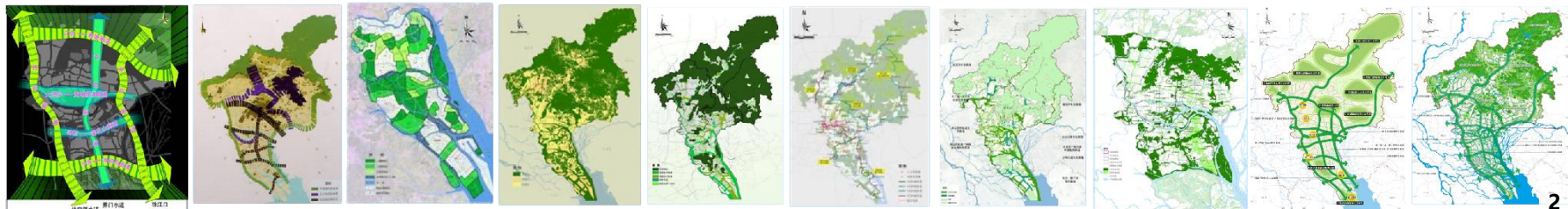
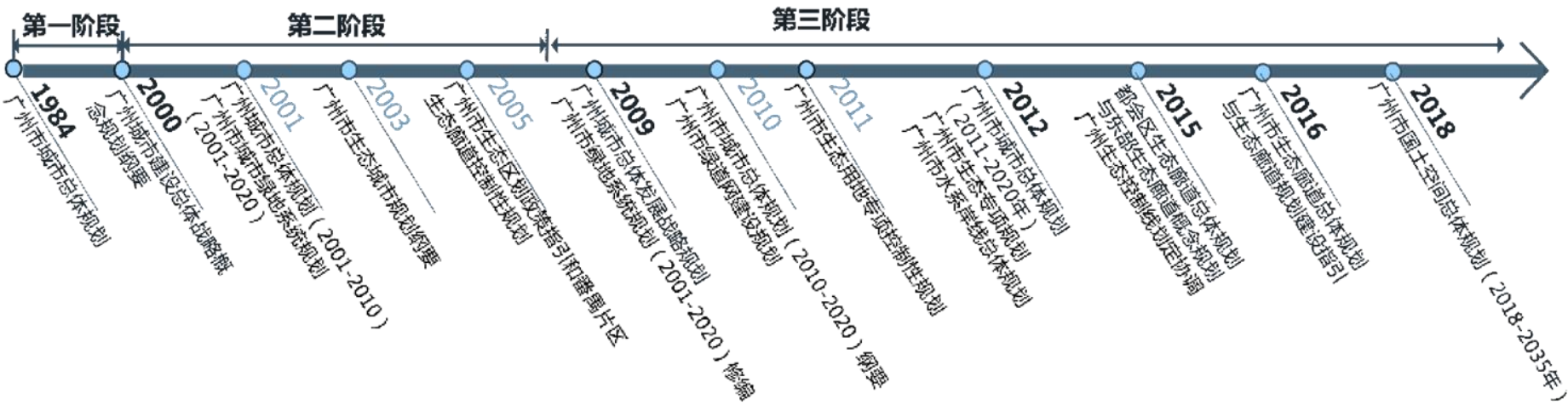


Guangzhou's Green Development and Planning Practice as a Megacity

Guangzhou Municipal Planning and Natural Resources Bureau
April, 2023



Eco-space Protection is a Long-term Work in Guangzhou



Promote Green Buildings, Reduce Energy Consumption



Promote Green Transportation

Investing **\$2 billion** in the electrification of public transportation, with **14,000** new energy buses.

In 2019, Guangzhou's electric buses won the **C40 Green Technology Award**.



Promote Sponge City Construction

Guangzhou is a demonstration city for **China's sponge city construction**.
With more than 50 demonstration construction projects or areas.



Haizhu Wetland: Create a harmonious community between human and nature

One of the top ten global projects for the 12th Dubai International Sustainable Development Best Practice Award



Restored Biodiversity

- Bird species increased from 40 to over 180
- Insect species increased from 66 to 285

