Almost all Chinese cities suffered the storm water inundation due to the monsoon climate, hundreds of people dies on street annually.

How to solve the problem in a wise way?
群力新区启动区控制性详细规划
Inspired by the pond-and-dyke system
Qunli Stormwater Park Ha’erbin, 33 ha
After: 2013, 3 years after the stormwater park was built
10% green sponge can solve the urban inundation problem
Landscape as living system to cleanse polluted water

75% of the nation’s surface water is polluted, 64% of cities’ underground water is polluted, 1/3 of the national population are under the threat of drinking water pollution, what can we do?
Shanghai Houtan Park, 上海后滩
10 hectares, 1700 m long, producing 2400 cubic meter of water per day
Aeriation and filtration processes
Aeriation
Created a life supporting system for biodiversity and low maintenance
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
The regional strategy: Planning an ecological infrastructure, transforming gray into green integrating flood control, storm water management, habitats and recreational uses,

The regional plan of an ecological infrastructure

Computer rendering of the Meishe River and Fengxiang Park

Urban: existing channel

Urban: existing lake shore

Suburban: existing undeveloped

The regional strategy: Planning an ecological infrastructure, transforming gray into green integrating flood control, storm water management, habitats and recreational uses,
The Site Plan
The constructed wetland in Fengxiang Park: at the foreground of the images, the terraces of subsurface flow wetland are densely covered with various plants. The smell of the sewage is sealed underneath.
The constructed wetland in Fengxiang Park showing the details of the subsurface flow terraced wetland.
Post operational evaluation: Overall Removal effect of pollutant indicators in wetlands
Nature based solution to Solutions Five 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
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

2004.2
上游 中游 下游

森林灌渠 采砂场和被渠化河道 湿地及物质文化遗存

现状

改造

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

Before

The Sanlihe River, 11 Kilometers long, Qian’an City, Hebei Province
#7 “Green sponge” to remediate the soil contamination

60% of the urban soil is contaminated

Qiaoyuan Park, Tianjin City
Acid Alkaline

改变PH值

Different PH Cleans Different Pollutants

Deep Water Pond

Shallow Water Pond

Dry Pond

Inverted Pond

Different Pond Depth Allows Different Species

Pond Plan Diagram

Adaptive Vegetation Species

Different PH Levels

Acid

Alkaline

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

<table>
<thead>
<tr>
<th>Location</th>
<th>pH Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wet bubbles of Qiaoyuan Park</td>
<td>7.4</td>
</tr>
<tr>
<td>Lake of Qiaoyuan Park</td>
<td>8.5</td>
</tr>
<tr>
<td>Lake of Hedong Park</td>
<td>9.2</td>
</tr>
</tbody>
</table>

4 土壤 PH 值变化

- 2011
- 2012

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

6 2011-2012 对每个水泡测定的 PH 值的变化结果
- 碱性明显下降

7 恢复后的生境，生物多样性逐年提高
#9 Green Solutions to Transform A City

Liupanhsui City, Guizhou, 贵州六盘水
The working wetland attracts thousands of visitors every day from the city and the far-reaching region. Tourists and locals alike are enjoying the autumn weather in this view of the richly textured and colored tapestry.
#10 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?
The vegetable garden: productive ecosystems that provide fresh fruits and vegetables for the kitchen
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!