A photograph of a park featuring a wooden walkway with railings that winds around a pond. The pond is filled with numerous green lily pads and a few pink flowers. In the background, there are lush green trees and a modern city skyline with tall buildings. Two people are walking on the bridge in the distance, one holding a pink umbrella.

# Mainstreaming Nature-based solutions in Urban China

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# URBAN NBS SURVEY IN CHINA

- 3 main research questions
- Survey of 4 types of cities in China

- What are the key characteristics of urban NBS in China?

- Whether and how existing NBS in Chinese cities contribute to biodiversity, while addressing various societal challenges, especially in climate mitigation and adaptation?

- What are the types of innovation that drive the uptake of NBS in different urban contexts?

1. Pilot cities for climate and sustainability actions, such as: Beijing, Shanghai, Shenzhen, Tianjin, Ningbo, etc.

2. Cities listed in Chinese Cities Development Reports from 2018 to 2021 as representative cases for urban ecological development, such as Changde, Yangzhou, Qinhuangdao, etc.

3. Cities located in biodiversity hotspots or areas where extremely important ecosystems are located, such as Zhanjiang, Kunming, Nanning, etc.

4. Resource-based cities that are facing various environmental problems, such as Datong, Daqing, Hegang, etc.



- 24 cases and counting
- field research in 5 cities



# 01

NBS is a new concept, but the practice of working with nature has long existed in urban China, though engineering solutions have dominated the responses towards urban challenges in the past decades.



- *Local people plant reeds to accelerate desalination and to consolidate the mudflats for subsequent crop cultivation. (Yongzheng Chongming County Chorography, 1727. Chapter 4, Custom)*

- *In the 1970s, local communes planted reeds for riverbank protection. (Chongming County Chorography Compilation Committee, 1989)*





## 02

Urban NBS in China are mostly state-led and policy-driven, especially related to sponge city programme (SCP). For these projects, environmental and economic impacts are often highlighted, whilst social impacts, especially for those marginal groups, are often not considered.

# 03

Though involving concerns on the environment, urban planning and NBS projects led by the government tend to prioritize 'green' rather than 'eco', producing urban green spaces with limited to no, and even negative, ecological impacts.



22 Oct 2021, Cicheng



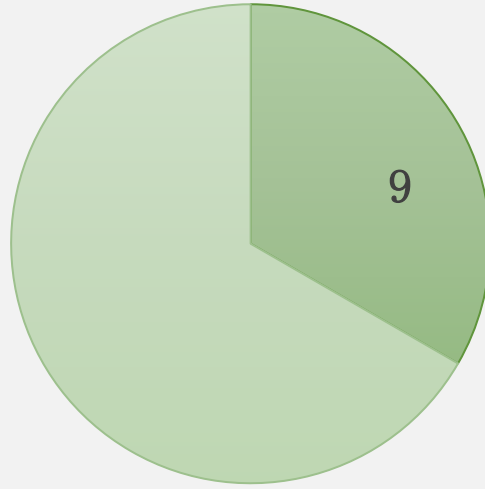
20 Jun 2022, Xiamen

# 04

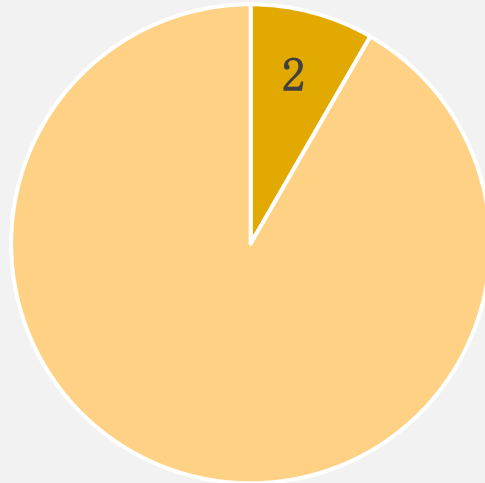
Recently, grassroots initiatives like community gardens are booming, driven by civil society organizations (e.g., NGOs, charities) and local communities. Most of the projects receive recognition or support from the local governments.

# 05

Information about the monitoring and maintenance of existing NBS projects in China is commonly lacking.



9 out of 24 NBS cases have **monitoring** information



Only 2 NBS cases have **maintenance budget** information



Xiao River National Wetland Park in Xiaoyi



Ecological Restoration of Land and Sea in Beihai





## For Urban NBS Mainstreaming in China...

- Value diversity
- Facilitate community-based actions
- Generate partnerships
- Improve data and monitoring, emphasize maintenance

A photograph of a pond with numerous lily pads. The water is dark and has many small, concentric ripples from raindrops. The lily pads are bright green and covered in water droplets. Some small yellow flowers are visible among the leaves.

# Thank you!

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