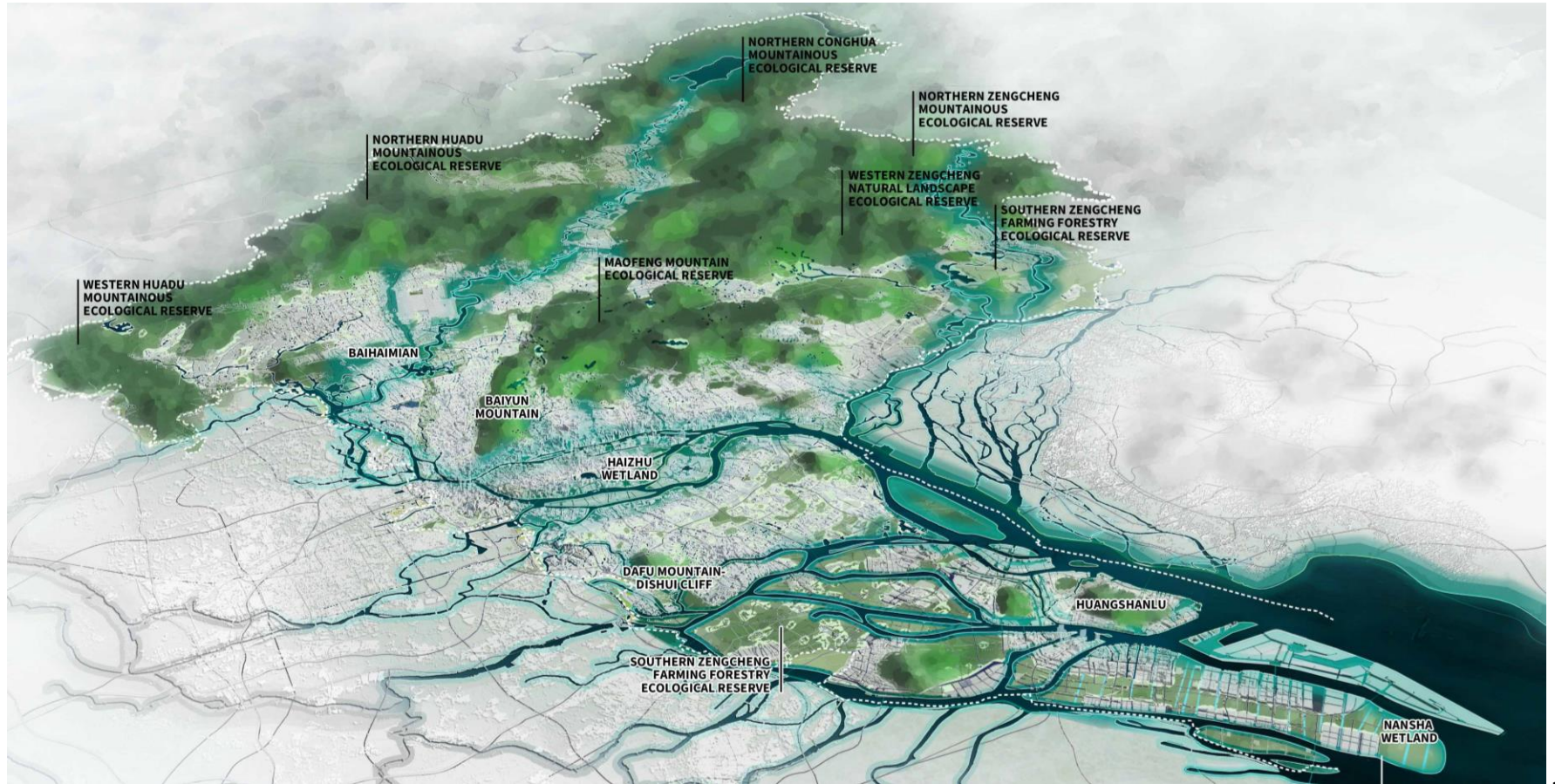




Bird Observation Platform in Haizhu Wetland

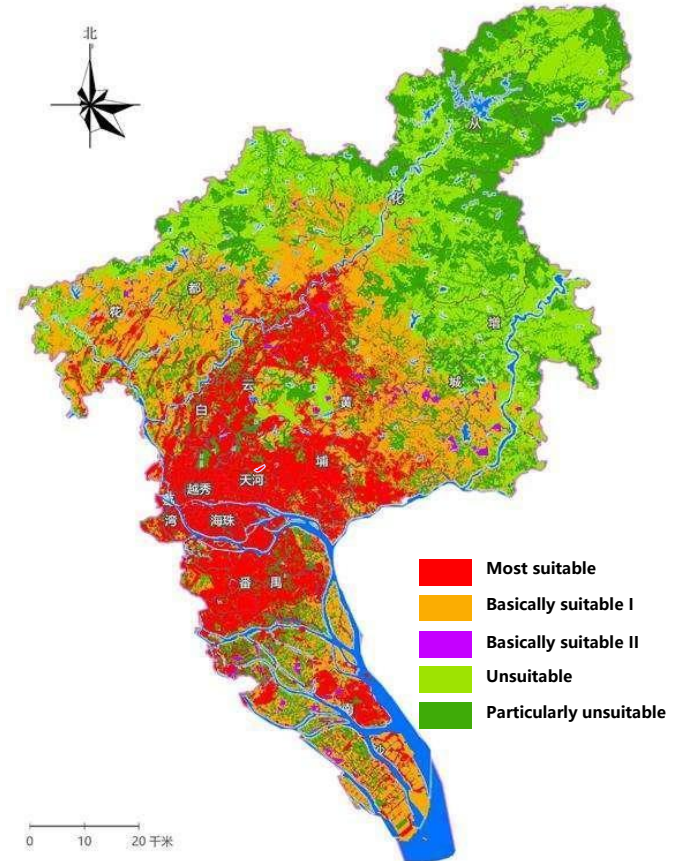
Ecological Protection in 2035 Master Plan

Guangzhou's Natural Cooling Sources



Scientific Ecological Evaluation to Identify the Development Bottom line

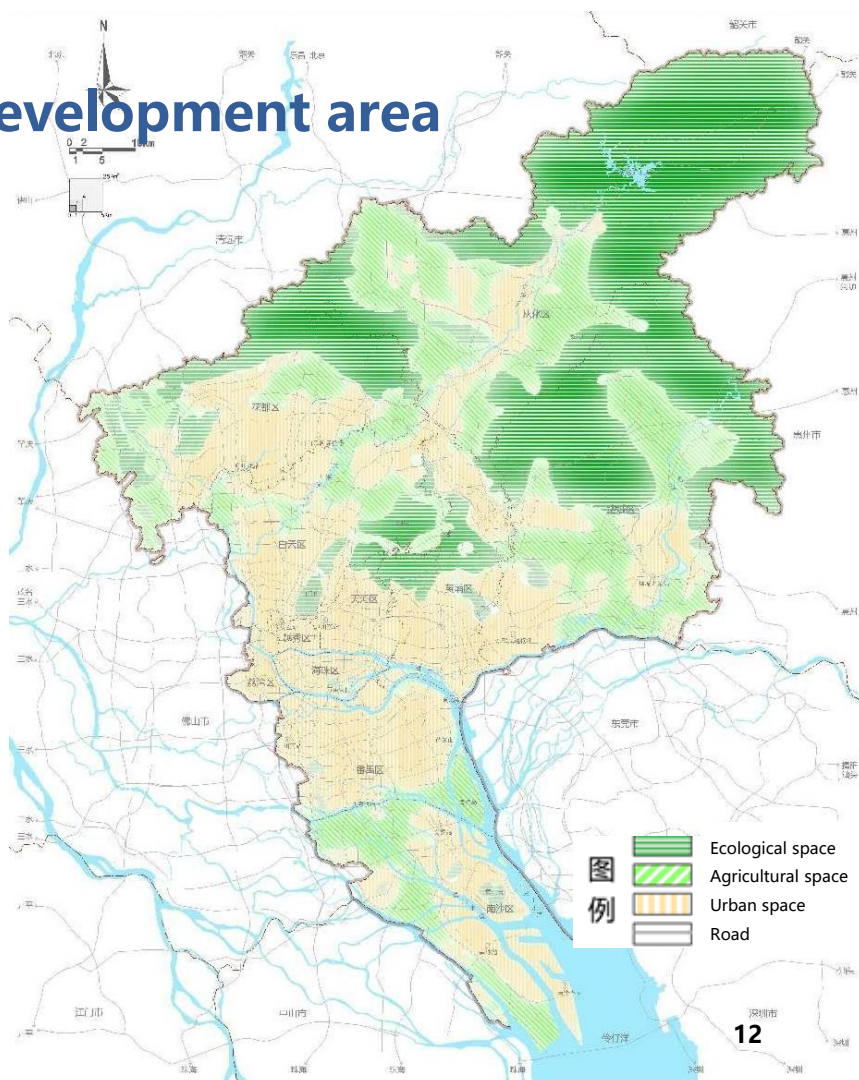
- Evaluating the **resources and environment carrying capacity**
- Evaluating the land developing suitability



