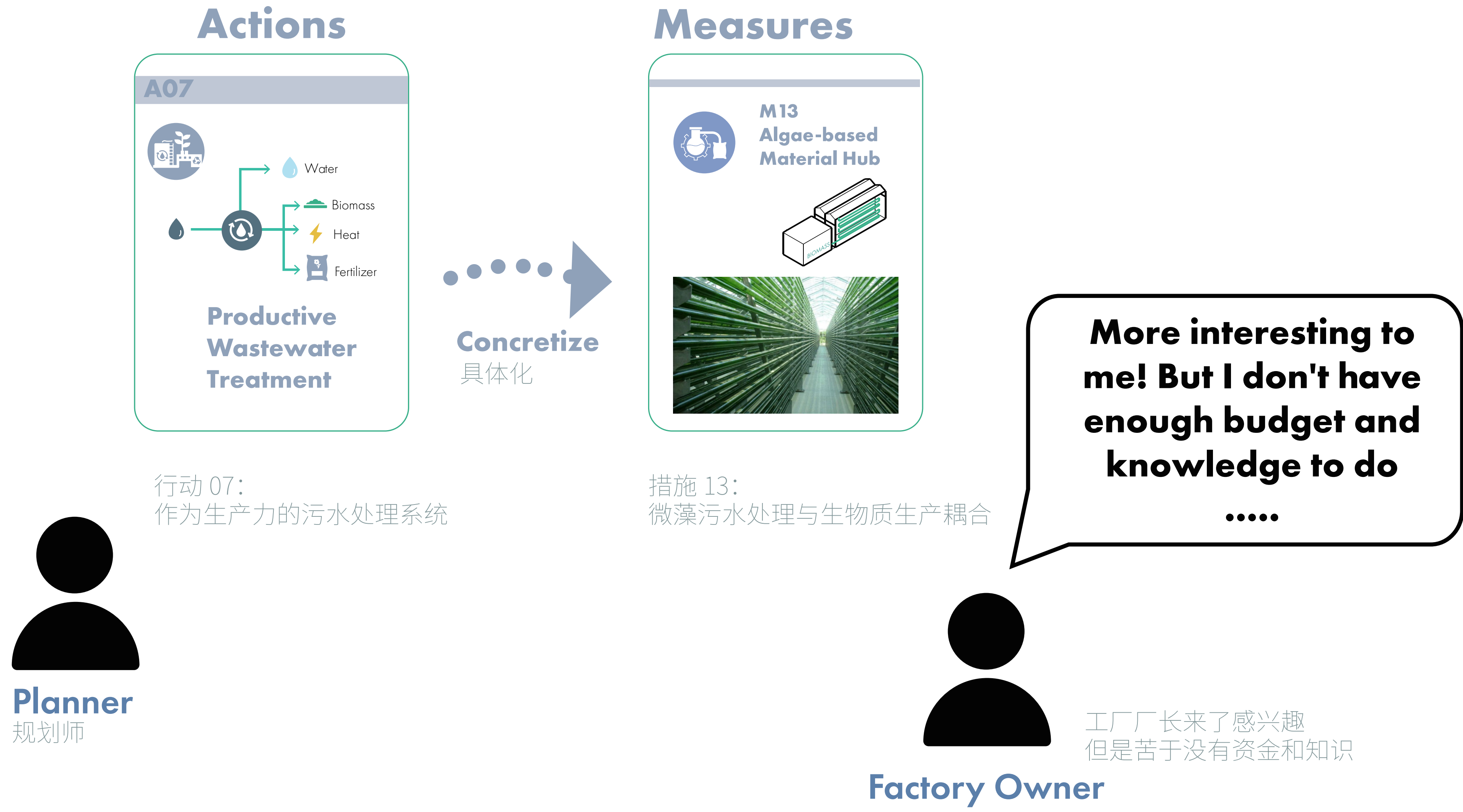
This pattern language works as a tool to coordinate and engage more people.

这套模式语言可以作为一个协调和吸引更多人的参与的工具。



People



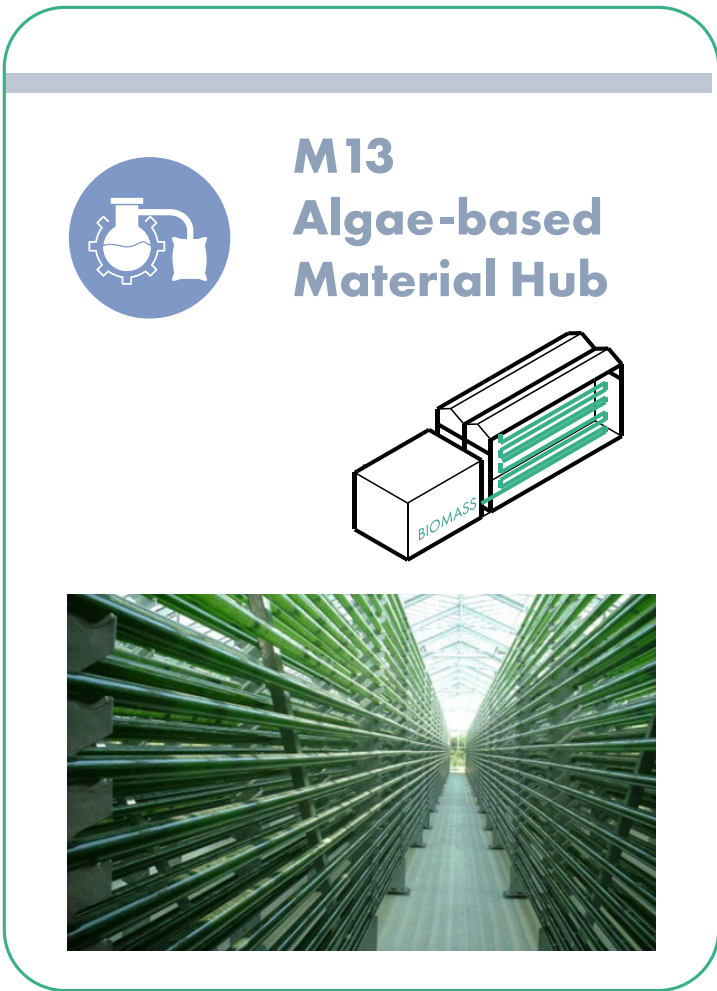


Actions



行动 07:
作为生产力的污水处理系统

Measures



措施 13:
微藻污水处理与生物质生产耦合

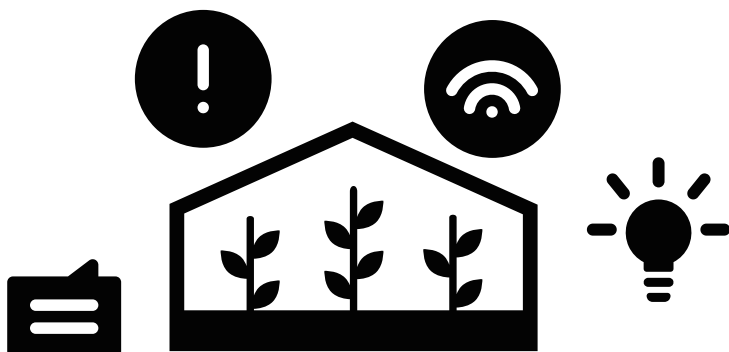
PG06



Production Open Day

工厂生产开放日

PG08



Cooperative living lab

联合智慧实验室

Let's do it together!

那还不冲冲冲

Factory Owners

工厂厂长

Planner

规划师

Horticultural Sector

大棚农业部门

Waste Services

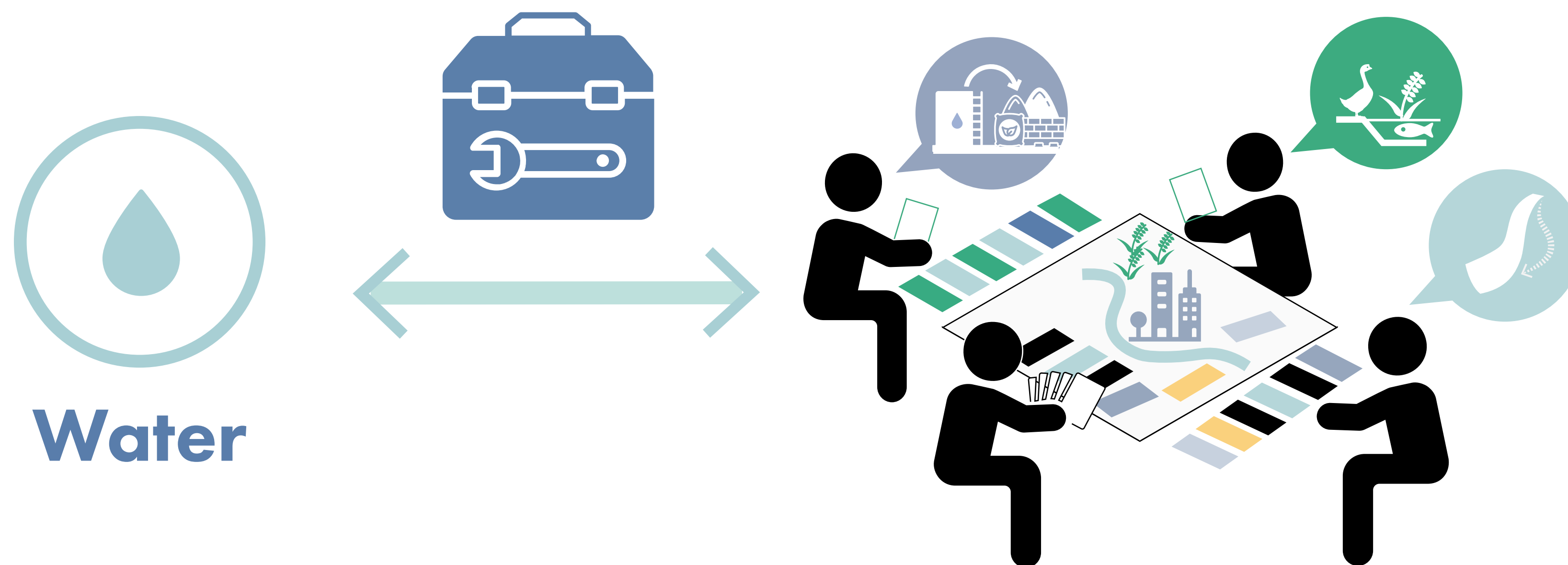
污水处理回收部门

Knowledge Institution

科研机构

鼓励人们参与并以水为导向

Encourage more people to join and become water-oriented.