Evaluation Result for land developing

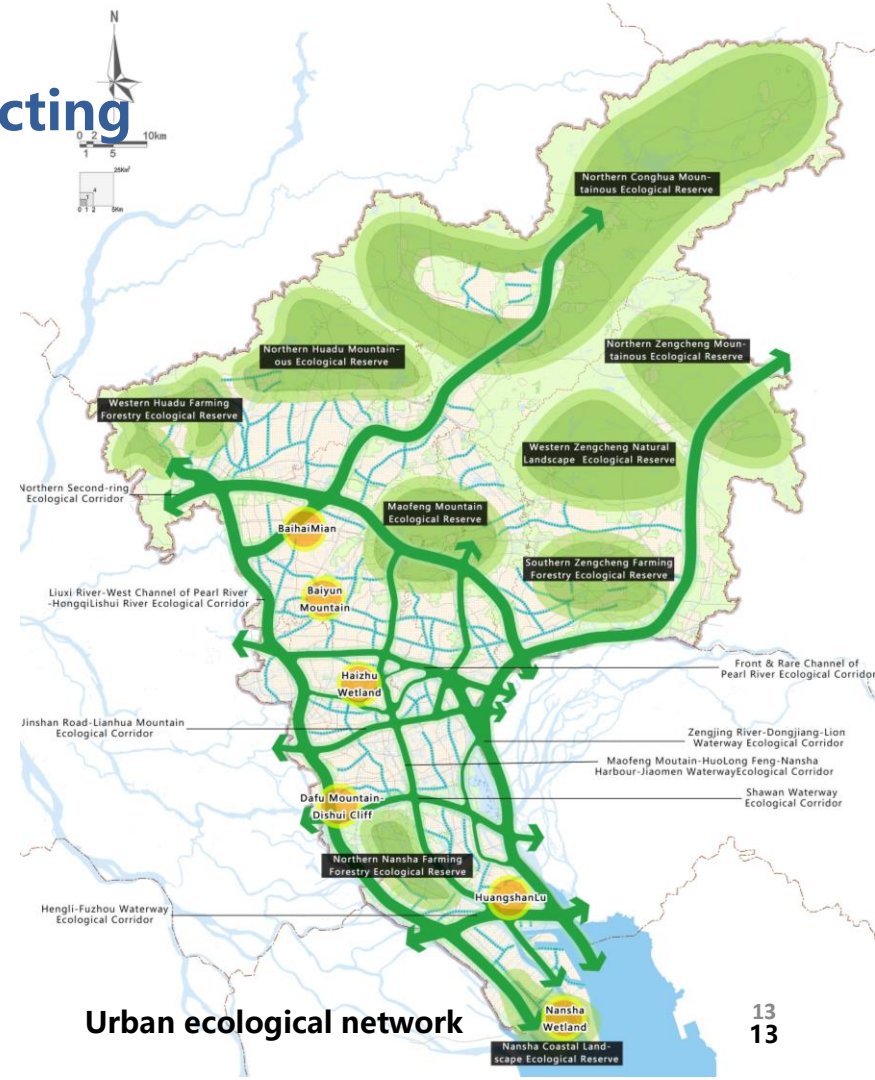
Clarify the Nature Protection and Development area

- Ecological and agricultural space
 $\geq 2/3$
- Urban space
 $\leq 1/3$



Build an Ecological Network Connecting Mountains, Rivers, and Seas

- ❑ 9 important ecological areas
- ❑ 5000km ecological corridors
- ❑ 6 ecological green cores



Delimit Ecological Red Lines

Strictly protect **Ecologically Vulnerable Areas**, incorporate them into the ecological conservation red line.



Establish a Nature Reserve System



5

Nature Reserves



70

Nature Parks



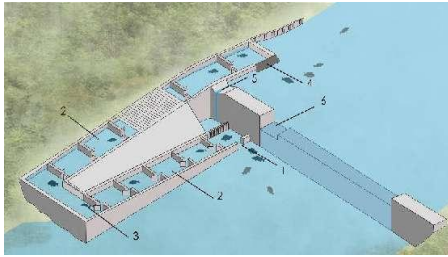
Protect bird flyways

Protect 15 bird habitats and 3 bird migration paths

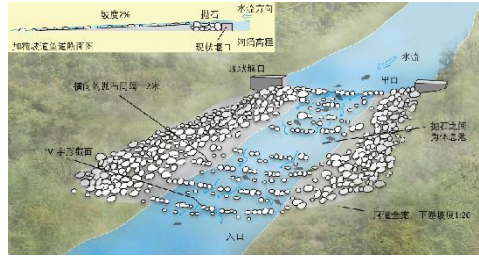


Build Fishways

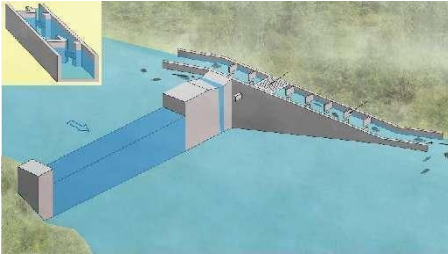
Build 16 fishways to restore the fish migration ecosystem



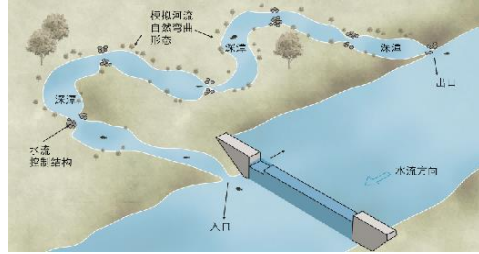
Pool-type fishway



Rock ramp fishway



Trap and transport fishways



Bypass fishway



Fishways

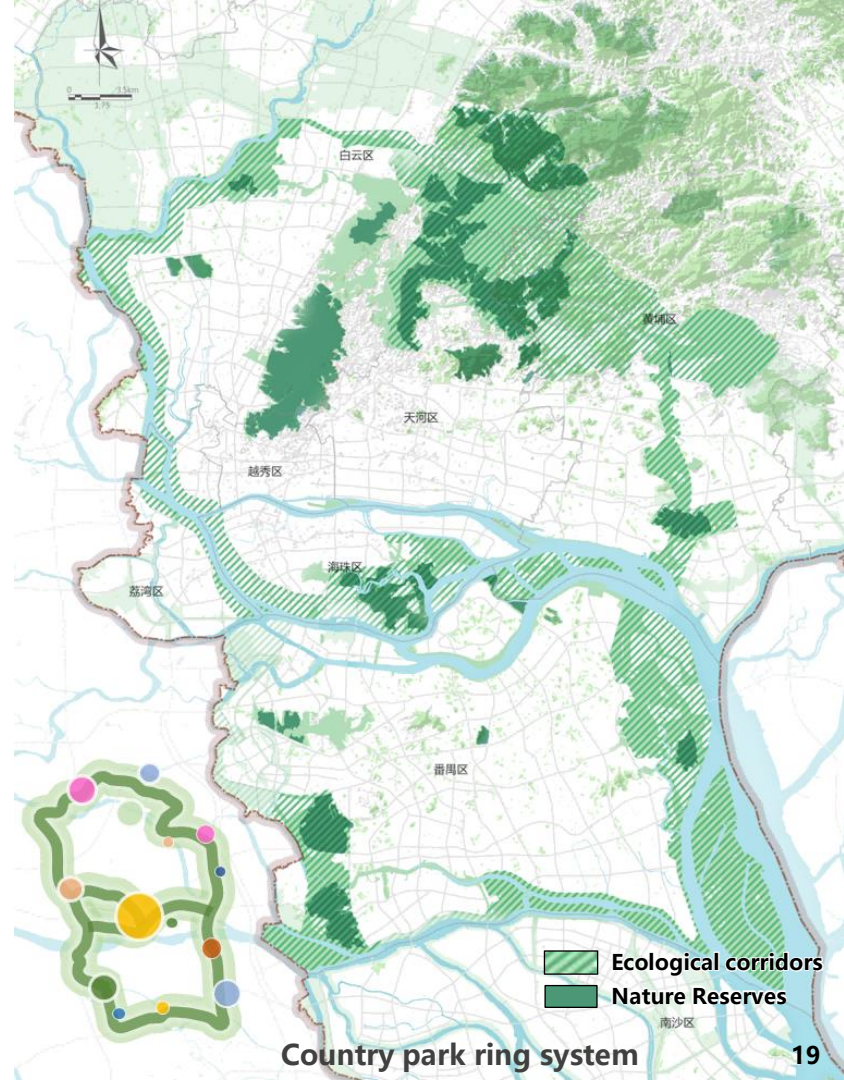
Improve Parks and Gardens, Enrich Ecological Products

- Increase **park service coverage**
- Build **urban parks**
- Improve **forest parks**

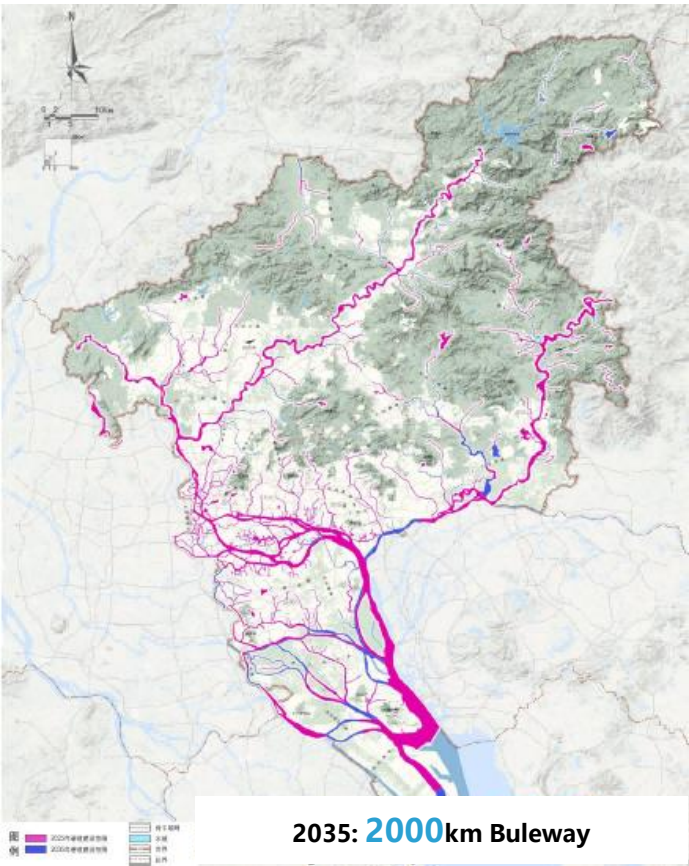
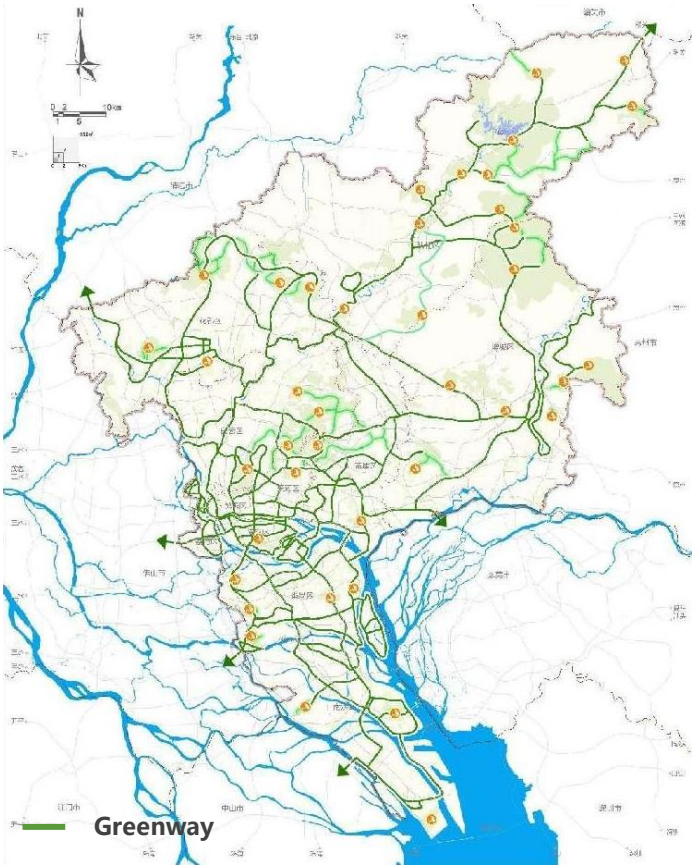