The whole set of Pattern Language
一整套模式语言

Circular
Water Loop

P1



Circular
Water Loop

P11 Sustainable Water Supply

P12 Circular Agricultural Production

P13 Circular Industrial Production

Water
Sensitive
City

P02



Water
Sensitive
City

P21 Water Network Reviving

P22 Delaying the Storm water

P23 Adapt to major Flooding water level

Ecologically
Sound
Waterscape

P3



Ecologically-
Sound
Waterscape

P31 Footprint Minimizing

P32 Riparian Ecosystem Regeneration

Principles

11 项基本原则

Actions

20 个行动

Measures

56 项具体措施

Programmes

10 种项目策划

L1

Reconnect
People with
Nature

L2

Reorient
the Public
Mindset

L3

Stimulating
Knowledge
Sharing and
Production

Leverages

3 个杠杆点

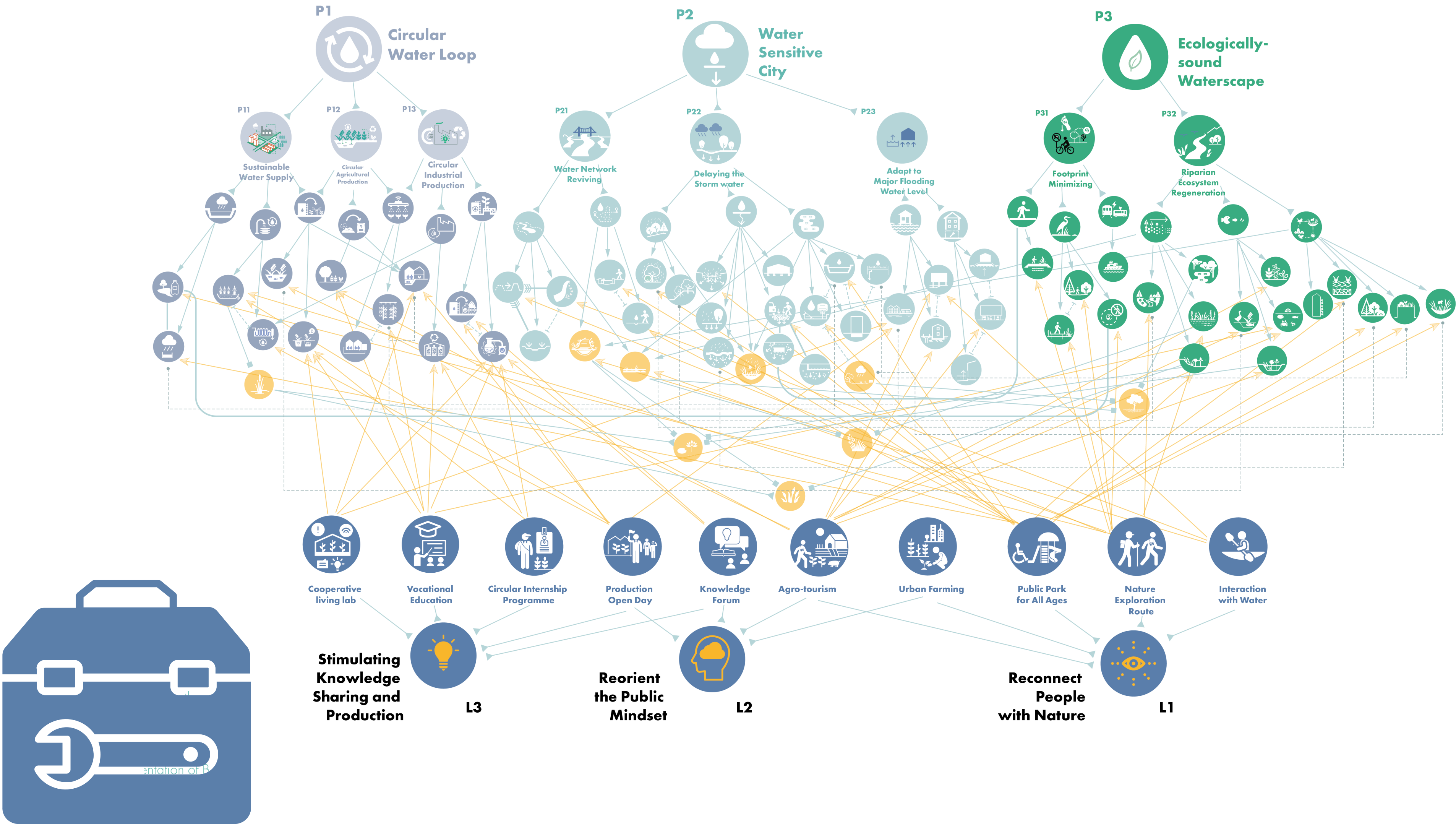
Reconnect
People with
Nature

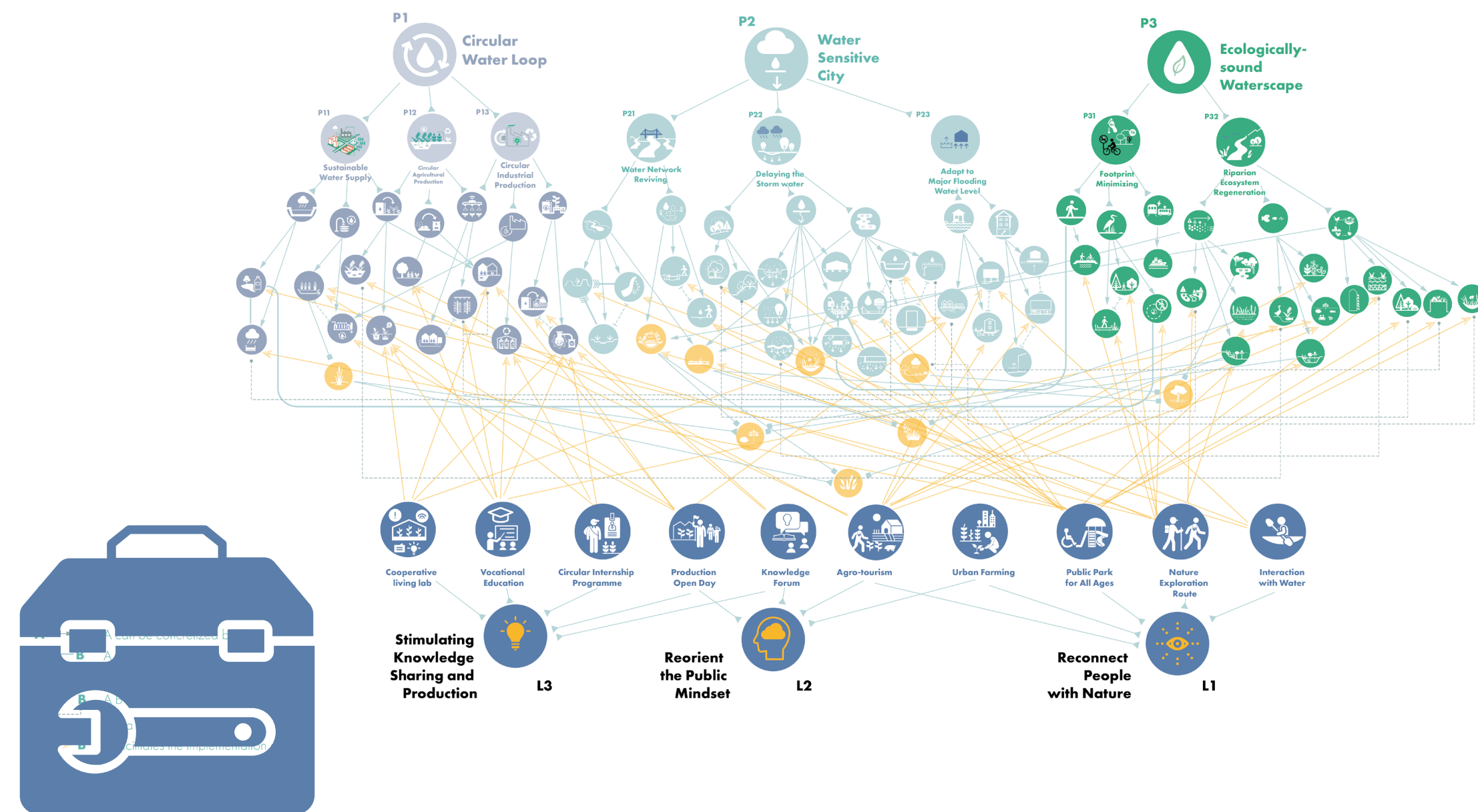
Reorient
Public
Mindset

Knowledge
Sharing and
Innovation

The Pattern Language Network

模式语言网络





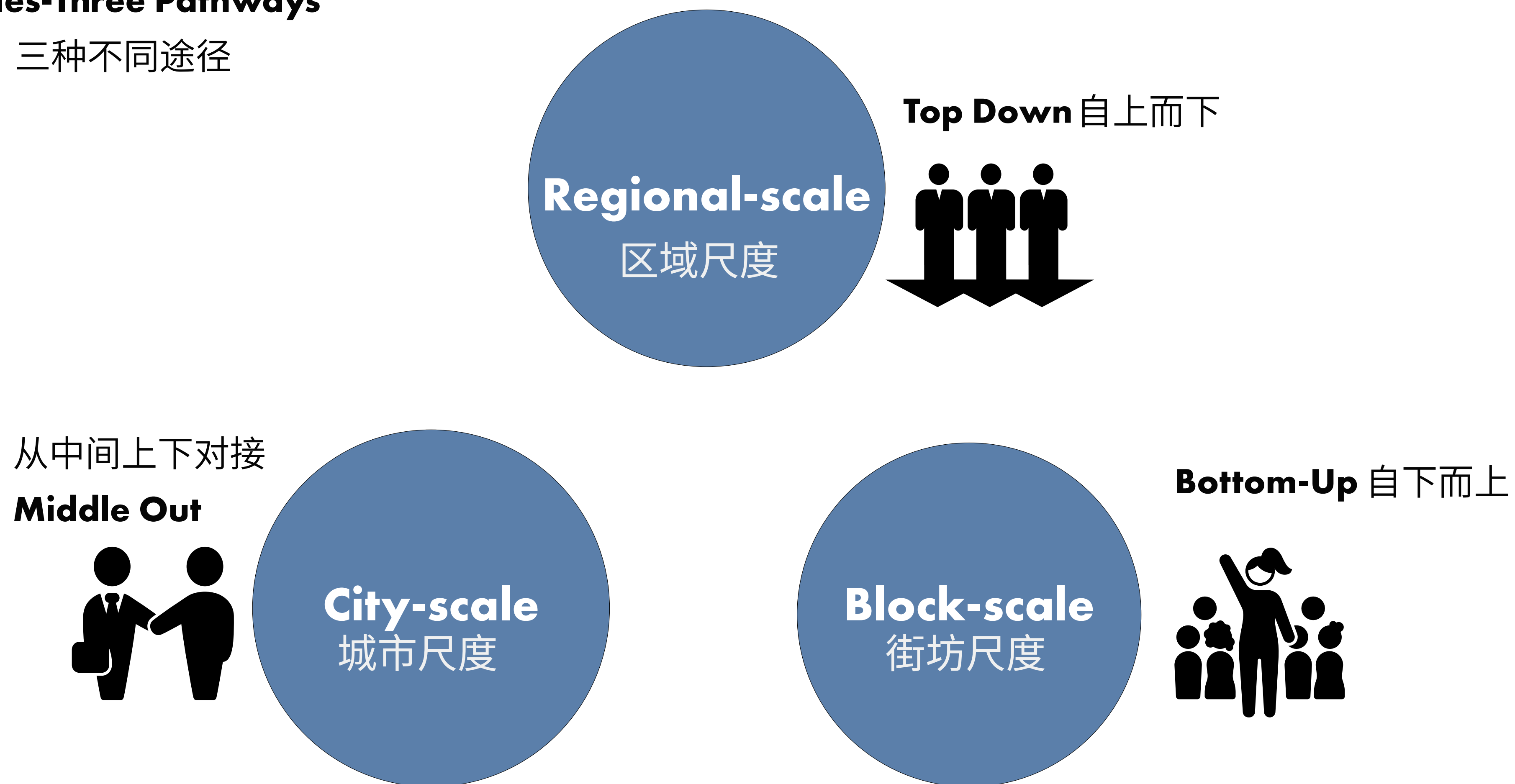
4. The Implementation:

How can this pattern language be used in the future urban planning ?

这种模式语言怎么在未来的城市规划中使用呢？

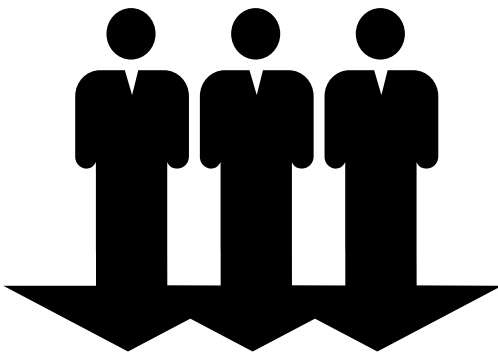
Three Scales-Three Pathways

三个层面，三种不同途径

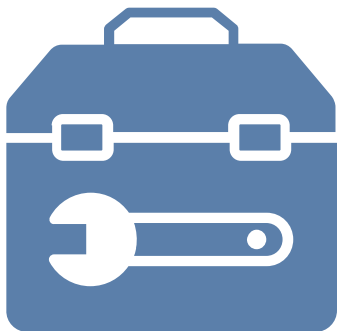




Top Down



自上而下由政府、专家主导
Led by Authorities and Water Professionals



Regional-scale 宏观战略

P1

Circular Water Loop

P02

Water Sensitive City

P3

Ecologically-Sound Waterscape

P11 Sustainable Water Supply

P12 Circular Agricultural Production

P13 Circular Industrial Production

P21 Water Network Reversing

P22 Delaying the Storm water

P23 Adapt to major flooding water level

P31 Footprint Minimizing

P32 Ecosystem Regeneration

PG01 Sustainable Water Supply

PG02 Circular Agricultural Production

PG03 Circular Industrial Production

PG04 Water Network Reversing

PG05 Delaying the Storm water

PG06 Adapt to major flooding water level

PG07 Footprint Minimizing

PG08 Ecosystem Regeneration

PG01 Sustainable Water Supply

PG02 Circular Agricultural Production

PG03 Circular Industrial Production

PG04 Water Network Reversing

PG05 Delaying the Storm water

PG06 Adapt to major flooding water level

PG07 Footprint Minimizing

PG08 Ecosystem Regeneration

PG01 Interaction with Water

PG02 Public Park for All Ages

PG03 Nature Exploration Route

PG04 Agro-tourism

PG05 Production Open Day

PG06 Urban Farming

PG07 Knowledge Forum

PG08 Cooperative living lab

PG09 Circular Internship Programme

PG10 Vocational Education

L1

Reconnect People with Nature

L2

Reorient the Public Mindset

L3

Stimulating Knowledge Sharing and Production

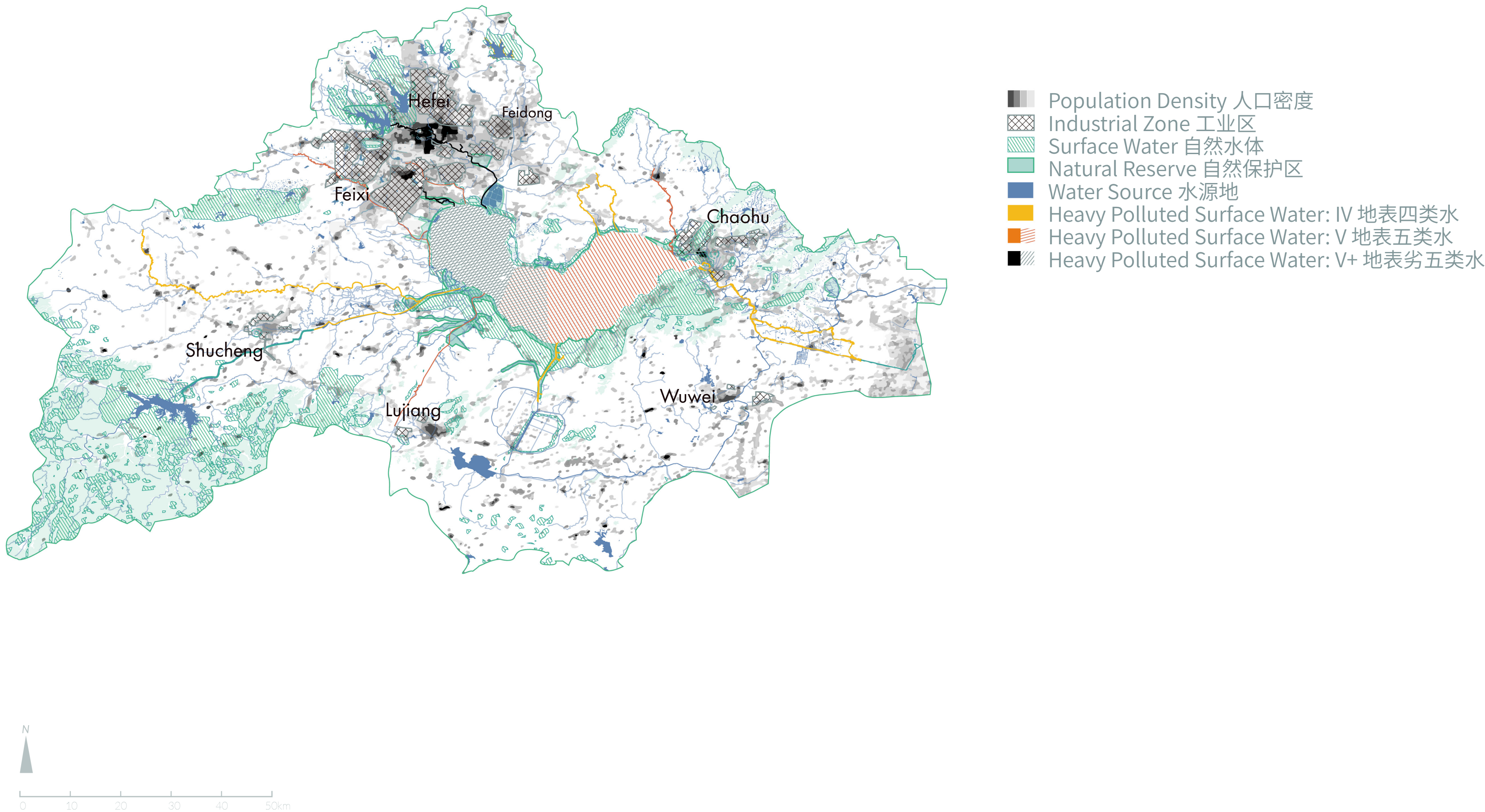
Principles
原则

Leverage Points
杠杆点

Authorities and Water Professionals

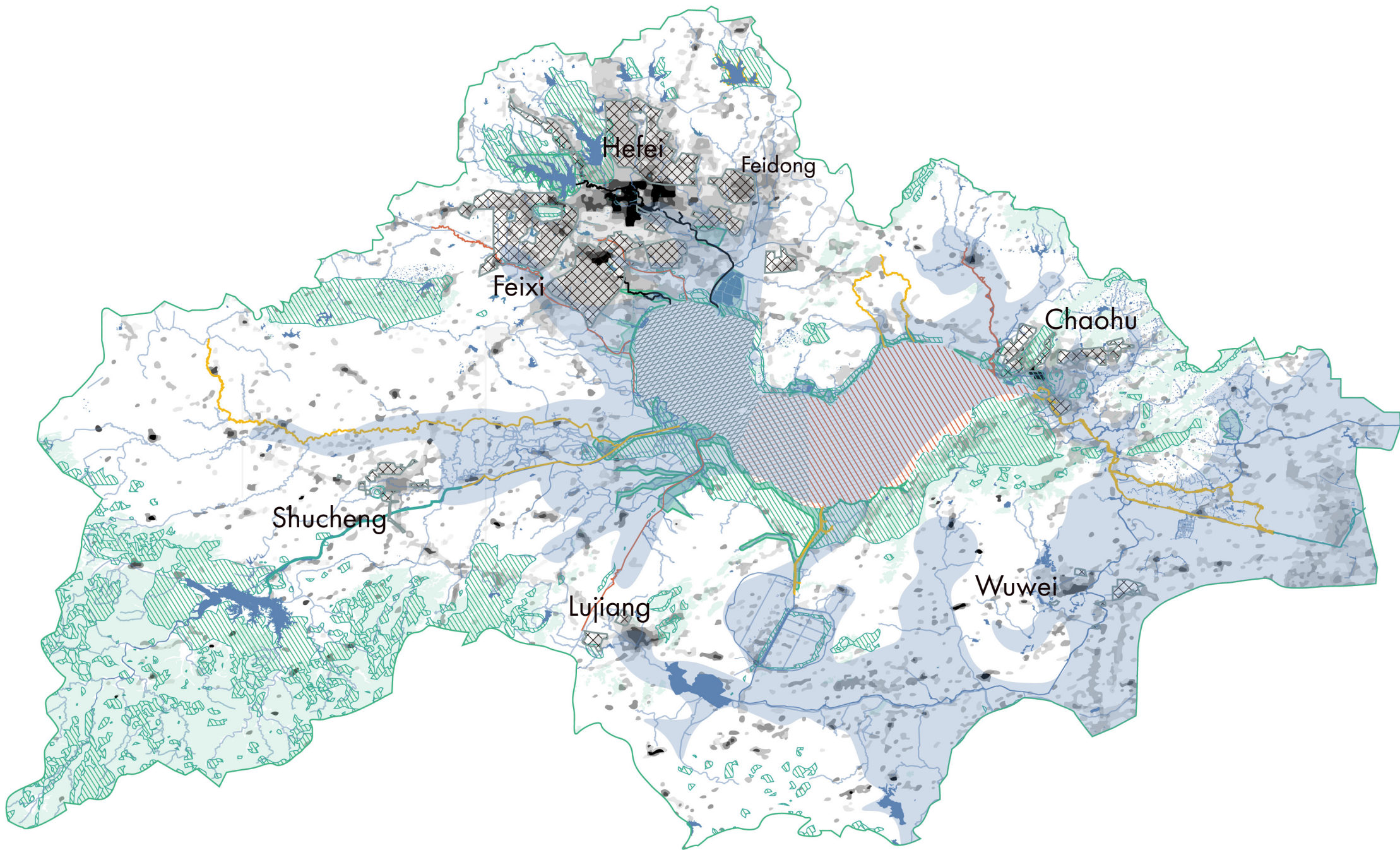
Regional scale: Risk Assessment 风险评估

Current Situation 现状图



Regional scale: Risk Assessment 风险评估

Current Situation 现状图

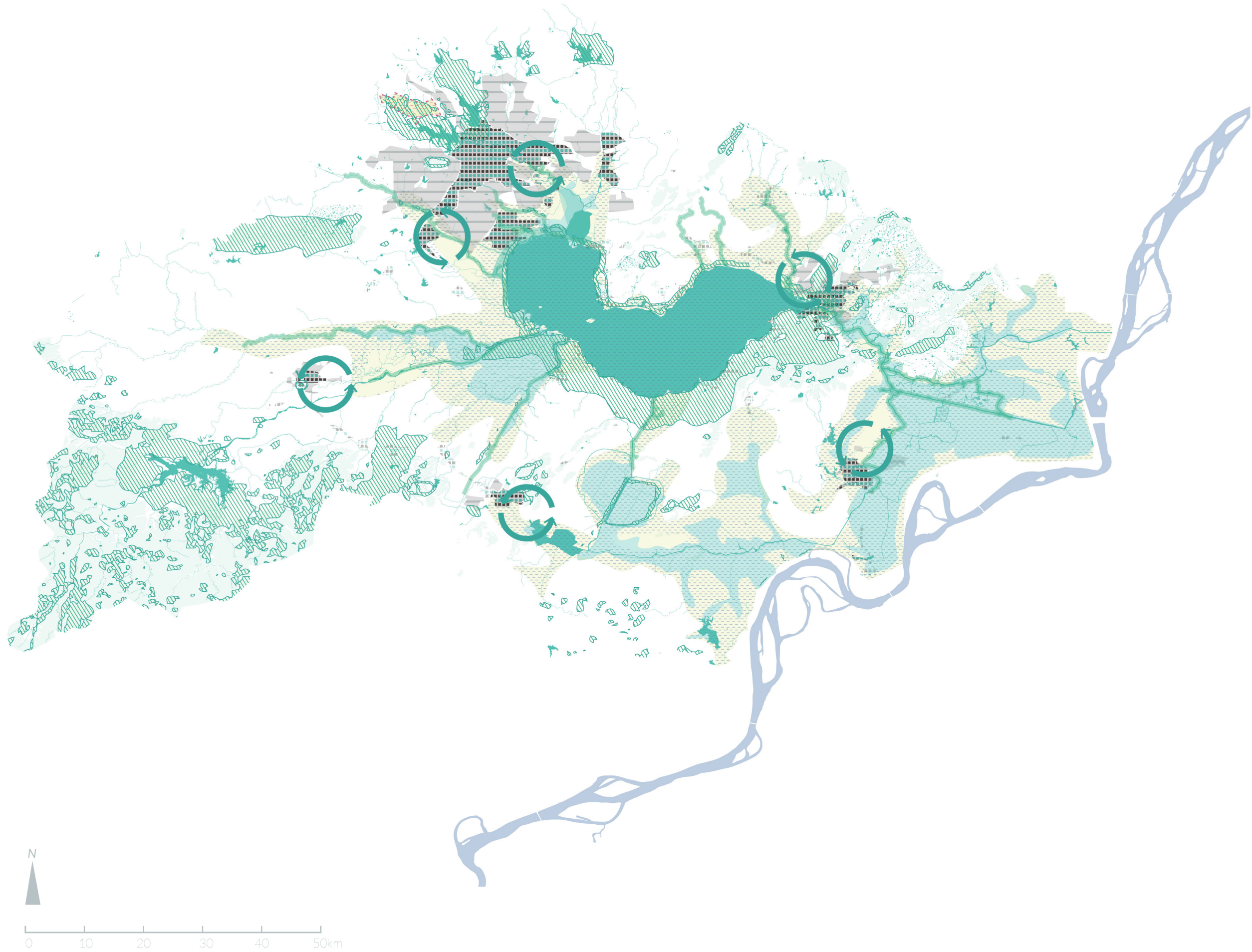


- Population Density 人口密度
- Industrial Zone 工业区
- Surface Water 自然水体
- Natural Reserve 自然保护区
- Water Source 水源地
- Heavy Polluted Surface Water: IV 地表四类水
- Heavy Polluted Surface Water: V 地表五类水
- Heavy Polluted Surface Water: V+ 地表劣五类水
- High Flood Risk Zone(<13m): 流域内主要洪泛区 (海拔低于巢湖洪水位)



Regional scale: The Spatial framework for the Lake Chao Basin 2050 区域尺度的空间框架

Water System Projection 水系统规划



水利规划部门的专业人士可以提出在如何在各地优先考虑各项原则。

The professionals and experts gives suggestion on how to prioritize different principles in different locations.