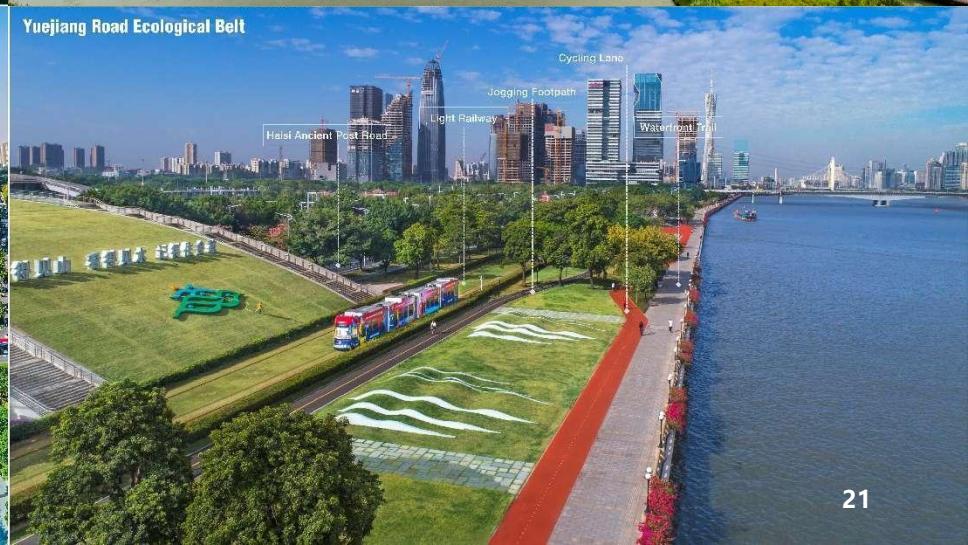
City Green Ring Connecting Countryside and Urban Area

- ❑ 180km long and 1km average wide
- ❑ Connecting 16 suburb parks, form a country park ring system
- ❑ Provide residents with green access to country parks



Build a 4,000km Greenway and a 2,000km Blueway





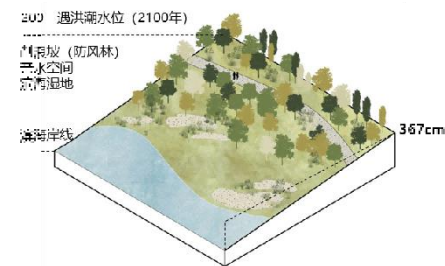
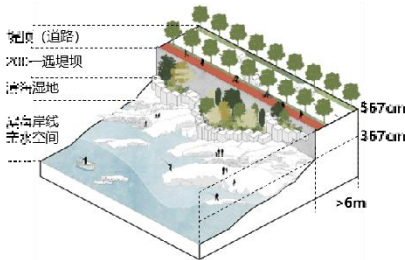
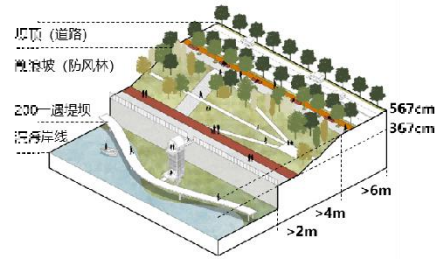
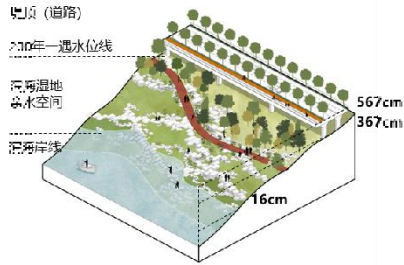
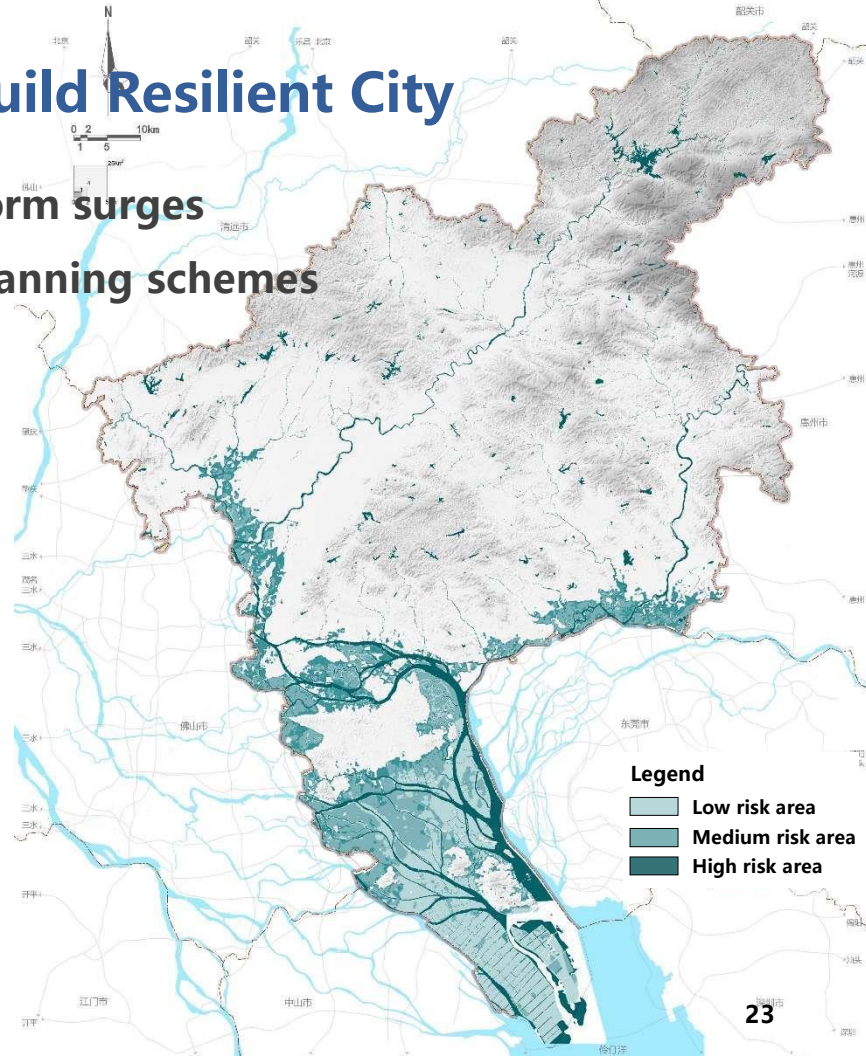
2000km blueway, provide diverse waterfront recreational spaces



Yadong River Blueway, Conghua

Adapt to the Climate Change and Build Resilient City

- Evaluate the risks of rising sea levels and storm surges
- Develop targeted response measures and planning schemes



Nansha, bordering the sea, is the core development area for the future



Build an Ecologically Resilient Coastal in Nansha

□ Mangrove Ecosystem

□ Coastal Wetlands

柳园路-西府路游径

丰泽路 凤起湖游径

翠涌游径

广隆涌游径

大冲涌游径

坑塘果园游径

三姓涌游径

南涌海游径

帽峰山-火龙凤-南沙港快速-蕉门水道生态廊道

小虎涌-迳谷山路组团廊道

大山髑山体

日本仔山体

黄山鲁山体

横沥-兜洲水道生态廊道

增江河-东江-狮子洋生态廊道

高尔夫球场-沥江游径

西门路-建设路游径

石楼河组团廊道

莲花山体

高尔夫球场-北部涌游径

莲花水乡-莲花街游径

增江河-东江-狮子洋生态廊道

黄阁大道-小虎涌游径

皇洲涌-蕉门河游径

槽阳涌游径

兴业路-涌边路游径

鹿颈公园游径

增江河-东江-狮子洋水廊道

Restore the coastal zone, enhance landscape quality in Nansha



After restoration

Construct Ecological Embankment in Nansha

Using the innovative concept of "changing height to width" to the construction of the river dyke, to achieve the triple benefits of hydrophilicity, leisure and landscape

- Setting up a low wave wall , composing a three-level dike with river banks, dykes, green belts and municipal roads, with an average width of 80-100 meters.