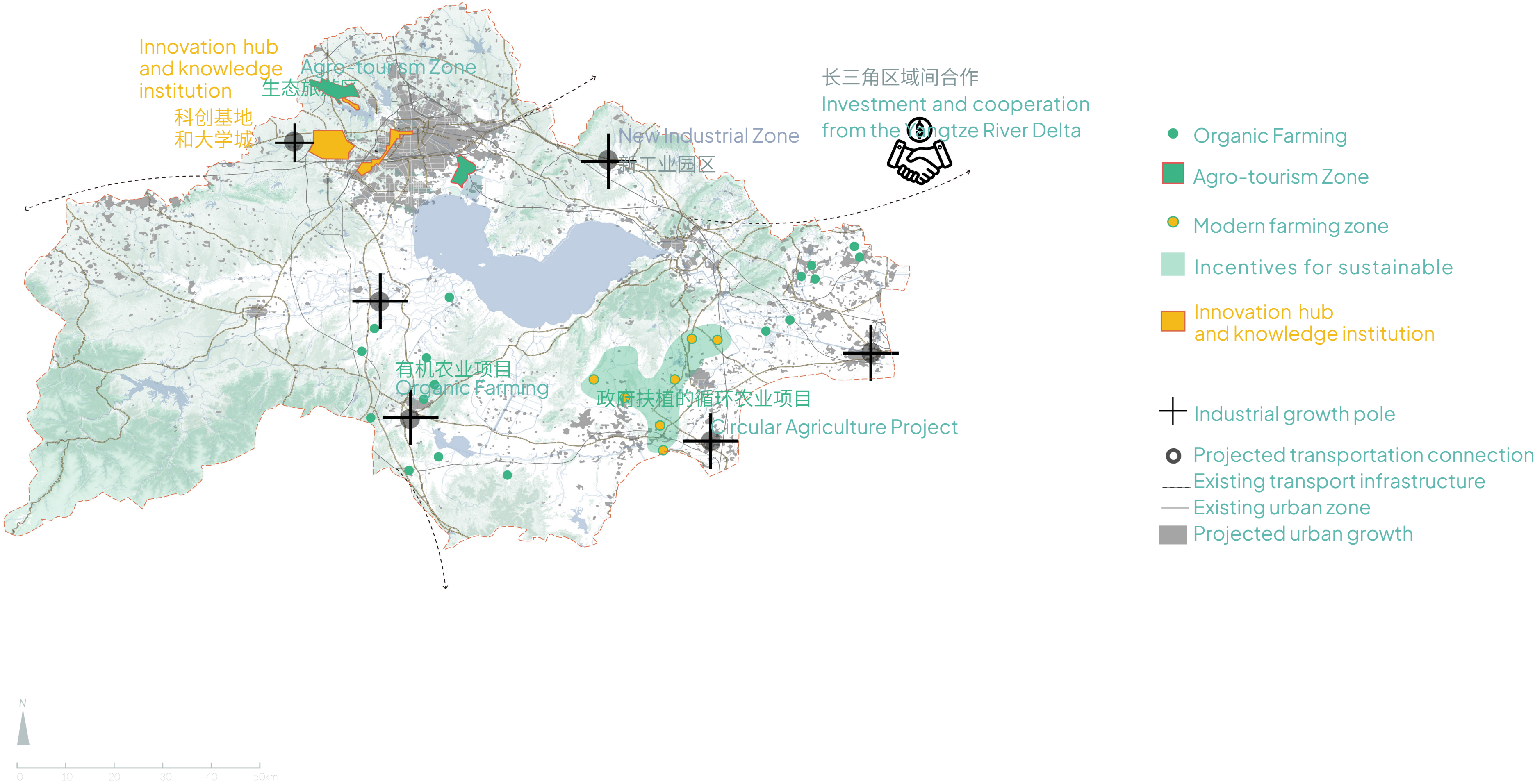
原则

Principles

- Water Sensitive Cities**
 - P21
 - P23
 - P22
 - Circular Water Loop**
 - P11
 - P12
 - P13
 - Ecologically-sound Waterscape**
 - P31
 - P32
- Existing Urban Area
 - Existing Industrial Zone
 - Floodable Area
 - Ecological Polder Zone
 - Green-blue Corridor
 - Wetland Park
 - Nature Reserves

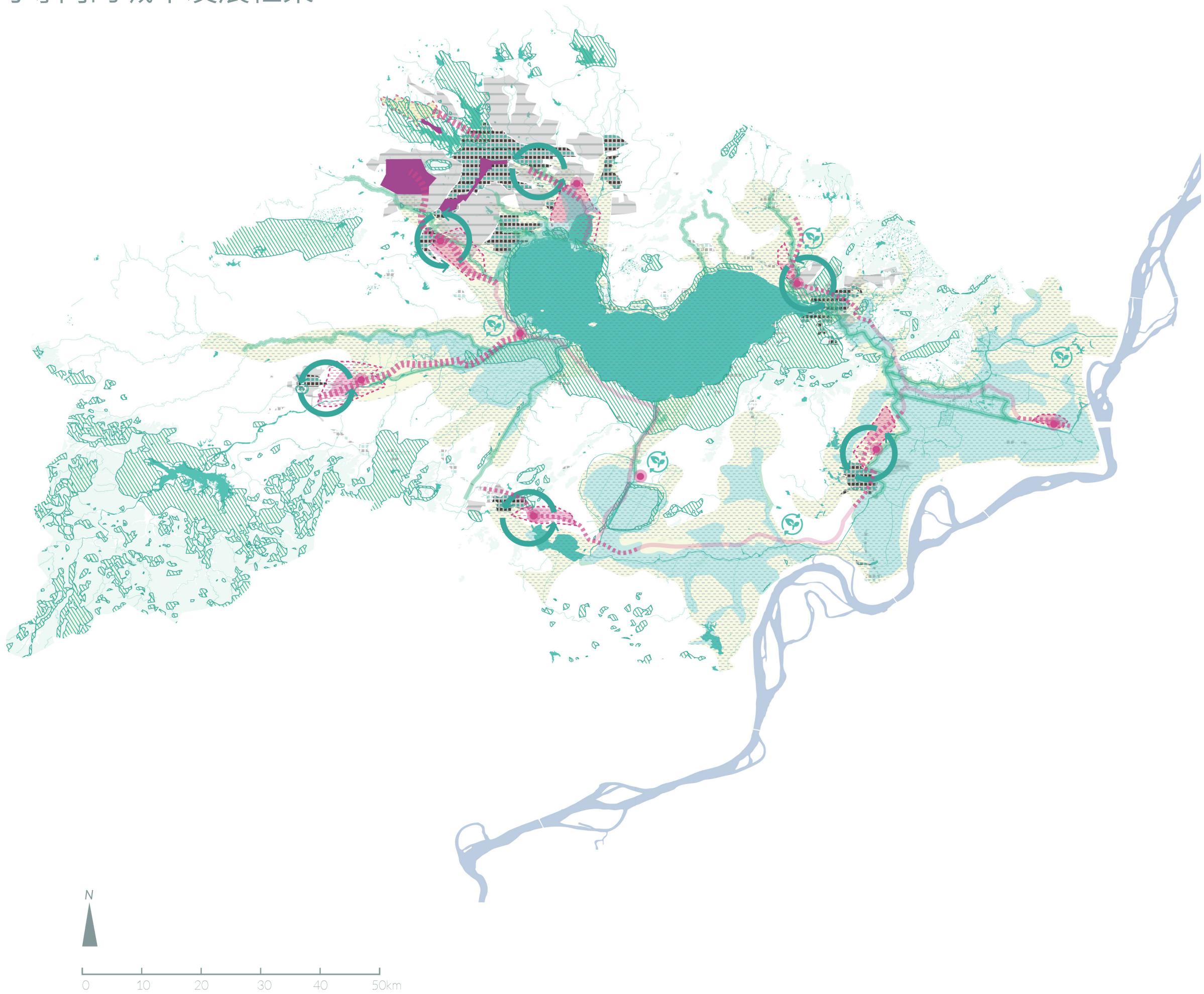
Regional scale: Current Threats and Opportunities Assessment 外部机遇与压力分析

Current Urbanisation Trends 基于当前城市化趋势的分析图



Regional scale: The Spatial framework for the Lake Chao Basin 2050 区域尺度的空间框架

Framework for Water-oriented Urban Development
以水为导向的城市发展框架



政府可以遵循三个杠杆点提供各种政策扶持和激励措施。
The government gives incentives and support to intervene on the three leverage points.

杠杆点

L1

Reconnect People with Nature

L2

Reorient the Public Mindset

L3

Stimulating Knowledge Sharing and Production

Leverage Points

Stimulating Knowledge Sharing and Production

Innovation Hub/Education Institutions

Existing Knowledge Institutions

Education Corridor

Reconnect People with Nature

Nature Exploration Corridor

Synergy

New Water-oriented Development Zone



Planner and Key Sectors

城市规划师及产业部门、机构多方协作

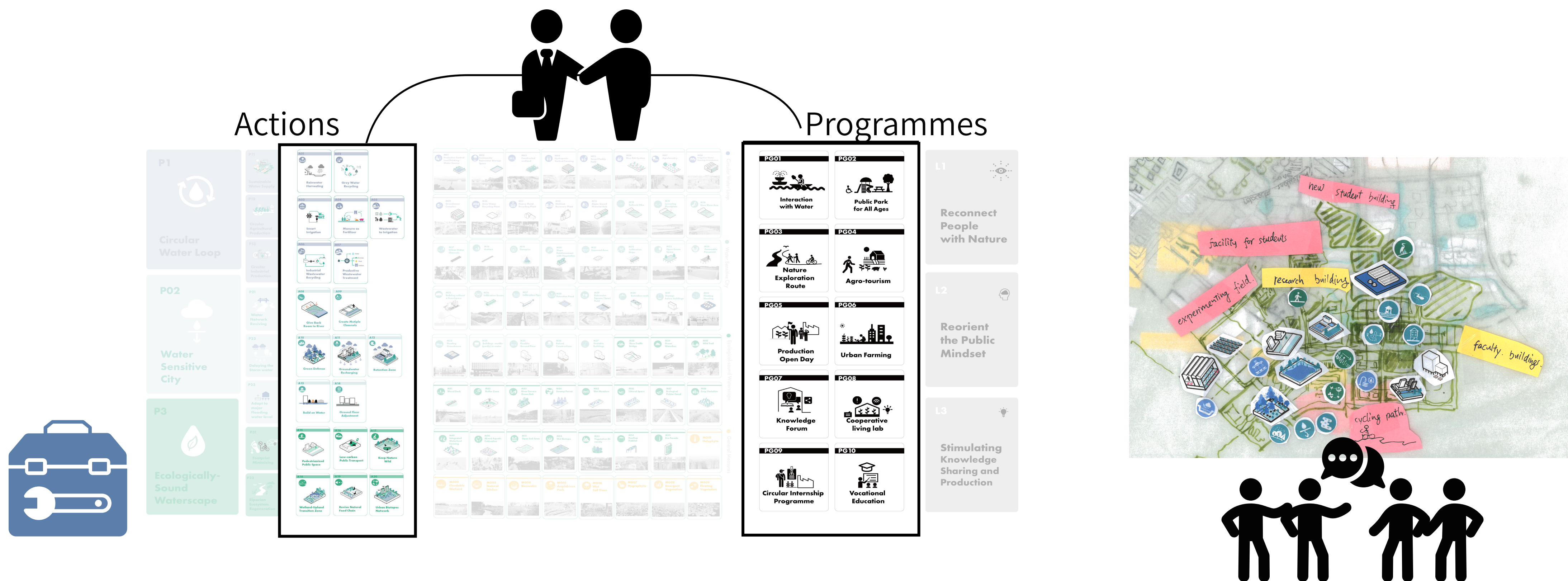
Middle Out / Horizontal Collaboration



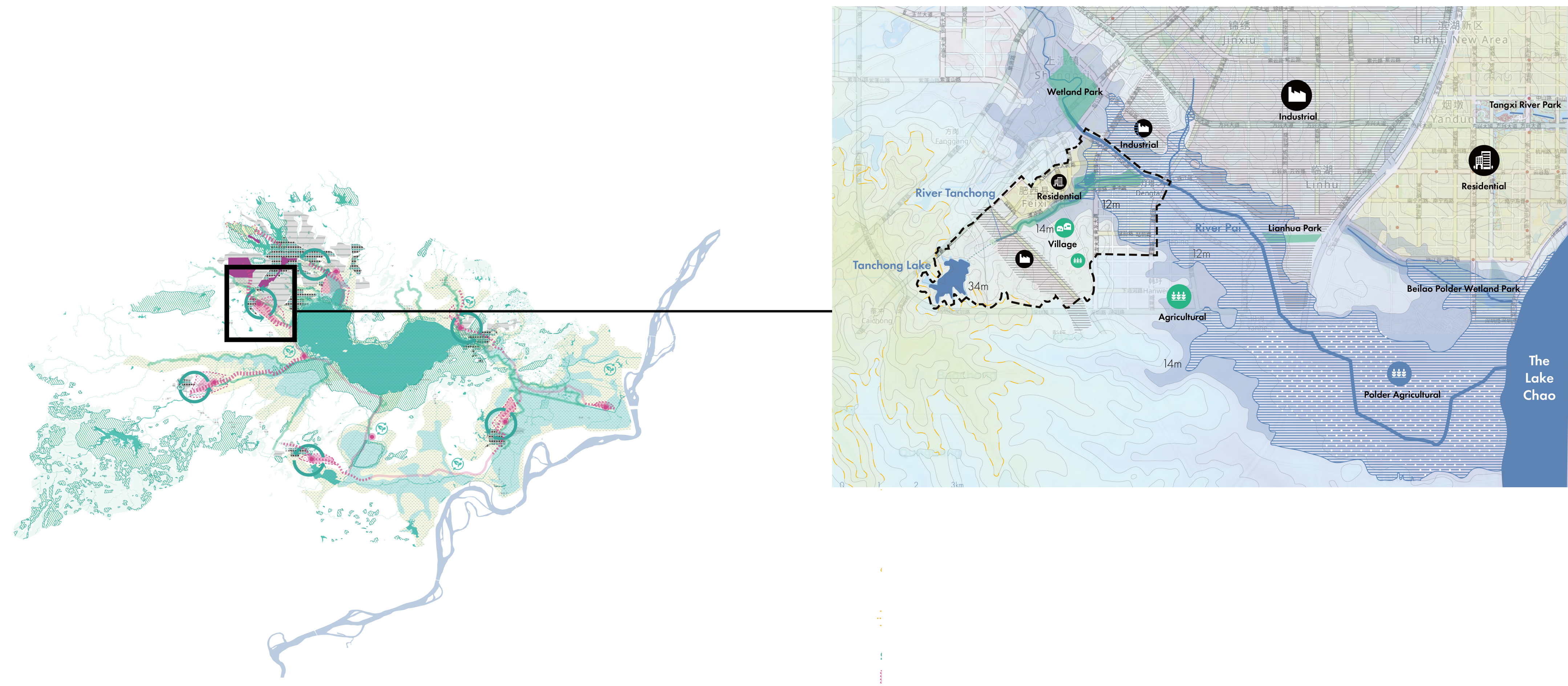
纵向统筹与横向合作

Planner and Key Sectors can choose from ‘Programmes’ and ‘Actions’ from the Pattern Language and create a vision together.

规划师及产业部门、机构牵头：从‘项目策划’和‘行动’中选择，制定共同的愿景。



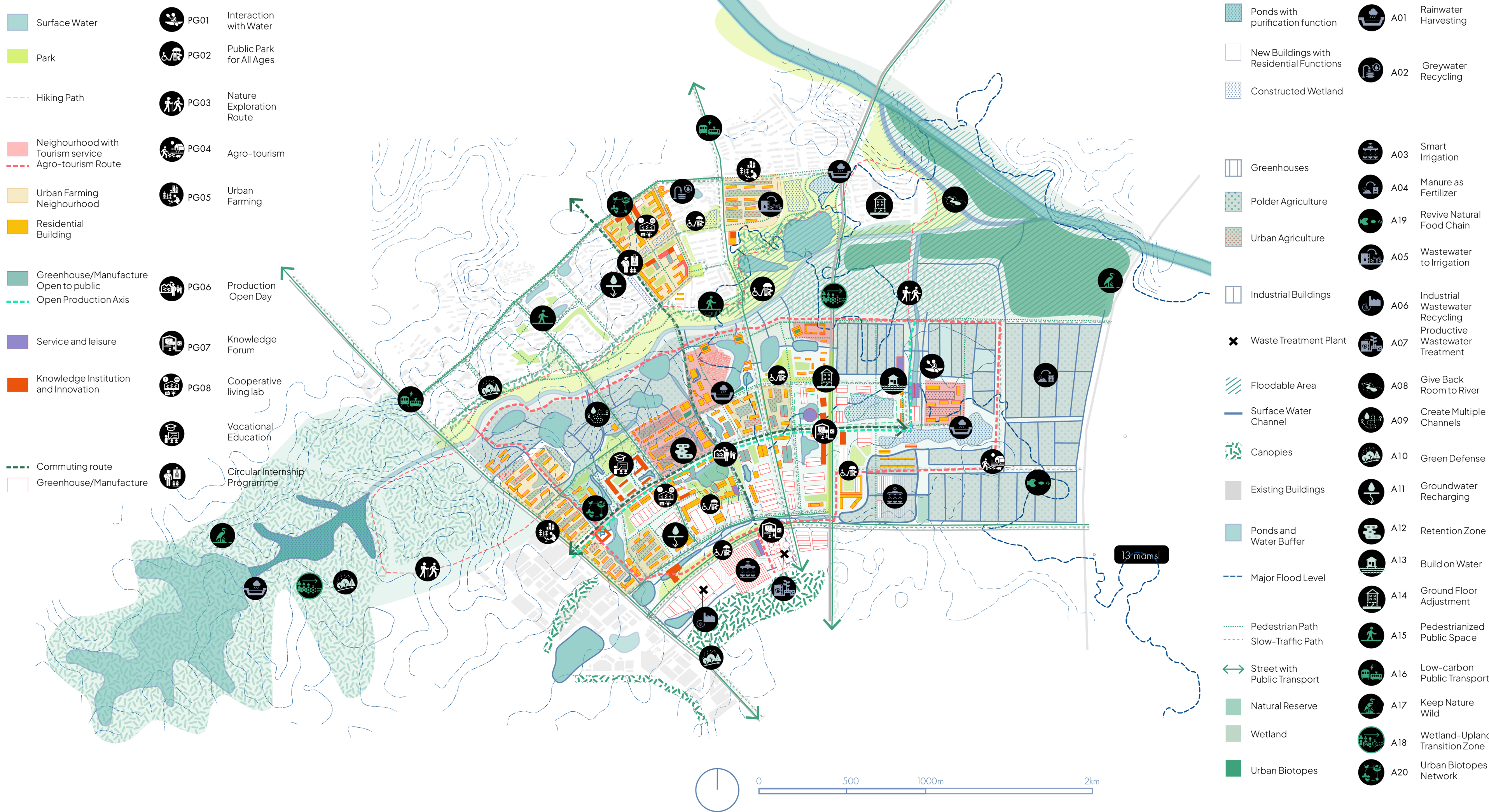
The Strategic Project for the Tanchong River Basin 2030 潭冲河流域作为战略试点项目