66.8 km Pearl Bay Super Dyke

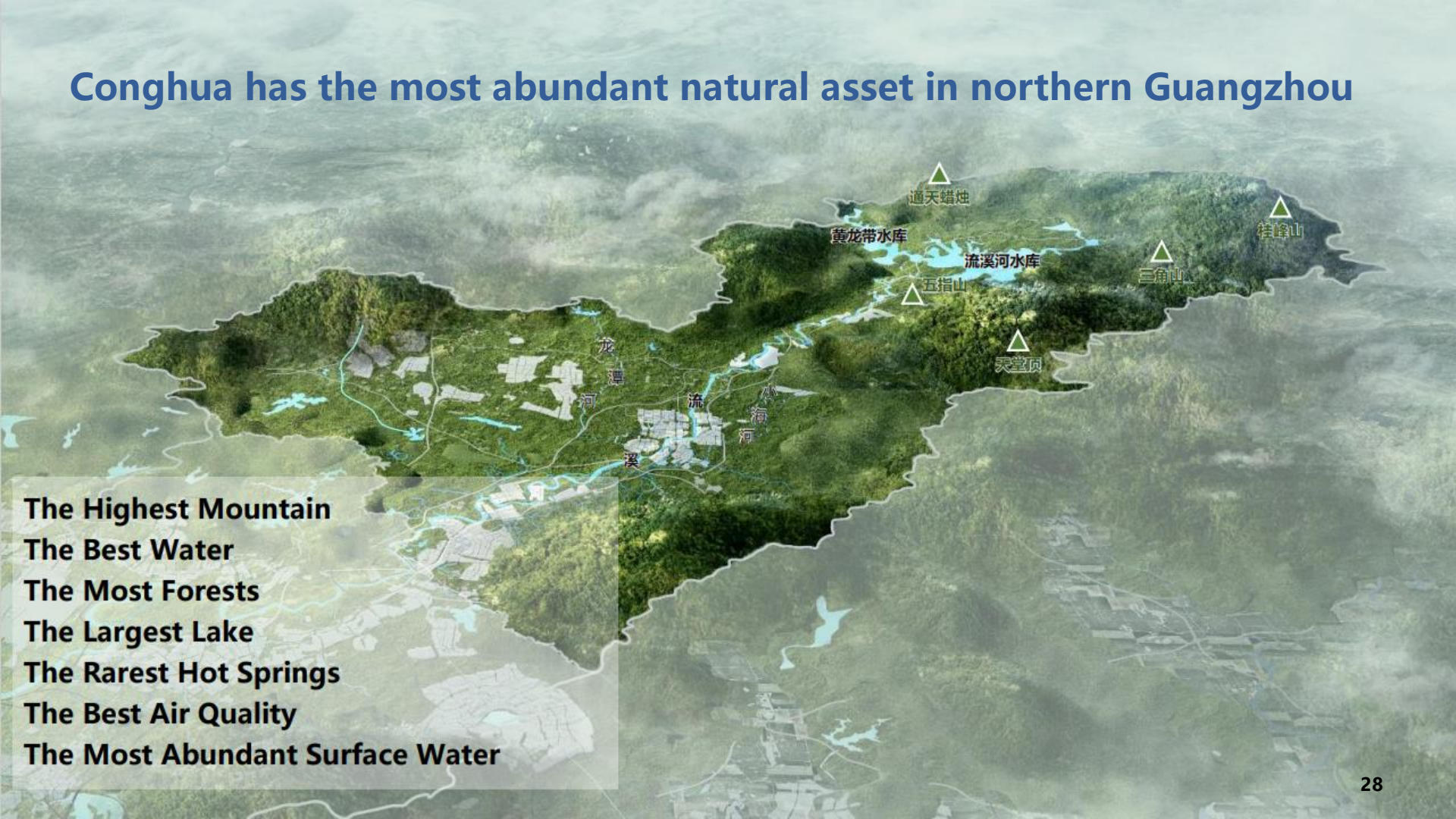


Super dike section design "changing height to width"



The Dyke of Nansha Bay

Conghua has the most abundant natural asset in northern Guangzhou



The Highest Mountain

The Best Water

The Most Forests

The Largest Lake

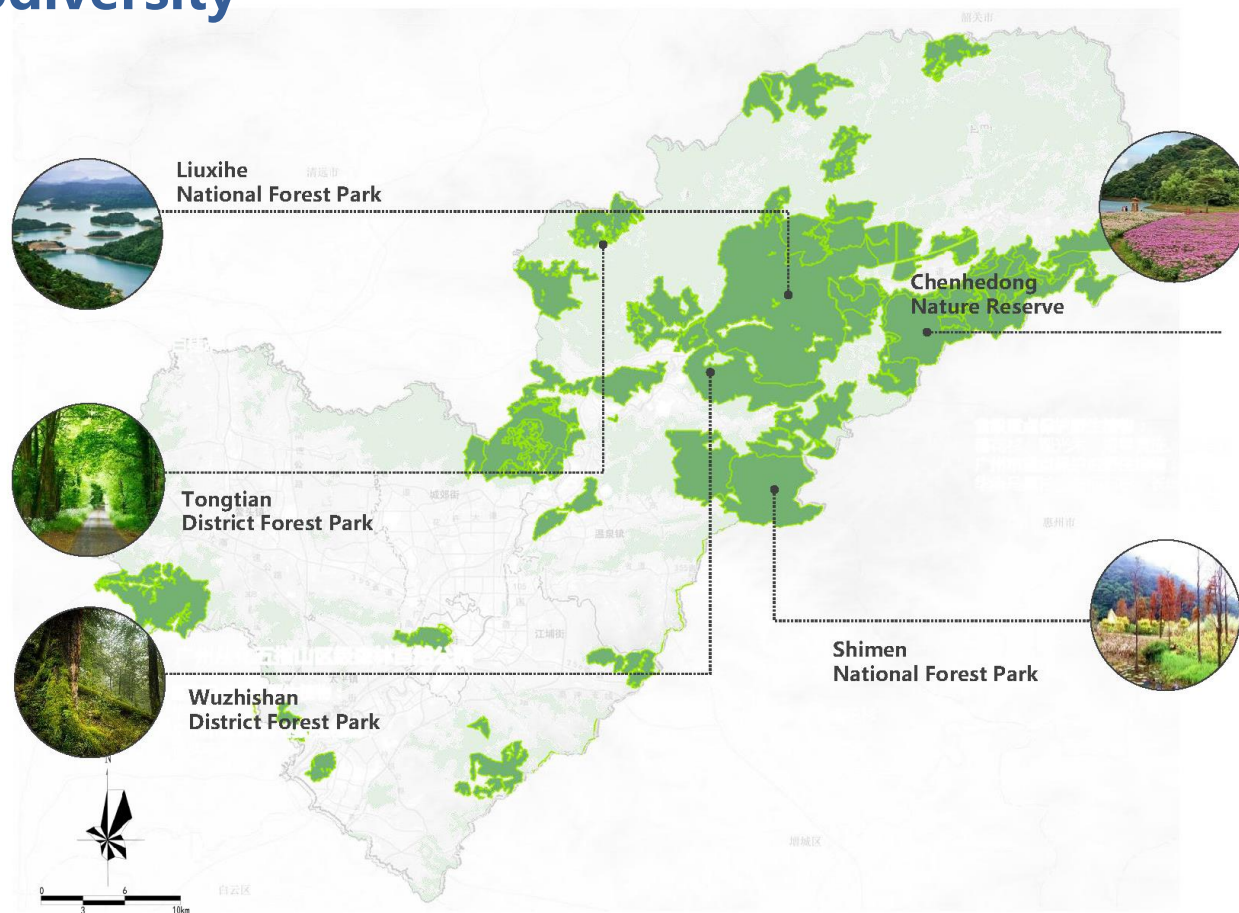
The Rarest Hot Springs

The Best Air Quality

The Most Abundant Surface Water

Protect the Native Biodiversity

- 50% of the area is ecological red line
- Nature reserves to protect biodiversity



Distribution map of protected wild plants in Conghua

Ecological protection compensation

- ❑ Ecological protection compensation in areas such as forests, farmlands.
- ❑ Provide ecological productions for all the citizens.



Blueway



Forest park



Greenway



Rural area

Collaborate with the World Bank on Sustainable Urban Cooling

In 2020, Guangzhou was selected as the first pilot city to carry out the "**China Sustainable Urban Cooling Project**".

Pilot Tasks

Assist Guangzhou in selecting **cooling strategies** that can be integrated into urban planning.

Select and carry out **pilot projects**.

Help Guangzhou **share experiences and knowledge** with cities at home and abroad.