Current Situation of Tanchong River Basin: 潭冲河流域现状



Vision for Tanchong River Basin 2030 潭冲河流域 2030 愿景框架

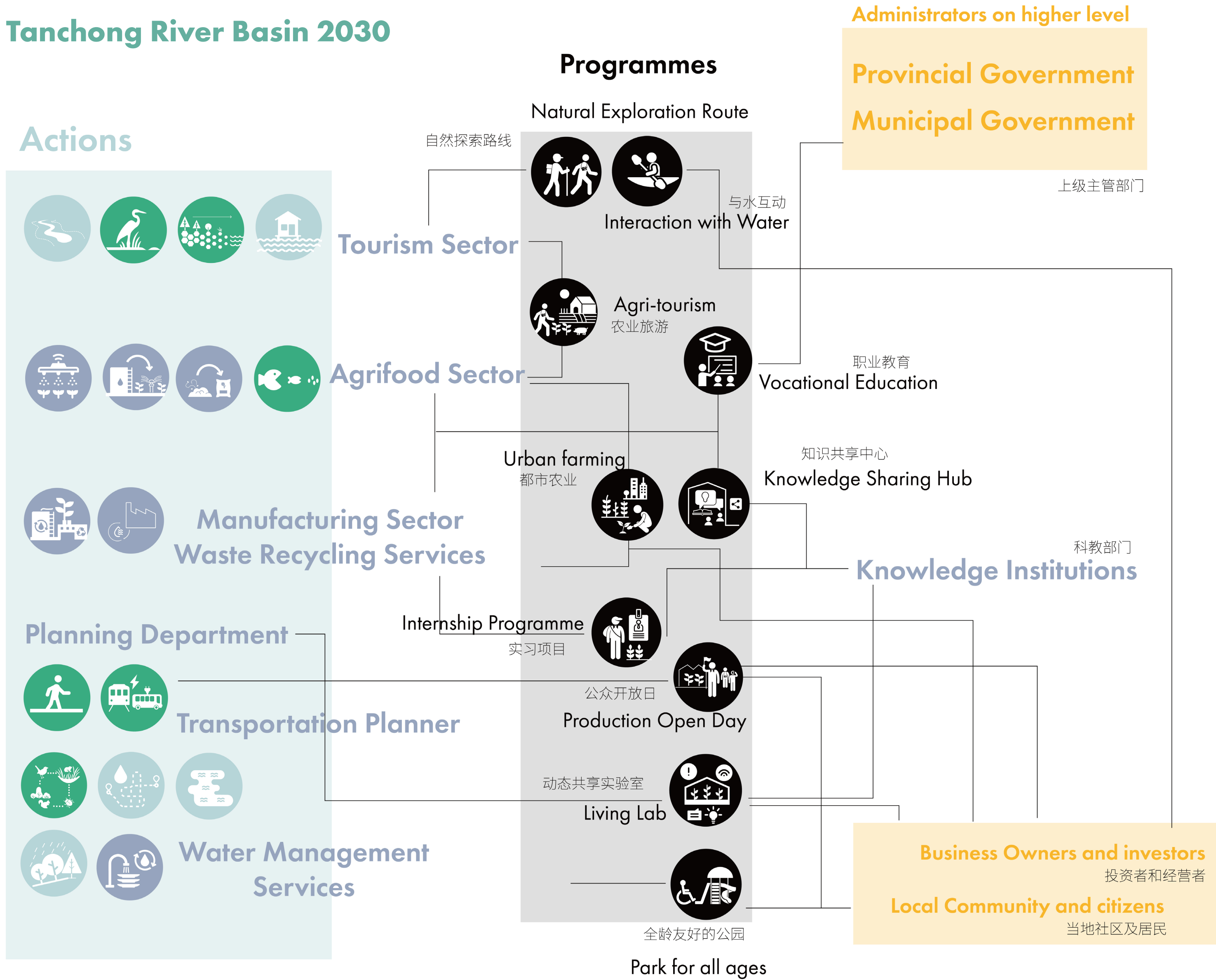


Implementation framework for Tanchong River Basin 2030

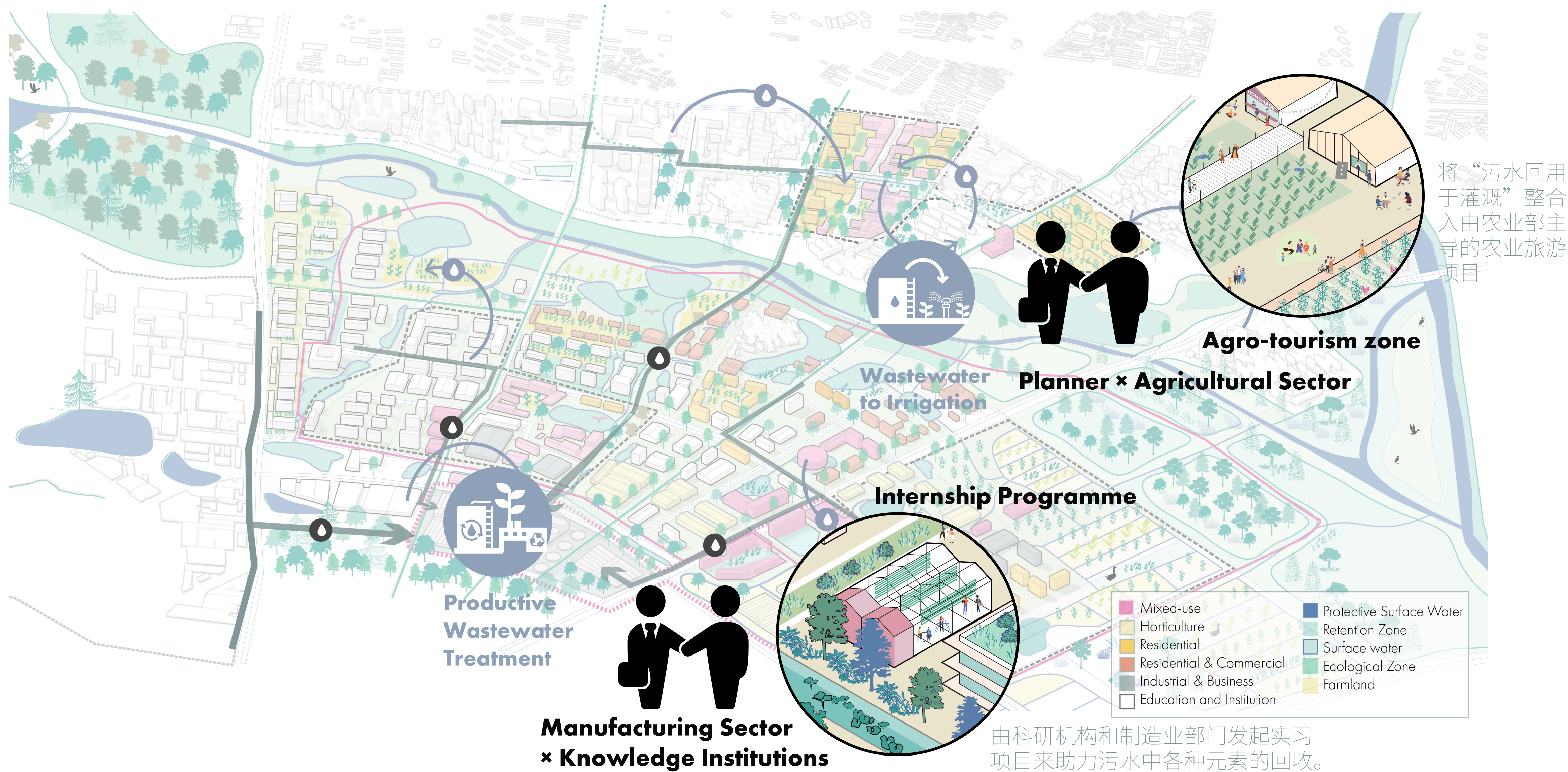
潭冲河流域 2030 愿景执行框架



**A multi-sector
collaboration process.**

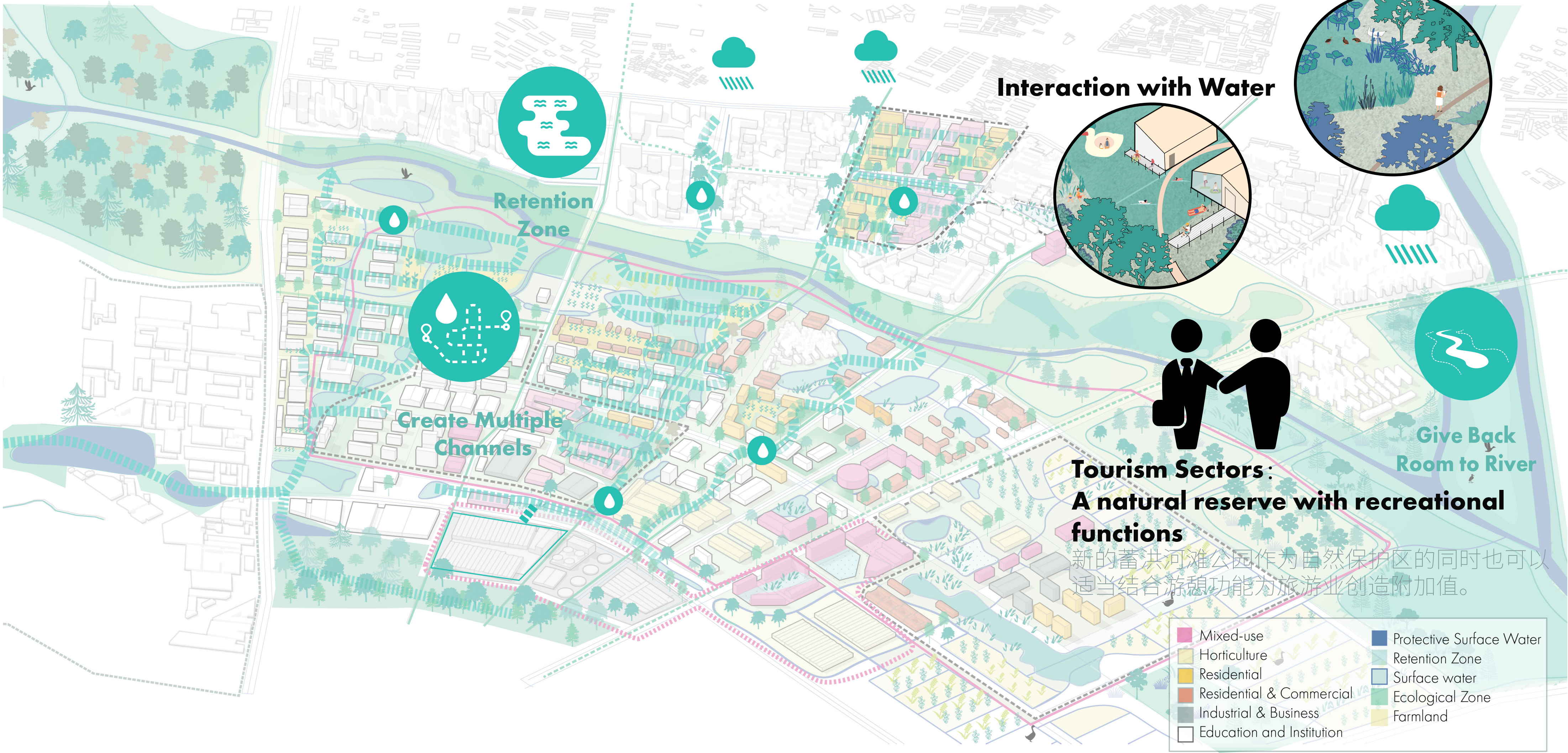


A vision for Circular Water Loop: 潭冲河流域循环用水专项规划



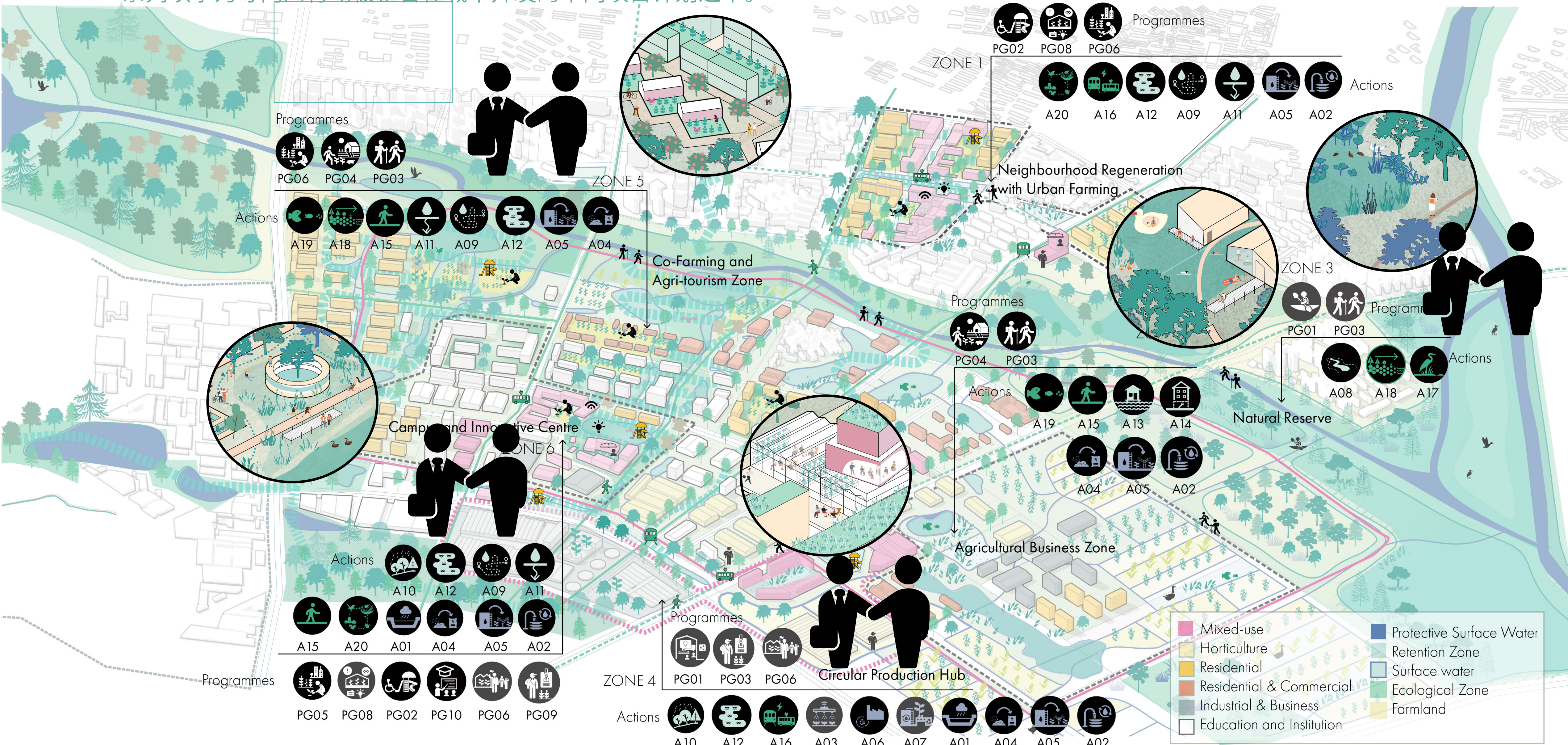
A vision for water sensitive city: 潭冲河流域水敏感型城市专项规划

Natural Exploration Route

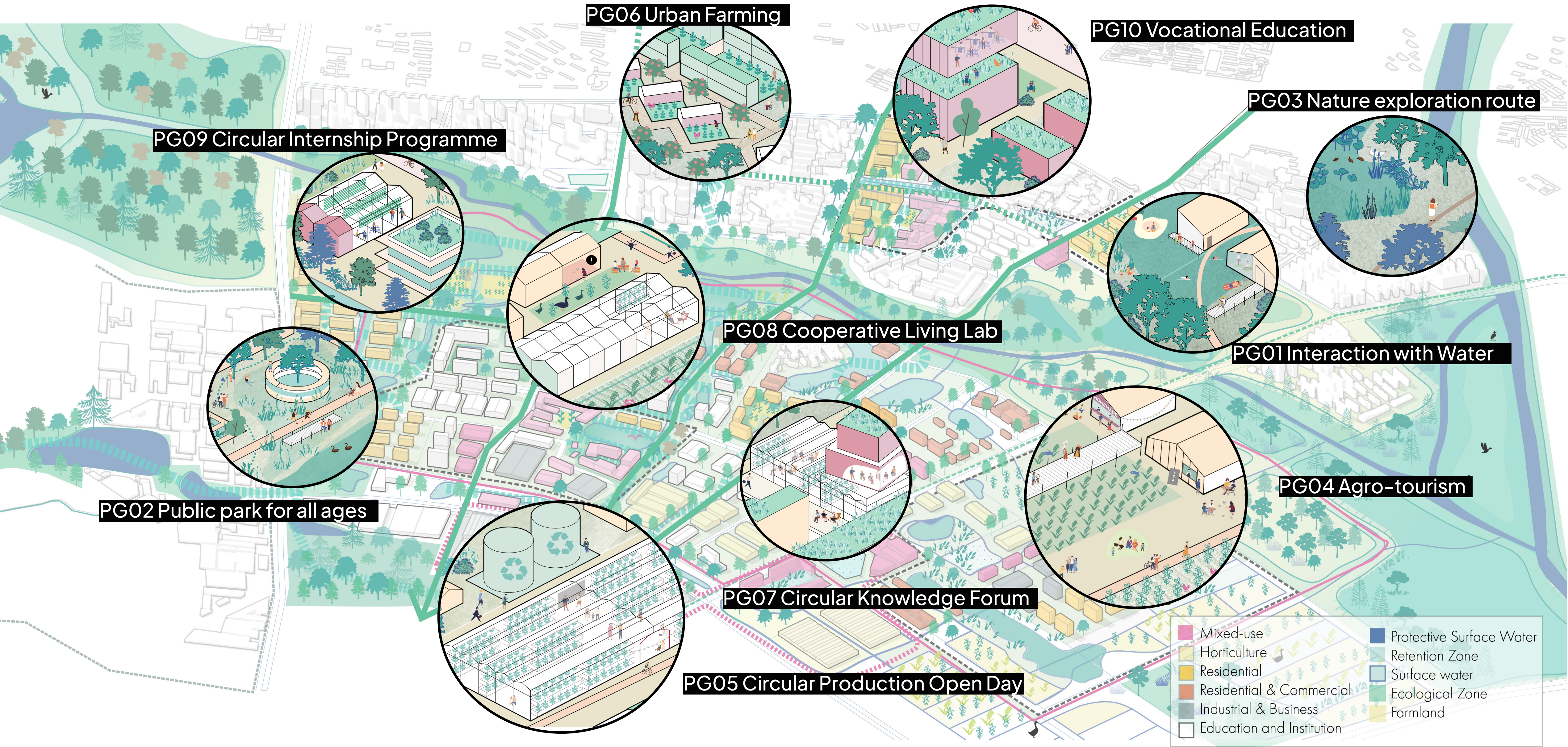


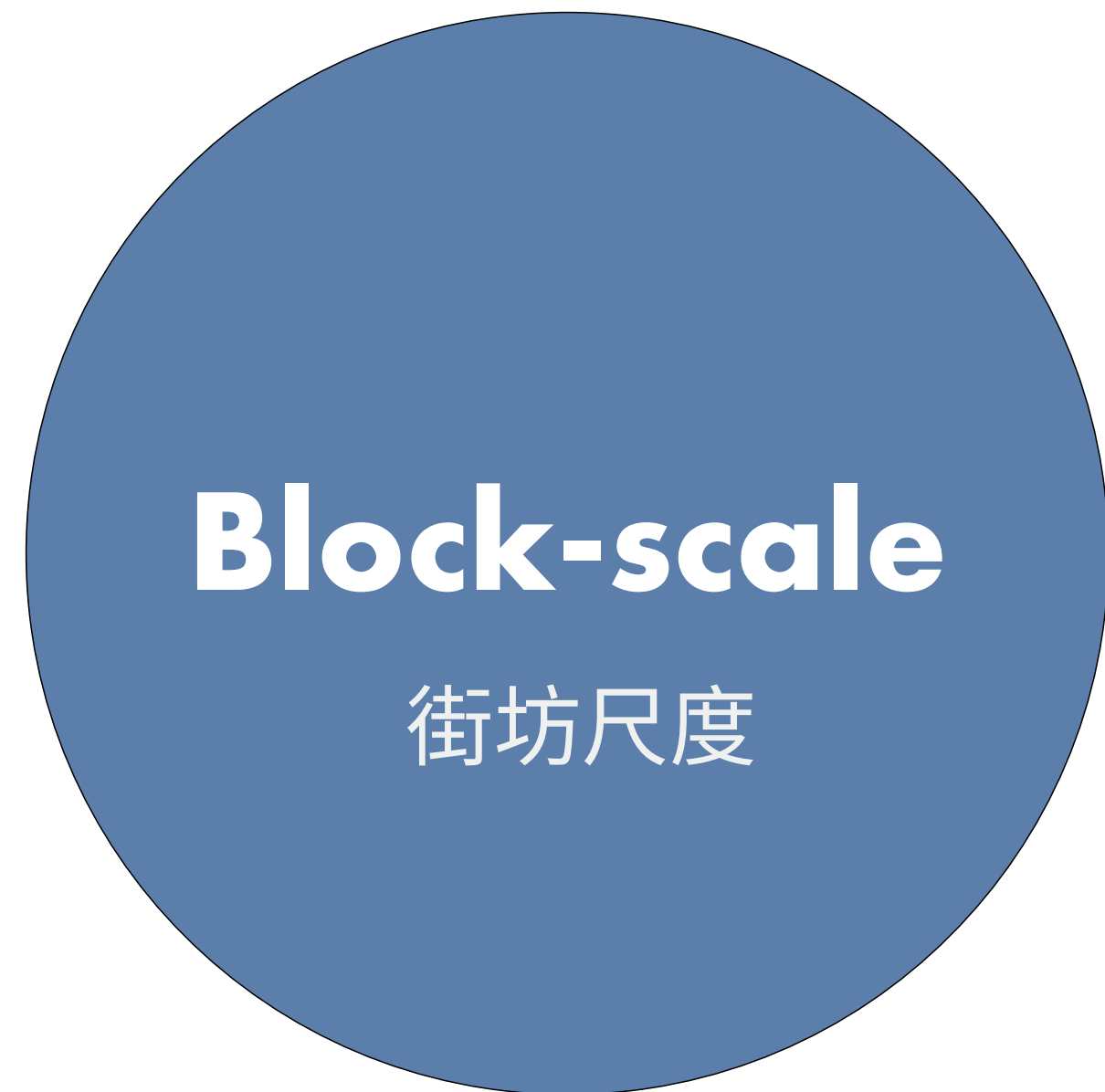
The actions for water are integrated by programmes of future urban development.
一系列以水为导向的行动被整合在城市开发的不同项目计划之中。

4.Implementation: 执行办法
62/ 84

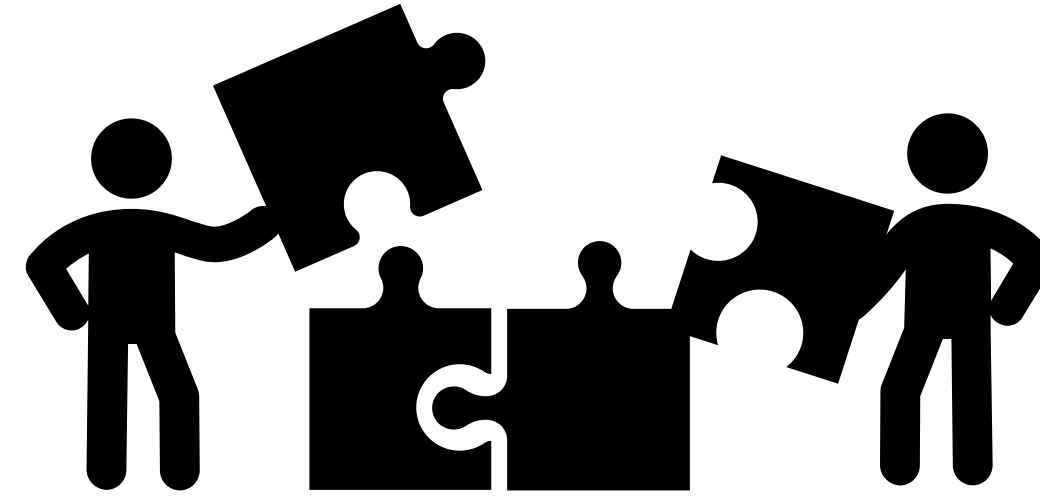


A Systemic Change on the landscape and on people's behavior. 系统性改变城市景观和居民的生活行为方式





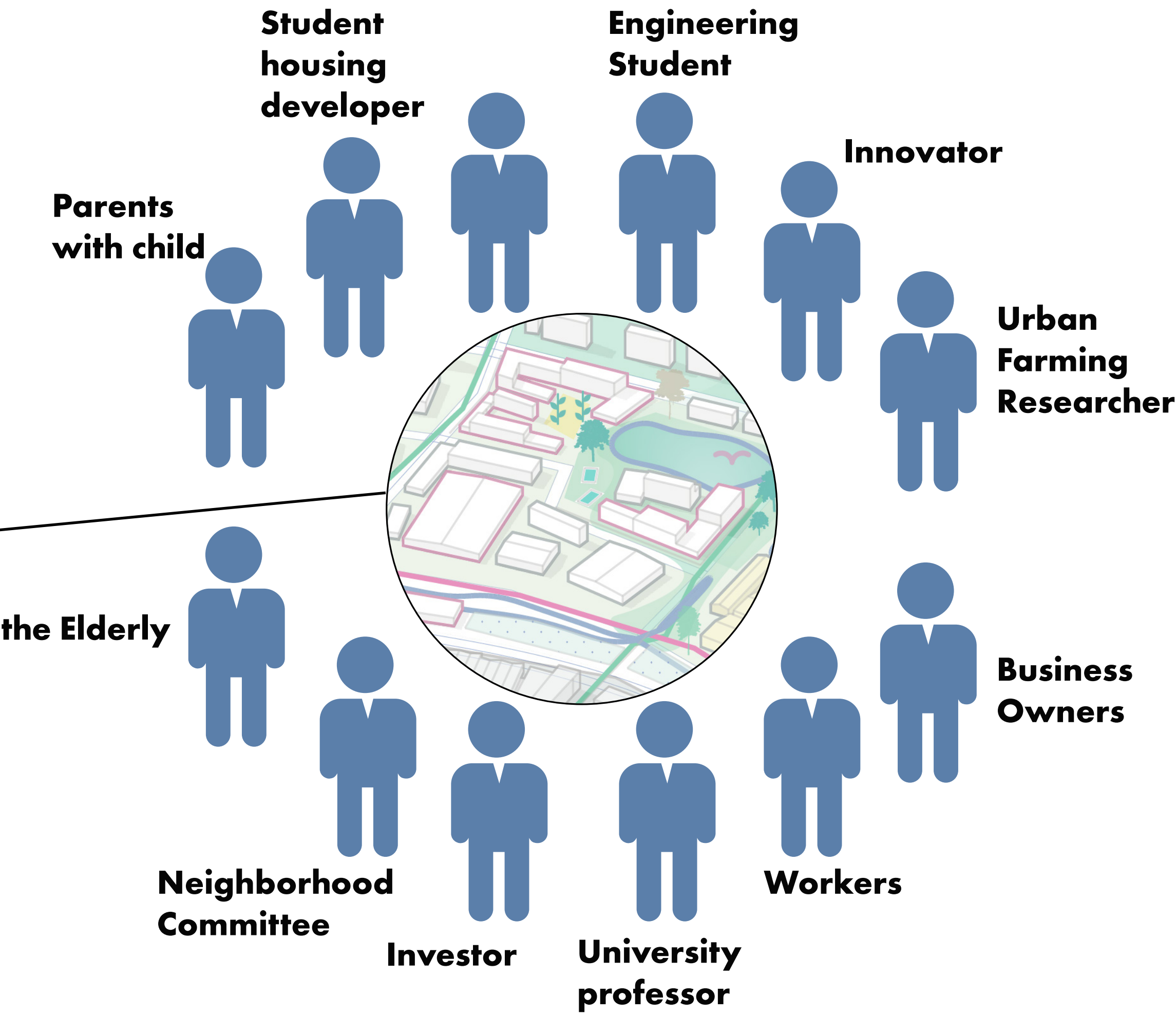
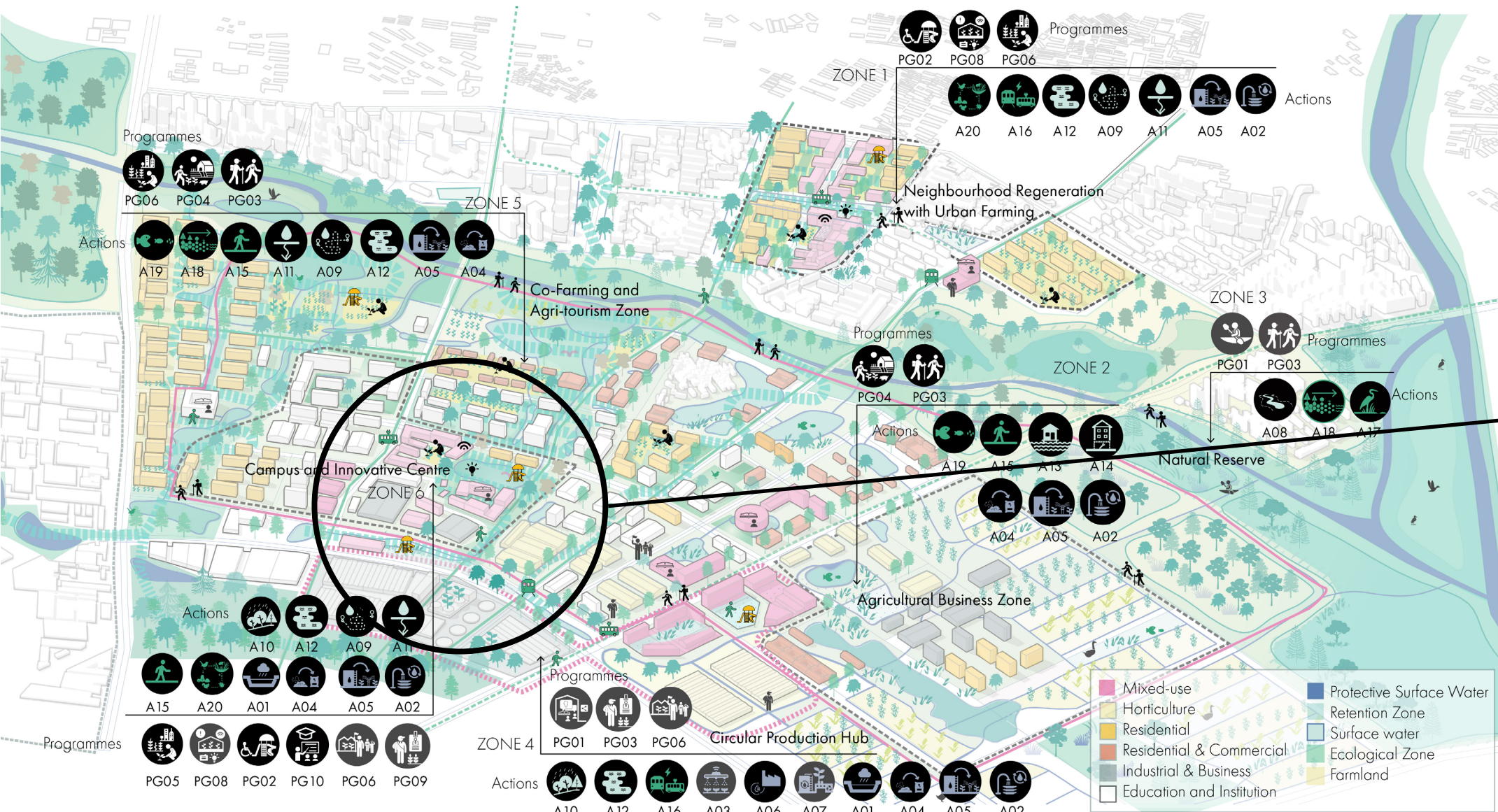
Bottom up



A Co-creation process allows the participation of multiple stakeholders
居民共同参加社区营建

Pilot Neighbourhood in Tanchong River Basin 潭冲河流域 6 号社区作为试点项目

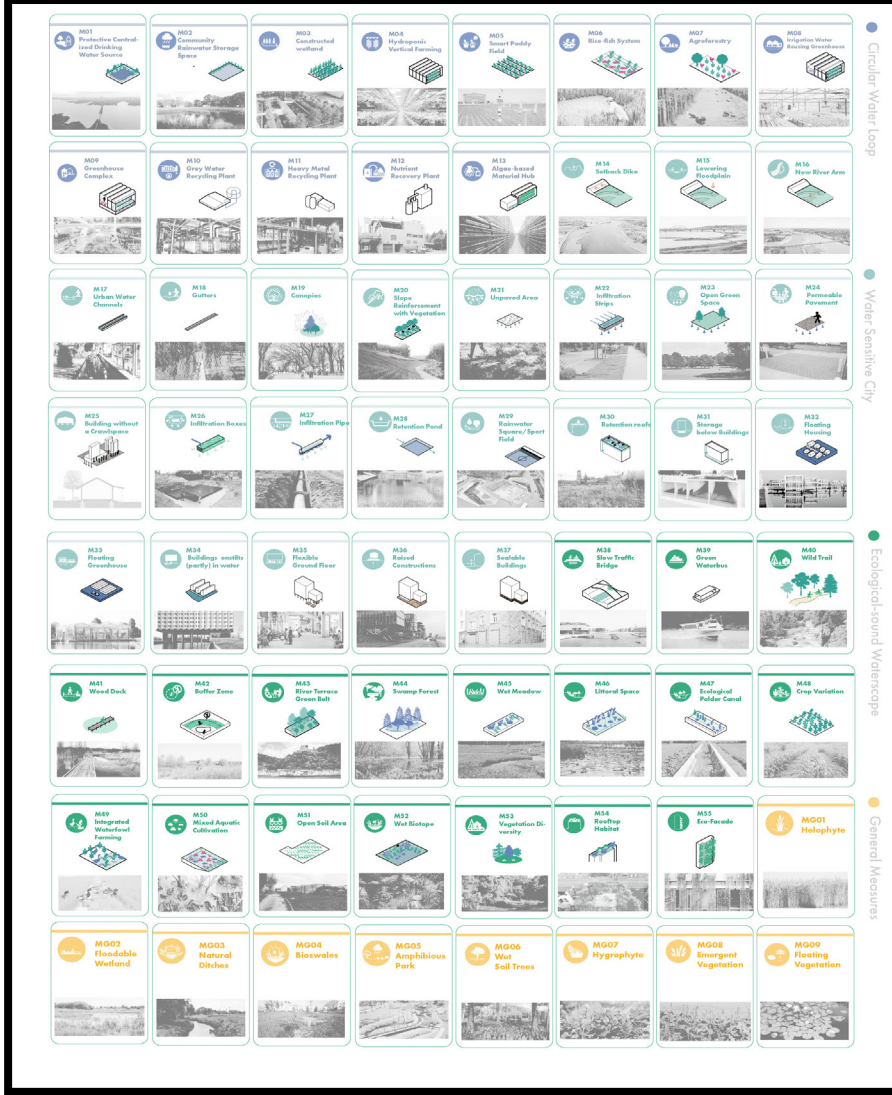
A Mix-used neighbourhood in New Campus Area



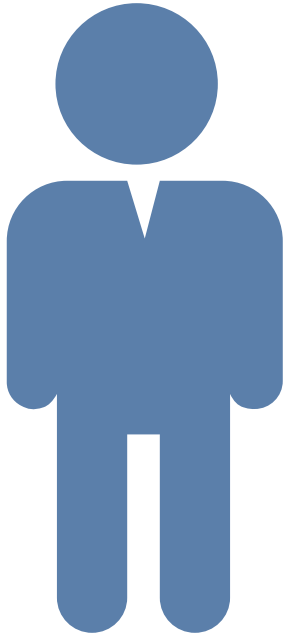
The Co-Creation Process: 共创过程



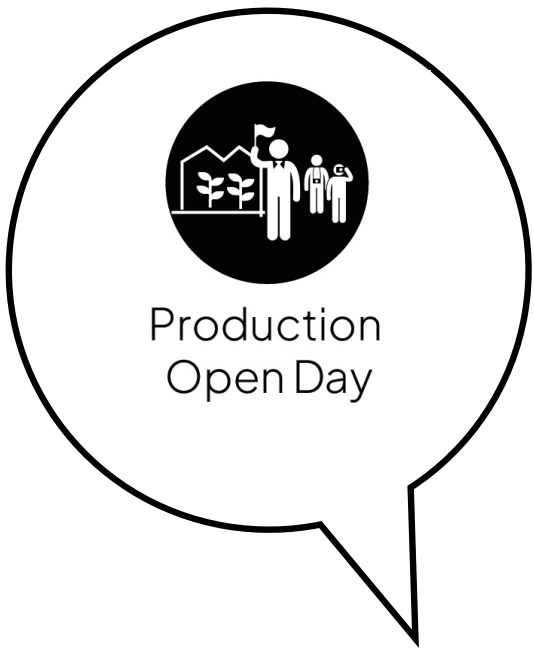
Measures 具体措施



Programmes 项目策划



Urban Designer

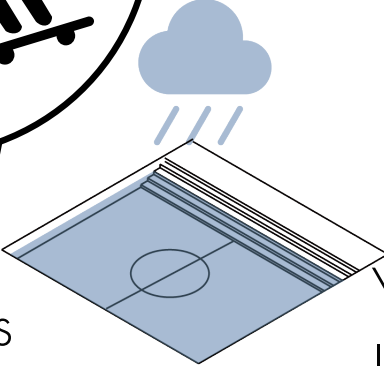


Production Open Day

Investor and entrepreneur



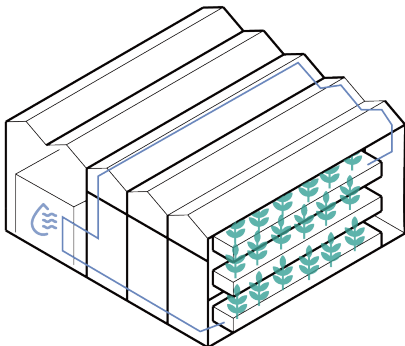
Students



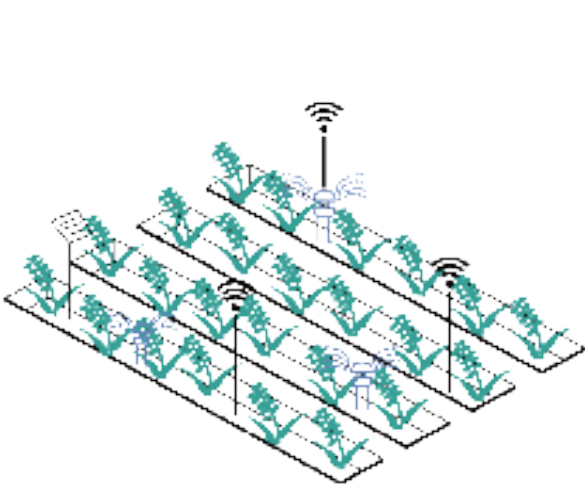
Young Innovators



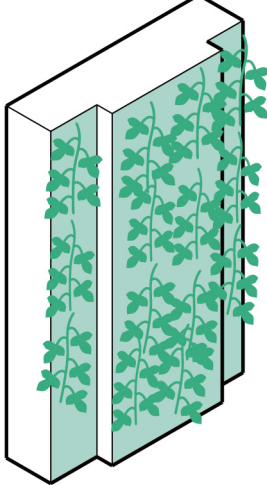
Cooperative living lab



Vocational Education



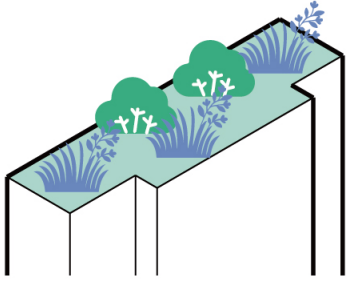
Knowledge Institution



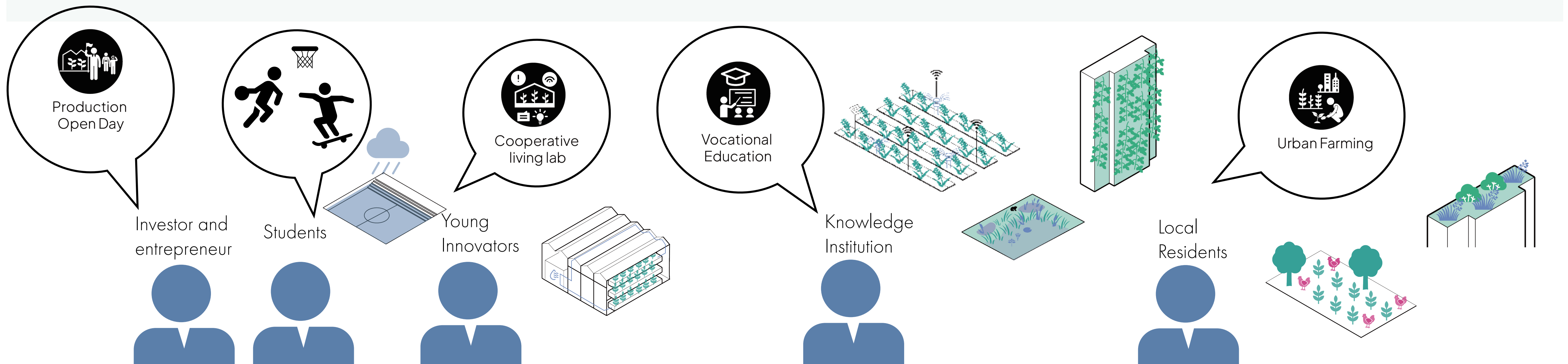
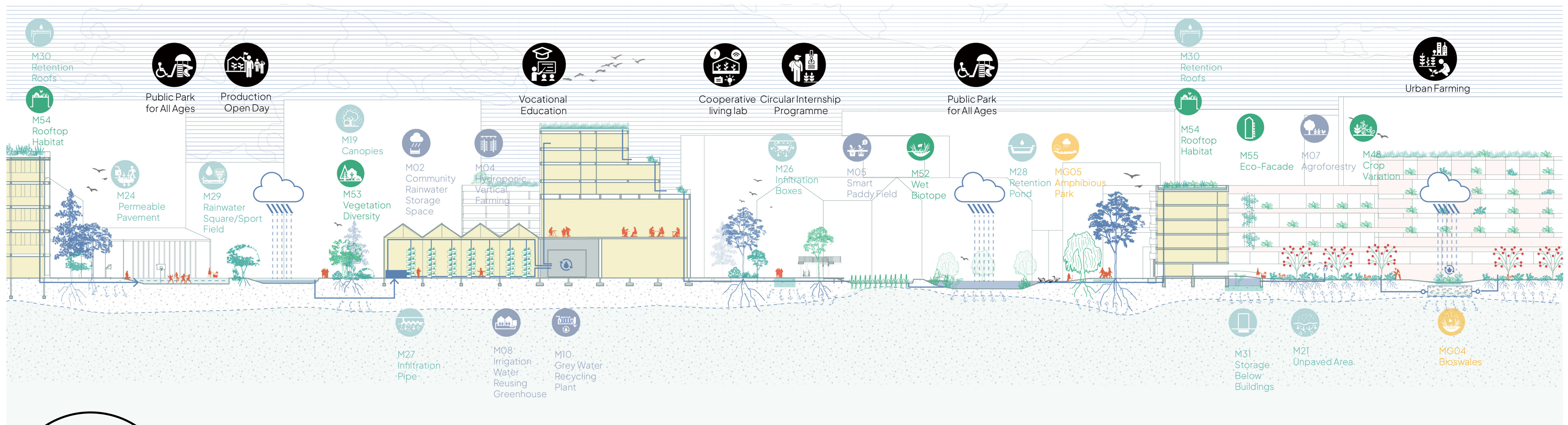
Local Residents



Urban Farming



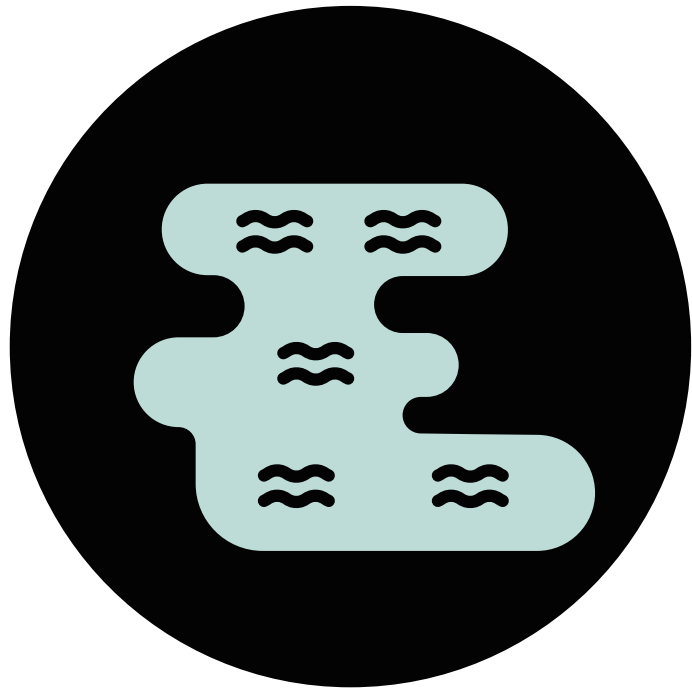
The Co-Created Neighbourhood 共同营建出未来社区



Student Community Plaza 学生社区广场

行动 12：蓄洪空间

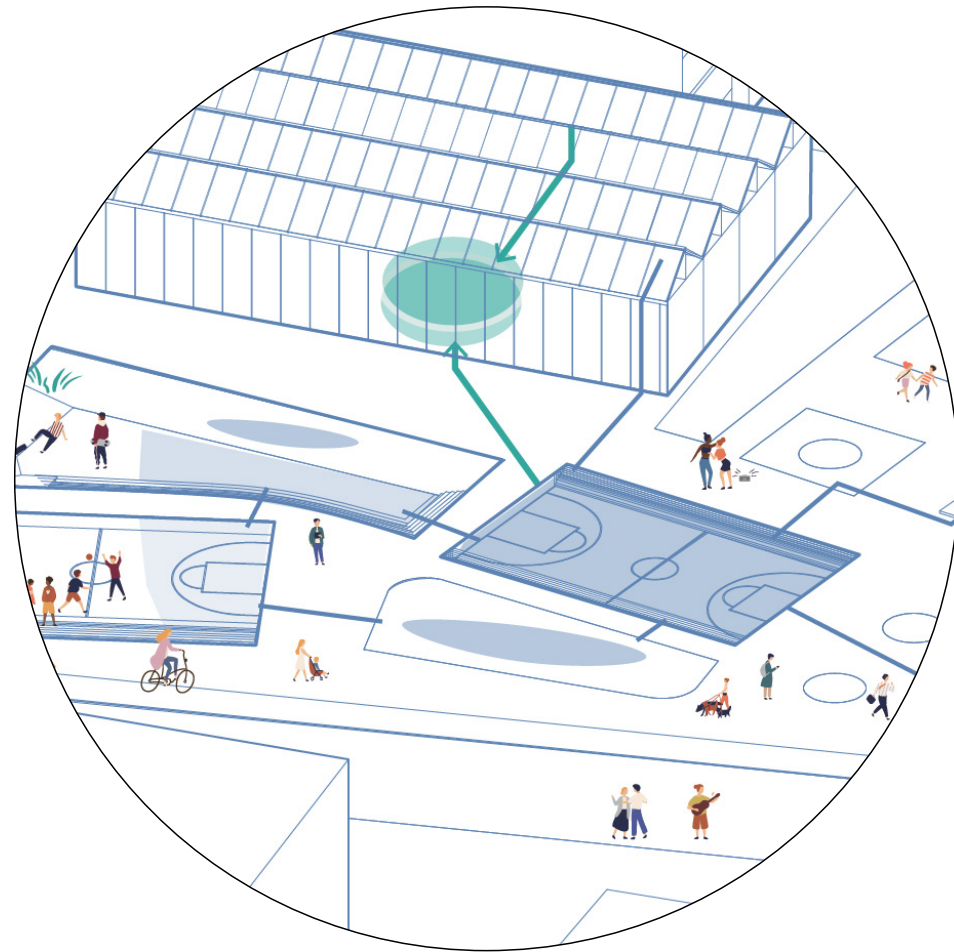
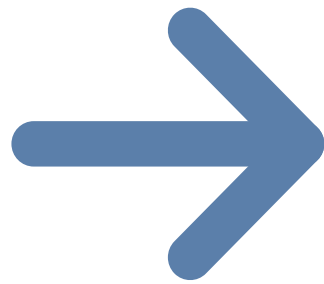
Action



A12
Retention
Zone



Concretize



措施 29：雨水广场

Measure



M29
Rainwater
Square



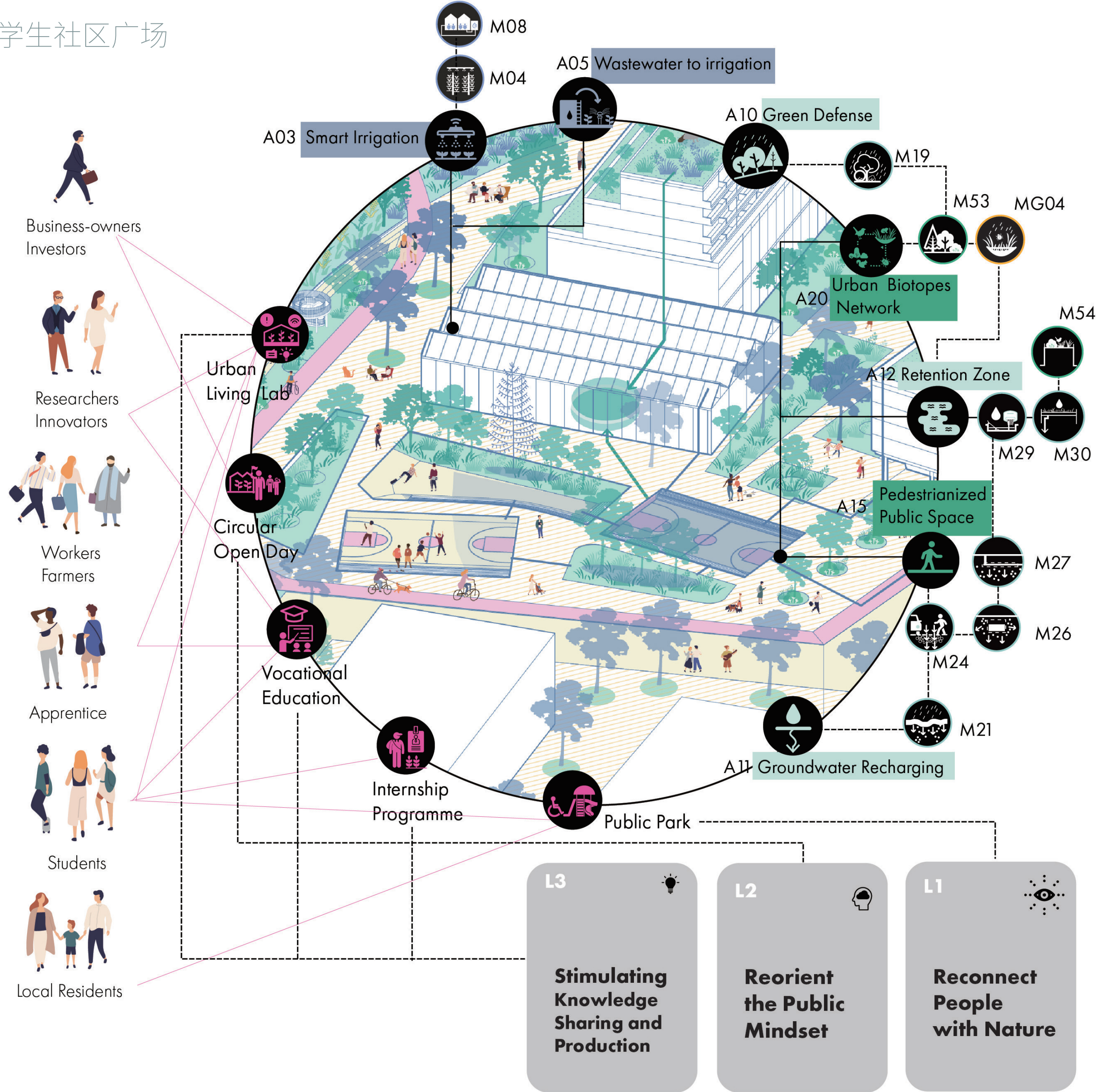
Students



We can take the
action for water,
in our own way!

学生们可以以自己喜欢的方式为水采取行动。

Student Community Plaza 学生社区广场



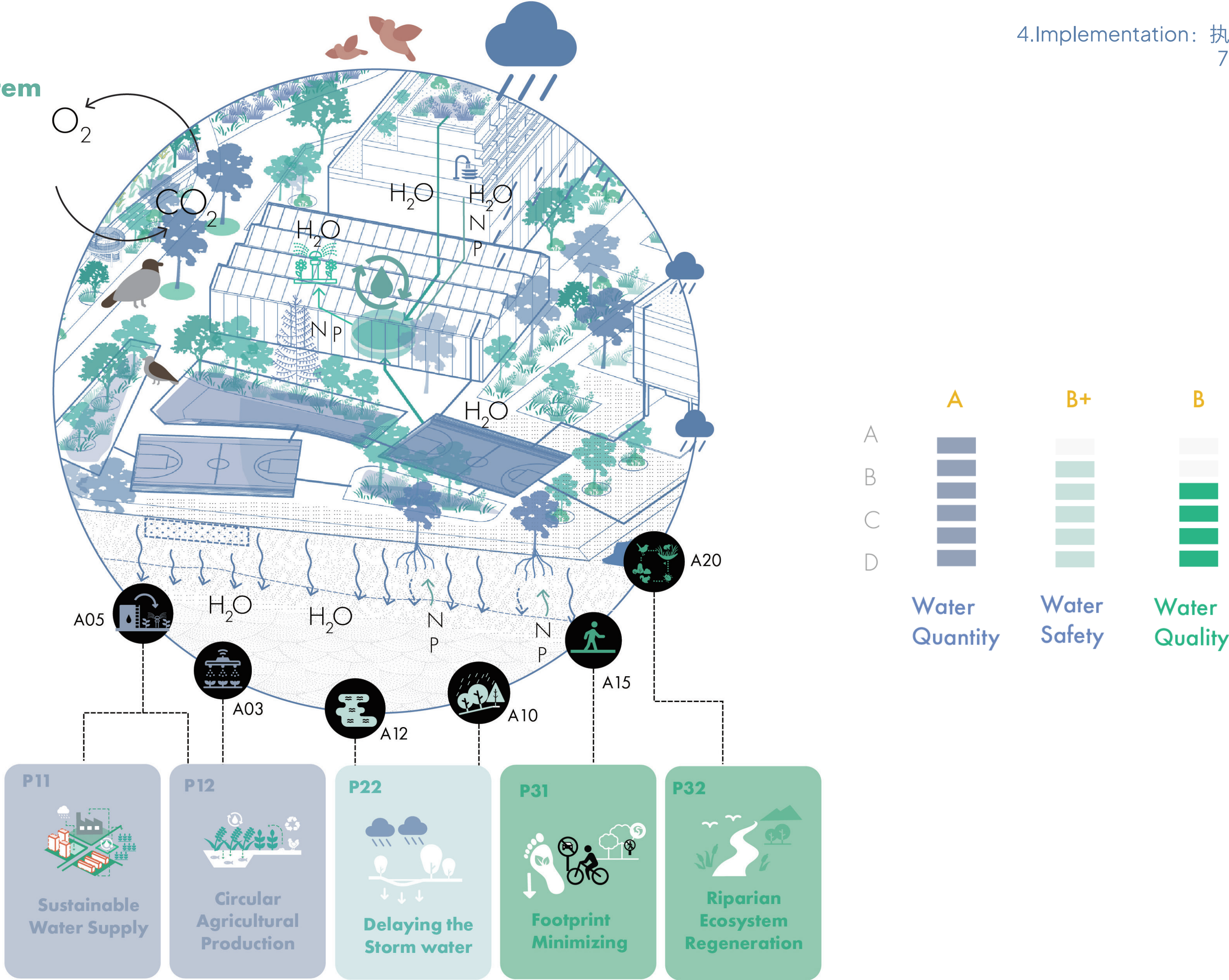
Student Community Plaza 学生社区广场



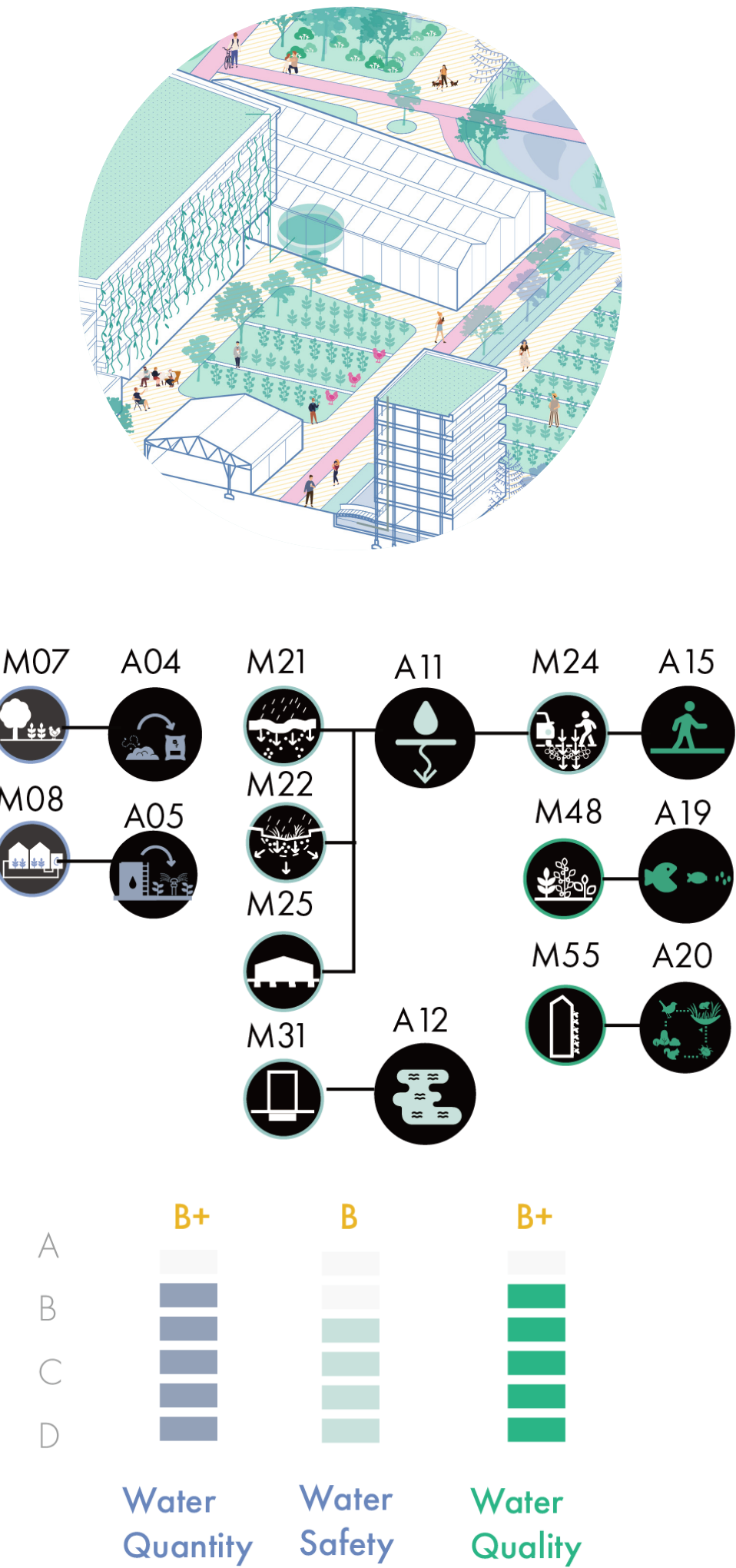
Student Community Plaza 学生社区广场



Contribution to the Water System
对水系统的贡献

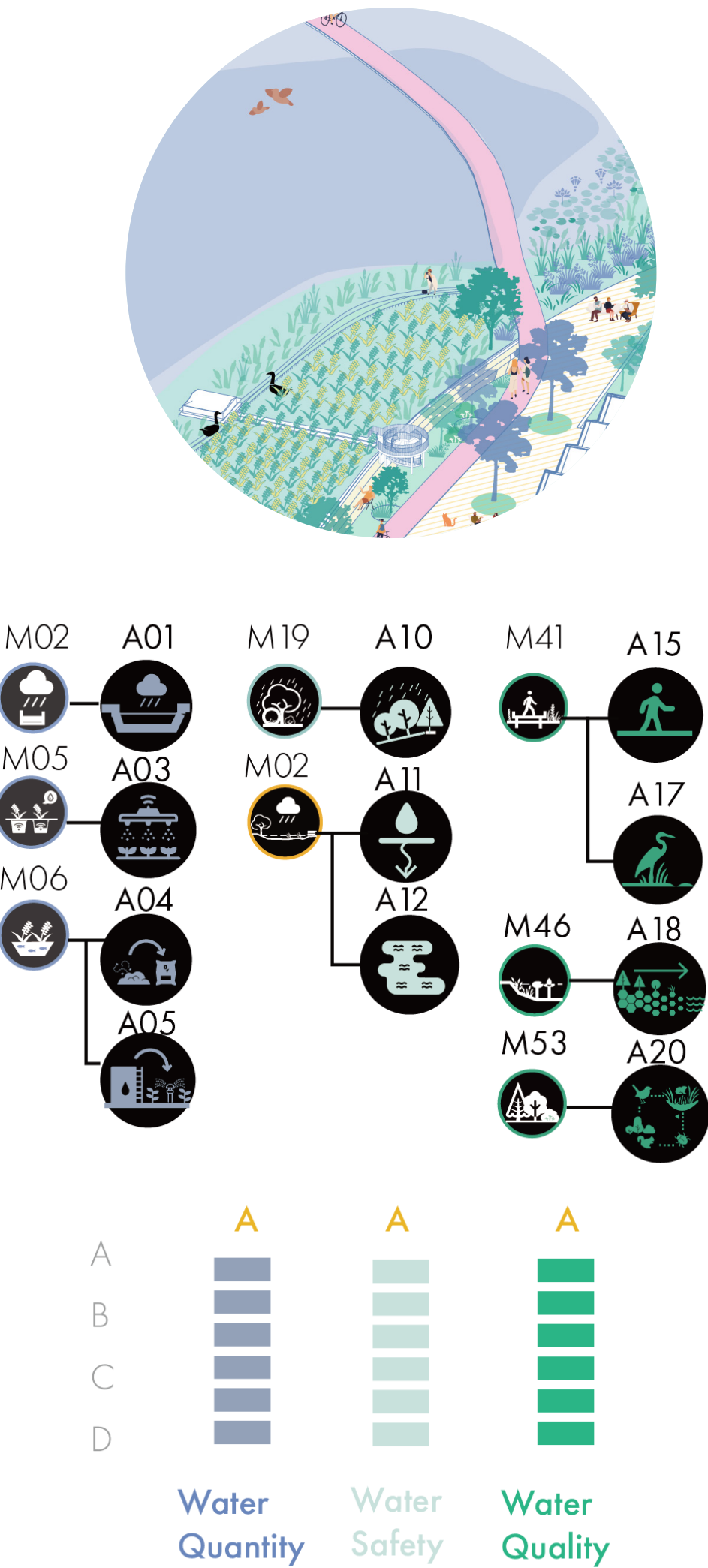


Community Urban Farming Centre
社区农业中心



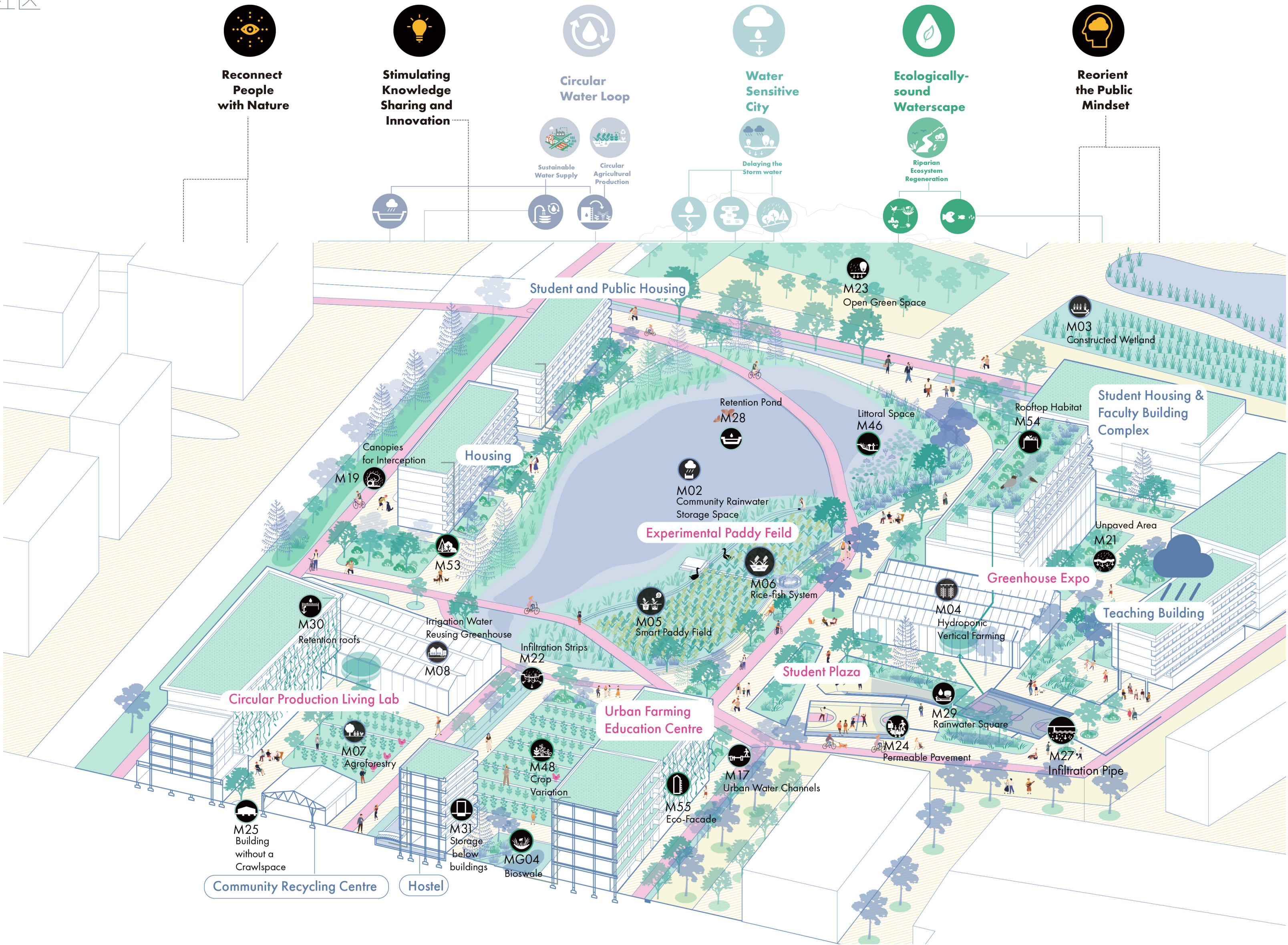
An Experimental Paddy Field Park

实验稻田公园



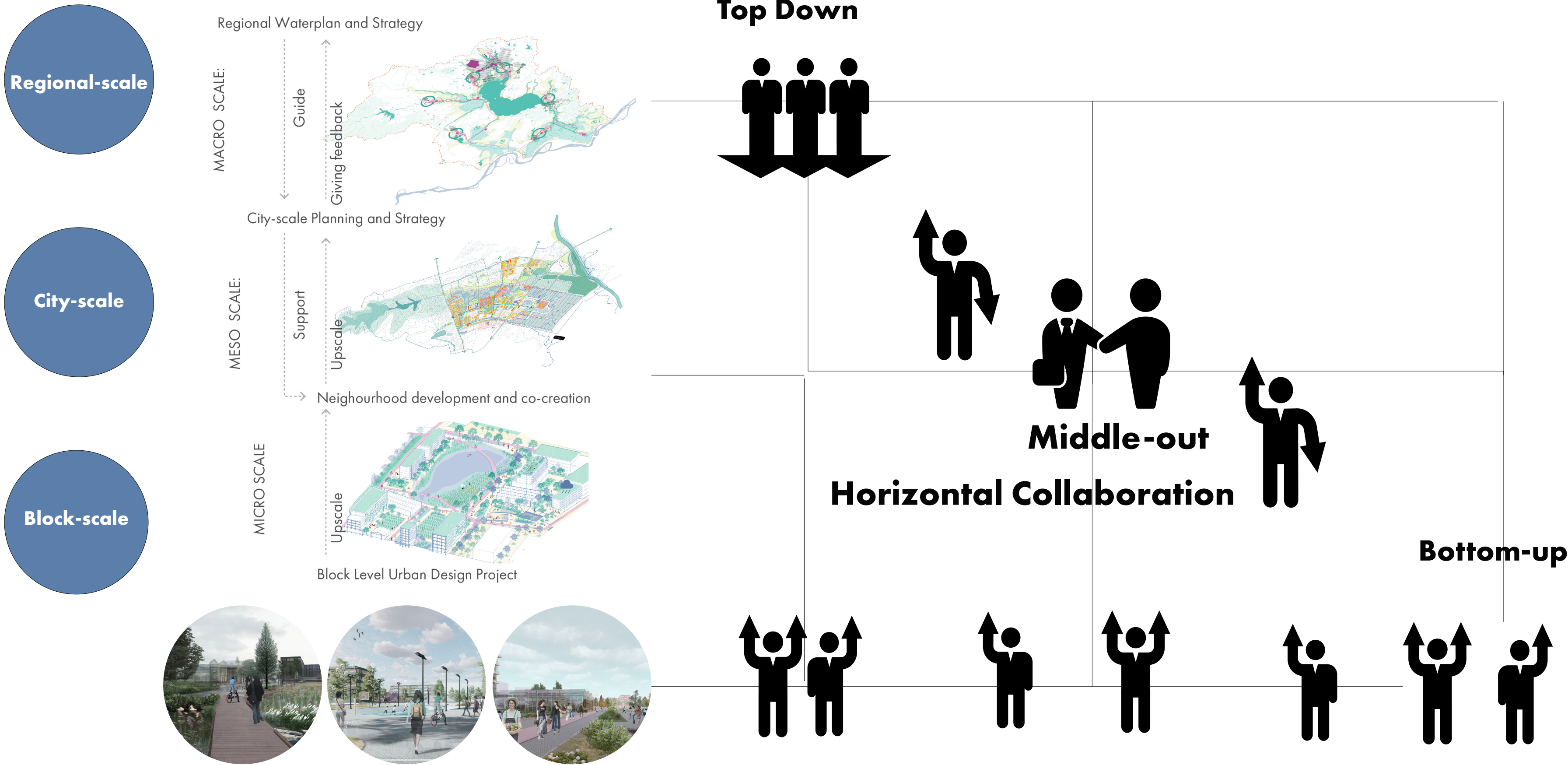
A Water-oriented Community

以水为导向的社区

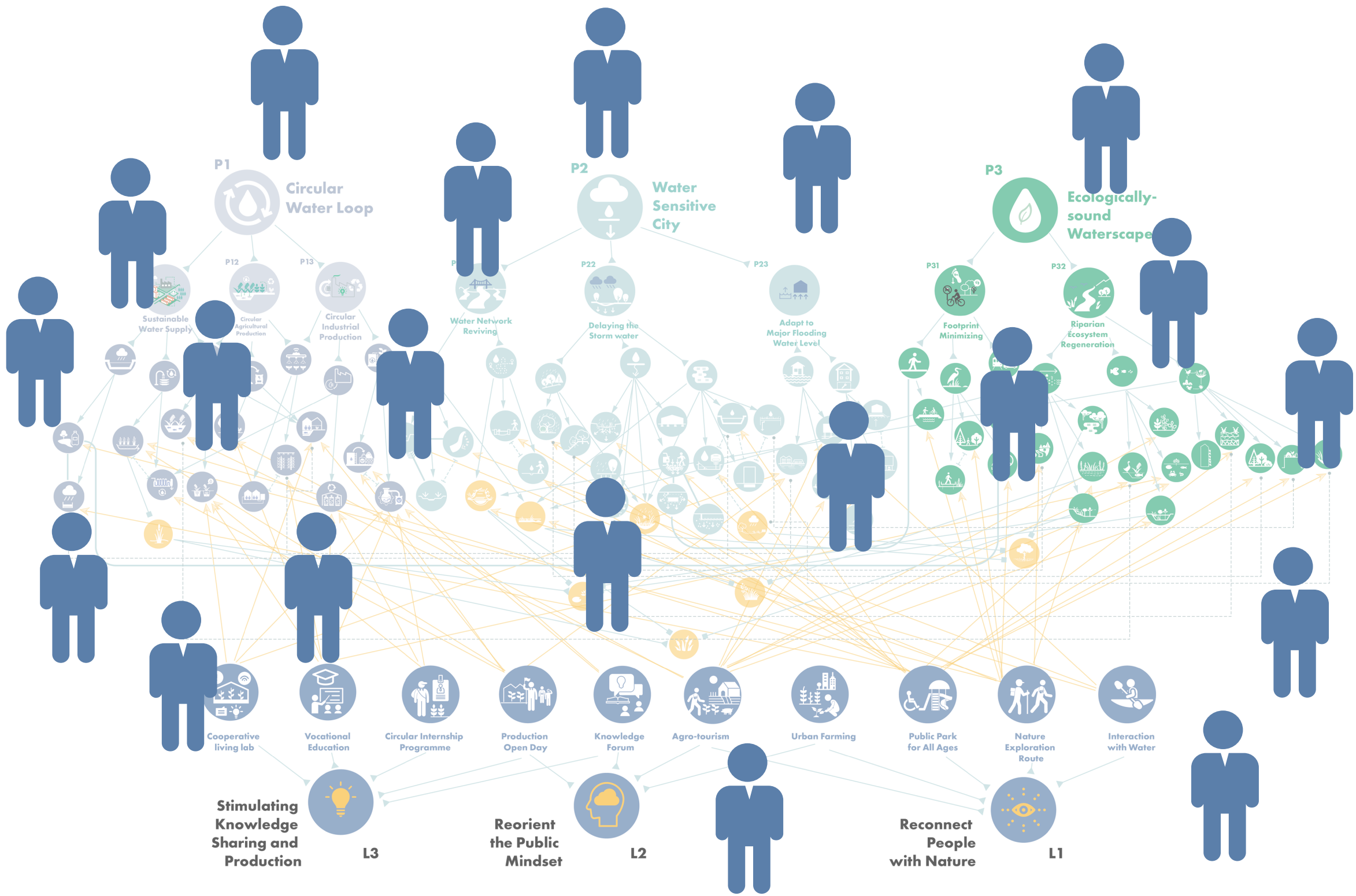
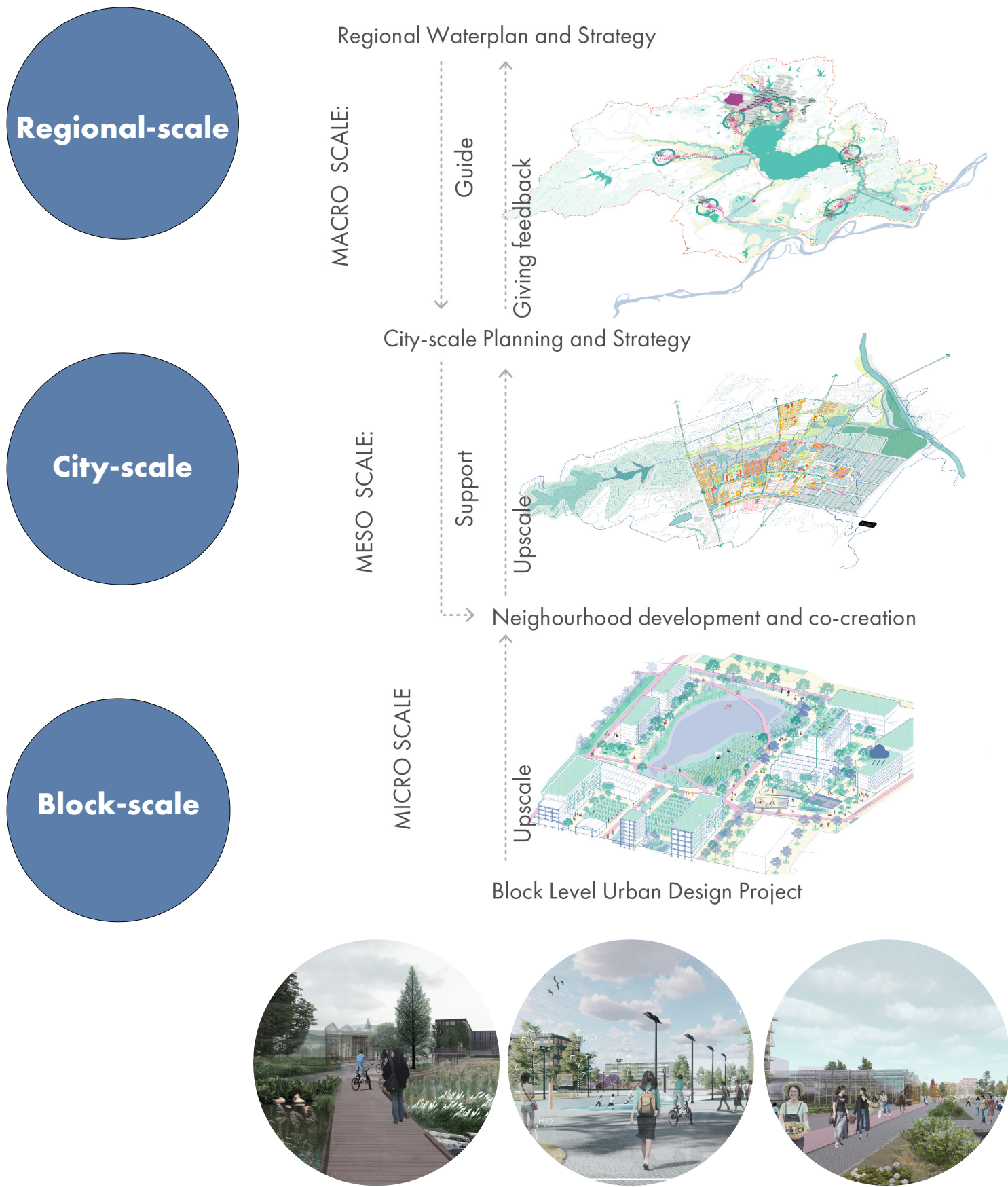


A Reinforcement Process that forms a Positive Feedback Loop in the system

宏观、微观和中观，三个尺度相互强化，在系统内形成正向反馈



The water-oriented urban planning network
一个以水为导向的城市规划关系网络



The Lake Chao Basin 2050

A systemic change and a water-oriented future

给巢湖流域 2050 一个系统性变化和以水为导向的未来

Circular Water Loop

Water Sensitive City

Ecologically Sound Waterscape



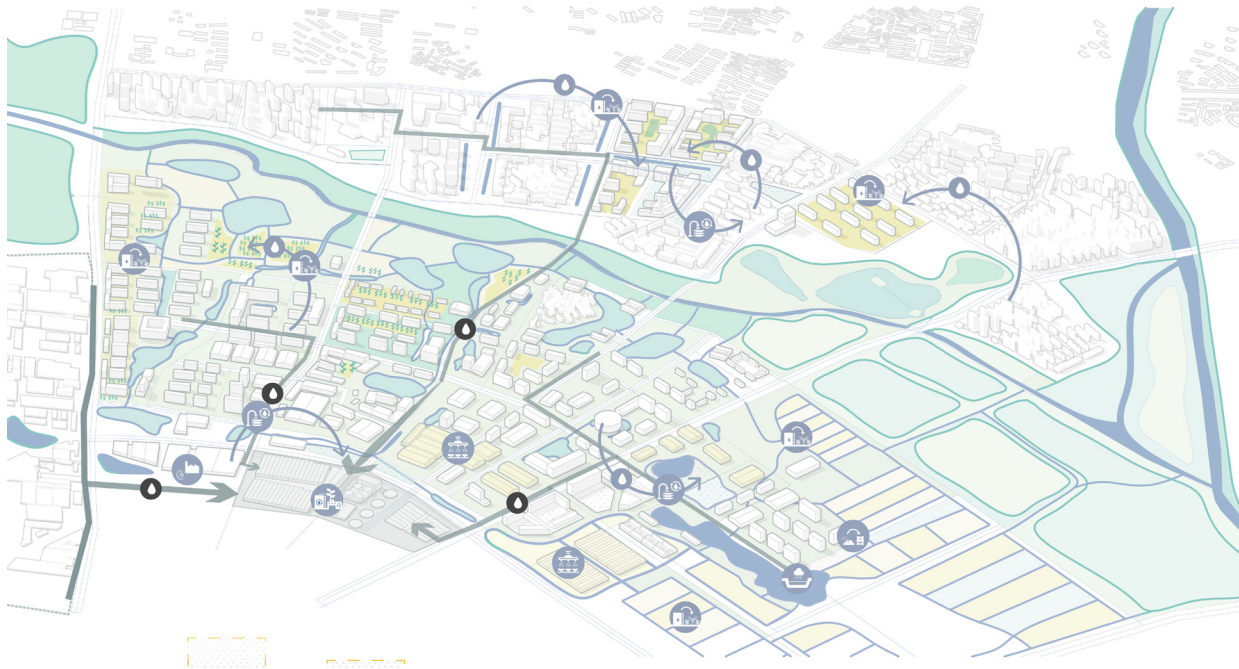
Conclusions

A Water-Oriented Urban Development Pattern

prioritizes the benefits of water in urbanisation and propose a synergetic solution regarding water quantity, water quality and water safety.

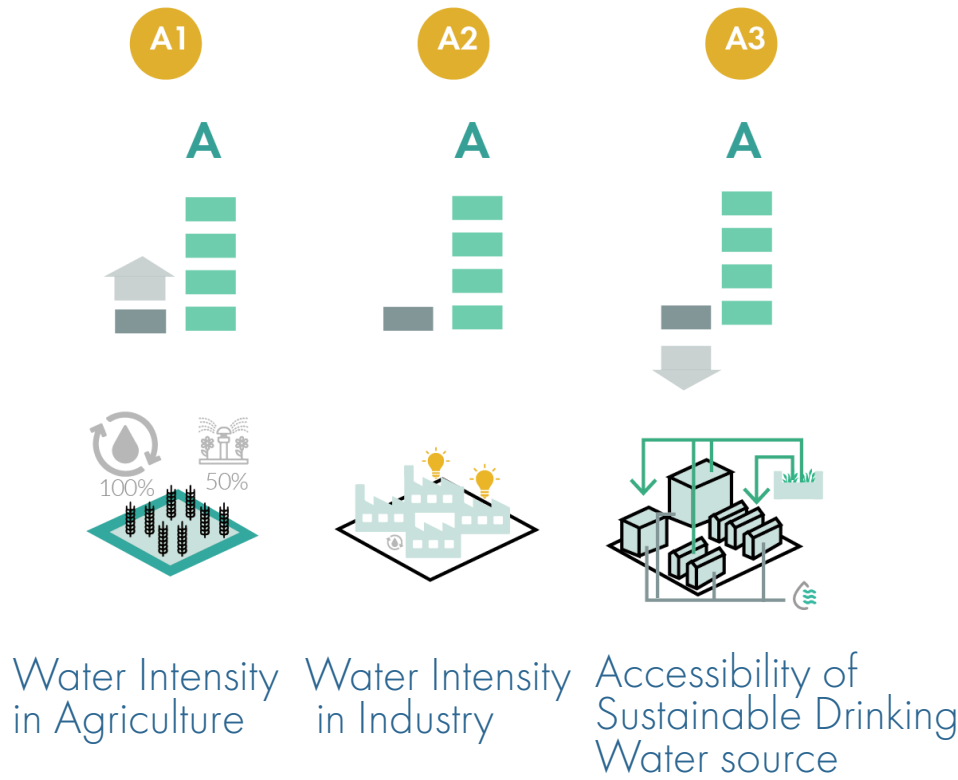
以水为导向的城市发展模式优先考虑水在城市化中的利益，提出了一个综合治理当前水质、水量和水安全问题的解决方案。





A

Water Quantity

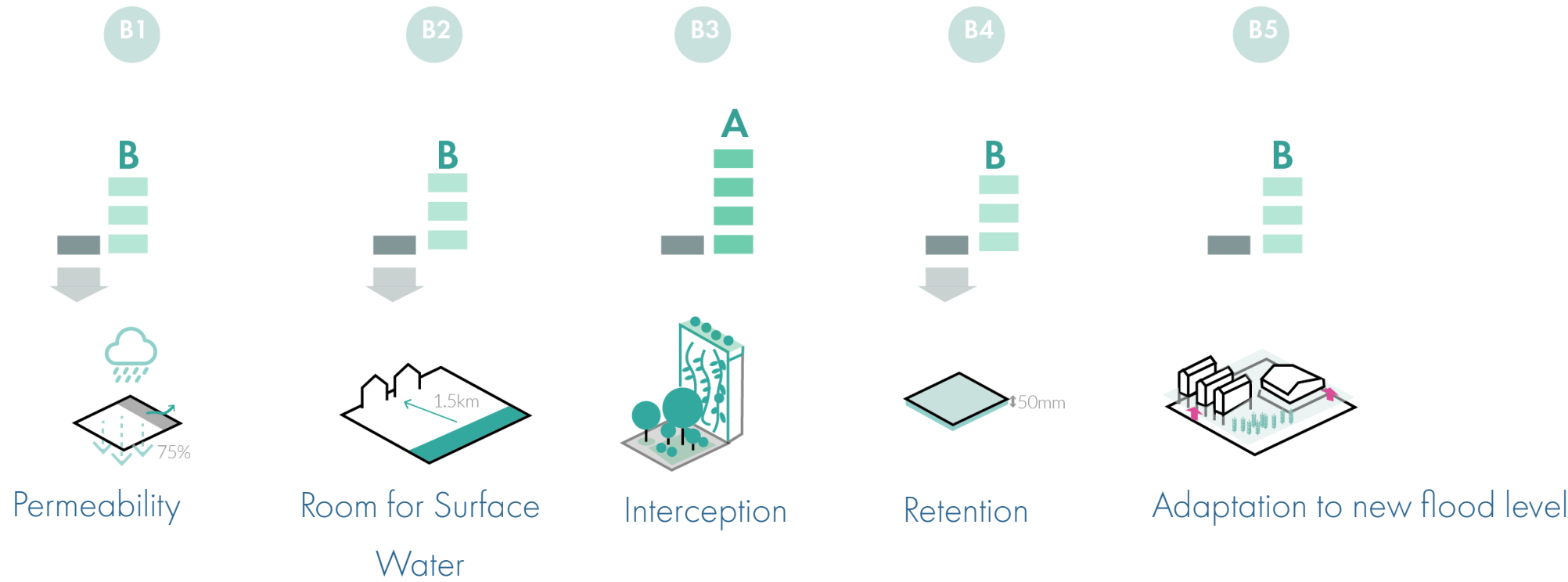


Future Autonomous Situation
Vision Score



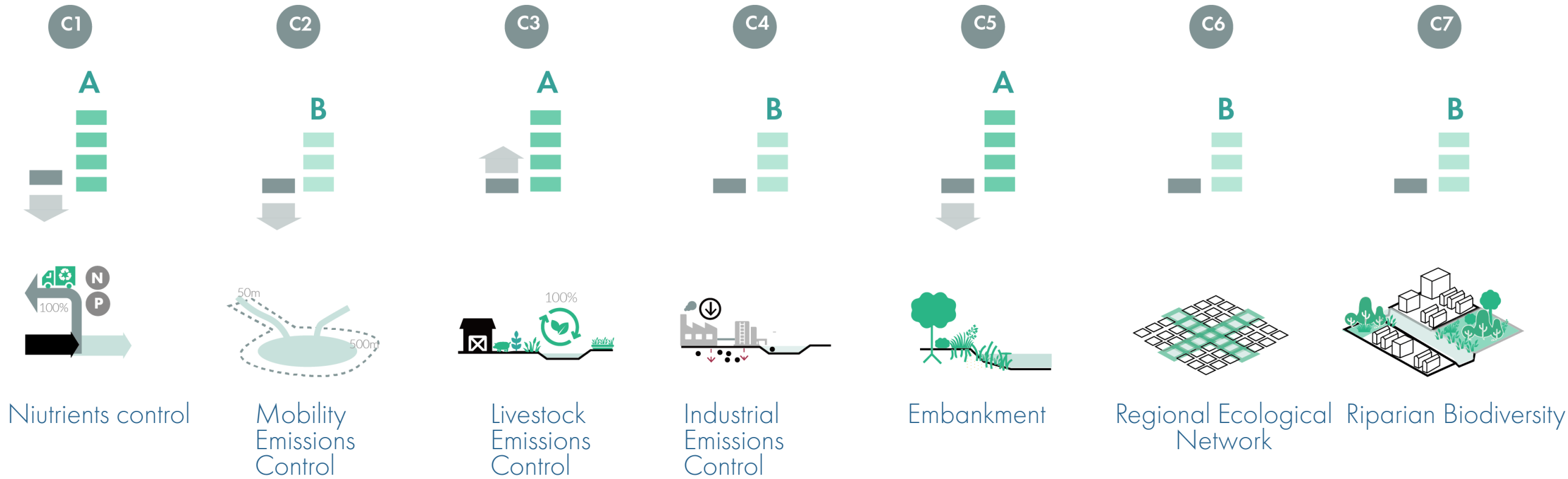
B

Water Safety



B+

Water Quality



Conclusions

A Water-Oriented Urban Development Pattern

emphasizes on **trans-scalar** and **cross-sector** collaboration among stakeholders and stimulates a **systemic change** in future urban development.

以水为导向的城市发展模式强调了跨尺度跨部门之间的协作，能够给未来的城市发展带来系统性的变化。



Multiple choices for different stakeholders to consider.

能够给不同领域的参与者提供多种选择。



Agricultural Sector

- | | |
|------|-------------------------------|
| PG04 | Agro-tourism |
| PG05 | Circular Production Open Day |
| PG06 | Urban Farming |
| PG07 | Circular Knowledge Forum |
| PG08 | Cooperative Living Lab |
| PG09 | Circular Internship Programme |
| PG10 | Vocational Education |
-
- | | |
|-----|-------------------------------------|
| M02 | Community Rainwater Storage Space |
| M03 | Constructed Wetland |
| M04 | Hydroponic Vertical Farming |
| M05 | Smart Paddy Field |
| M06 | Rice-fish System |
| M07 | Agroforestry |
| M08 | Irrigation Water Reusing Greenhouse |
| M09 | Greenhouse Complex |
| M12 | Nutrient Recovery Plant |
| M13 | Algae-based Material Hub |
| M33 | Floating Greenhouse |
| M47 | Ecological Polder Canal |
| M48 | Crop Variation |
| M49 | Integrated Waterfowl Farming |
| M50 | Mixed Aquatic Cultivation |



Industrial Sector

- | | |
|------|-------------------------------|
| PG05 | Circular Production Open Day |
| PG07 | Circular Knowledge Forum |
| PG08 | Cooperative Living Lab |
| PG09 | Circular Internship Programme |
| PG10 | Vocational Education |
-
- | | |
|-----|-----------------------------------|
| M02 | Community Rainwater Storage Space |
| M03 | Constructed Wetland |
| M10 | Grey Water Recycling Plant |
| M11 | Heavy Metal Recycling Plant |
| M12 | Nutrient Recovery Plant |
| M13 | Algae-based Material Hub |
| M25 | Building without a Crawlspace |
| M26 | Infiltration Boxes |
| M27 | Infiltration Pipe |
| M31 | Storage below buildings |
| M55 | Eco-Facade |



Tourism Sector

- | | |
|------|-----------------------------------|
| PG01 | Interaction activities with water |
| PG02 | Public Park for all ages |
| PG03 | Nature exploration route |
| PG04 | Agro-tourism |
| PG05 | Circular Production Open Day |
-
- | | |
|------|--|
| M01 | Protective Centralized Drinking Water Source |
| M05 | Smart Paddy Field |
| M06 | Rice-fish System |
| M07 | Agroforestry |
| M09 | Greenhouse Complex |
| M15 | Lowering Floodplain |
| M16 | New River Arm |
| M17 | Urban Water Channels |
| M23 | Open Green Space |
| M32 | Floating Housing |
| M33 | Floating Greenhouse |
| M34 | Buildings on stilts/(partly) in water |
| M38 | Slow Traffic Bridge |
| M39 | Green Waterbus |
| M40 | Wild Trail |
| M41 | Wood Deck |
| M43 | River Terrace Green Belt |
| M44 | Swamp Forest |
| M45 | Wet Meadow |
| MG02 | Floodable Wetland |



Knowledge Institutions

- | | |
|------|-------------------------------|
| PG06 | Urban Farming |
| PG07 | Circular Knowledge Forum |
| PG08 | Cooperative Living Lab |
| PG09 | Circular Internship Programme |
| PG10 | Vocational Education |
-
- | | |
|------|------------------------------|
| M04 | Hydroponic Vertical Farming |
| M05 | Smart Paddy Field |
| M06 | Rice-fish System |
| M07 | Agroforestry |
| M11 | Heavy Metal Recycling Plant |
| M12 | Nutrient Recovery Plant |
| M13 | Algae-based Material Hub |
| M33 | Floating Greenhouse |
| M48 | Crop Variation |
| M49 | Integrated Waterfowl Farming |
| M50 | Mixed Aquatic Cultivation |
| M55 | Eco-Facade |
| MG01 | Helophyte |



Local Residents

- | | |
|------|-----------------------------------|
| PG01 | Interaction activities with water |
| PG02 | Public Park for all ages |
| PG06 | Urban Farming |
| PG08 | Cooperative Living Lab |
-
- | | |
|-----|-----------------------------------|
| M02 | Community Rainwater Storage Space |
| M03 | Constructed Wetland |
| M10 | Grey Water Recycling Plant |
| M17 | Urban Water Channels |
| M19 | Canopies for Interception |
| M21 | Unpaved Area |
| M22 | Infiltration Strips |
| M23 | Open Green Space |
| M28 | Retention Pond |
| M29 | Rainwater Square/Sports field |
| M30 | Retention roofs |
| M31 | Storage below buildings |
| M35 | Flexible Ground Floor |
| M37 | Sealable Buildings |
| M38 | Slow Traffic Bridge |
| M39 | Green Waterbus |
| M52 | Wet Biotope |
| M54 | Rooftop Habitat |
| M55 | Eco-Facade |

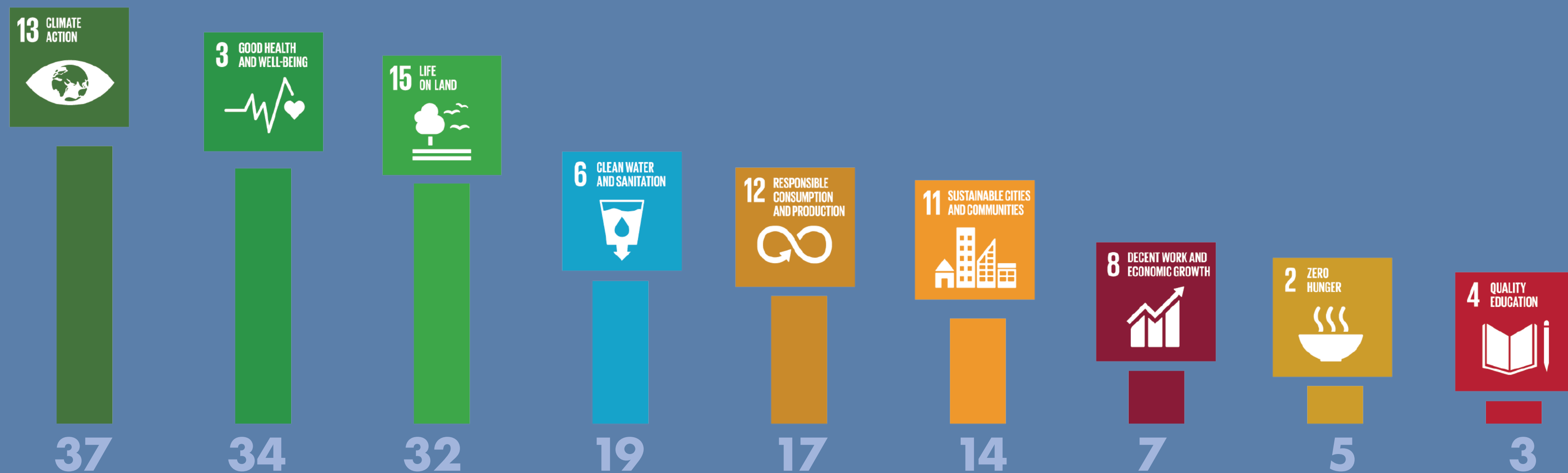
Conclusions

Conclusion: 结论
83/ 84

A Water-Oriented Urban Development Pattern

offers **transferable** interventions to other locations and **facilitates** sustainable development.

以水为导向的城市发展模式也给其他城市的可持续发展提供了可迁移的策略。





The Patternbook

Thank you!
84/ 84



Thank you for
your listening!
Q&A?

感谢聆听！

请扫描二维码阅读
《模式手册：以水为导向的城市发展》