世界银行驻华代表处
World Bank Office, Beijing

February 19, 2020

Guangzhou Municipal Government
People's Republic of China
Fax: 86-20-83340347

China Sustainable Urban Cooling Pilot Project in Guangzhou

On behalf of the World Bank, I am pleased to inform the Municipal Government that Guangzhou has been selected as pilot city for a World Bank funded China Sustainable Urban Cooling Project. This project, which was approved by the World Bank's Energy Sector Management Assistance Program (ESMAP) late last year, aims to (i) assist the city of Guangzhou to identify cooling strategies to be incorporated into urban planning; (ii) carry out pilots in the selected sites; and (iii) help share the experience and knowledge with cities in China and other countries. The specific activities to be financed are included in the annex to this letter.

The proposed work directly links to the ongoing preparation of a World Bank's technical support program to China on sustainable cities, which includes components on land use planning to address urban heat island effects. This program includes the establishment of a knowledge exchange platform connecting cities in China and around the world. It is our hope that the work to be carried out in Guangzhou will provide valuable insight to be shared on this platform.

We are excited about working with the city of Guangzhou and looking forward to strengthening our collaboration.

Yours sincerely,

Francis Ghesquiere
Practice Manager

Urban and DRM (East Asia and the Pacific)
Social, Urban, Rural and Resilience Global Practice

Join the World Bank Cities for Biodiversity Network

Participate in the World Bank C4B Urban Biodiversity International Seminar.



Collaborate with cities around the world
Green Cities--integrating urban greening and ecology into urban and community planning.

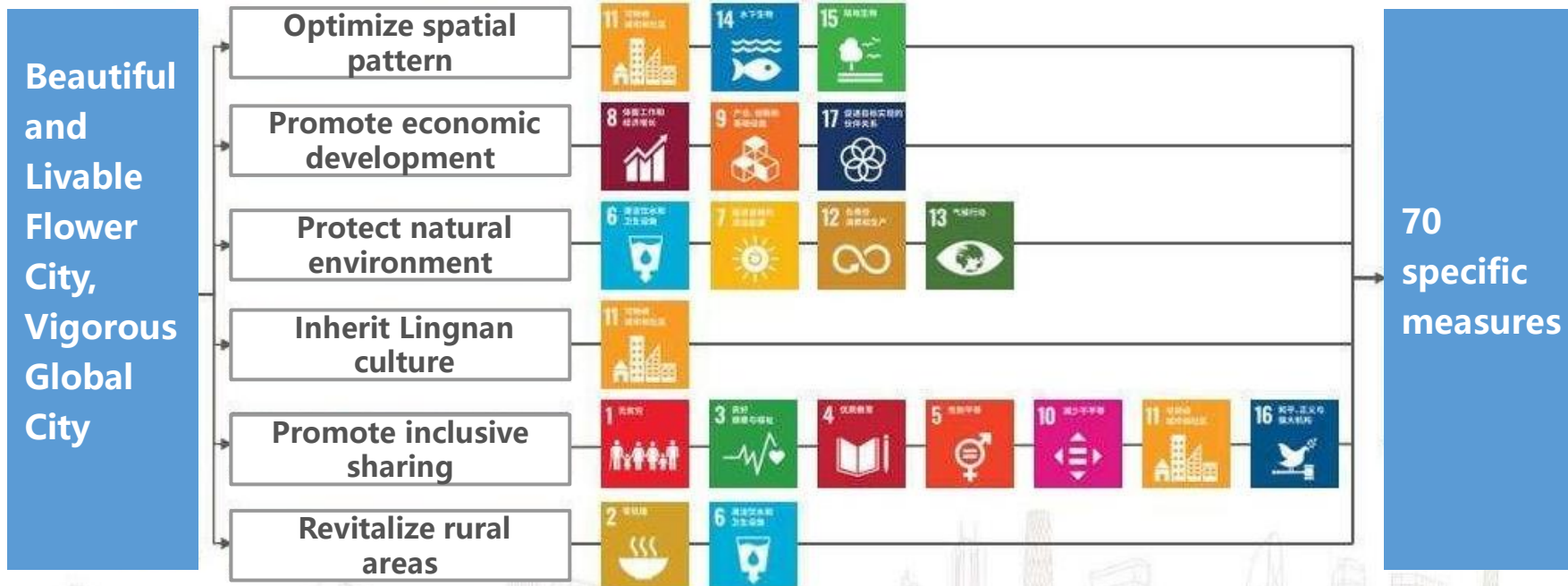


Share Guangzhou's experience

UN's SDGs 2030 Voluntary Local Reviews

Development vision: **Beautiful and Livable Flower City, Vigorous Global City**

6 urban strategy and 70 specific measures aligned with the 17 Sustainable Development Goals



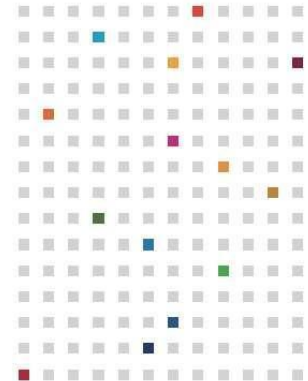
Submit UN SDGs Guangzhou Voluntary Local Review

In 2021, Guangzhou Voluntary Local Review was published on the United Nations website's sustainable development column.



Vibrancy, Inclusion, and Openness; a Mega-City's Road Towards Green Development

UN SDGs Guangzhou Voluntary Local Review



Vibrancy, Inclusion and Openness, a Mega-City's Road Towards Green Development

- <https://sdgs.un.org/topics/voluntary-local-reviews>



An aerial photograph of a modern city skyline, likely Guangzhou, China. The image shows a dense cluster of skyscrapers, including the prominent IFC tower on the left and the Canton Tower on the right. A wide river flows through the city, with several bridges crossing it. The foreground is dominated by lush green trees and a park area. The sky is blue with scattered white clouds. The text "Future Works" is overlaid in the center in a large, white, sans-serif font.

Future Works

Strategy beyond 2035

Nature positive, Green growth

A nature and biodiverse city



1 Biodiversity network



2 Open space



3 Nature-based solution

A clean and low-carbon city



4 Clean energy



6 Green building



7 Green transportation



8 Green industry

A resilient and livable city



8 Heat



9 Sea level rise



10 Flooding

A greener and vibrant city

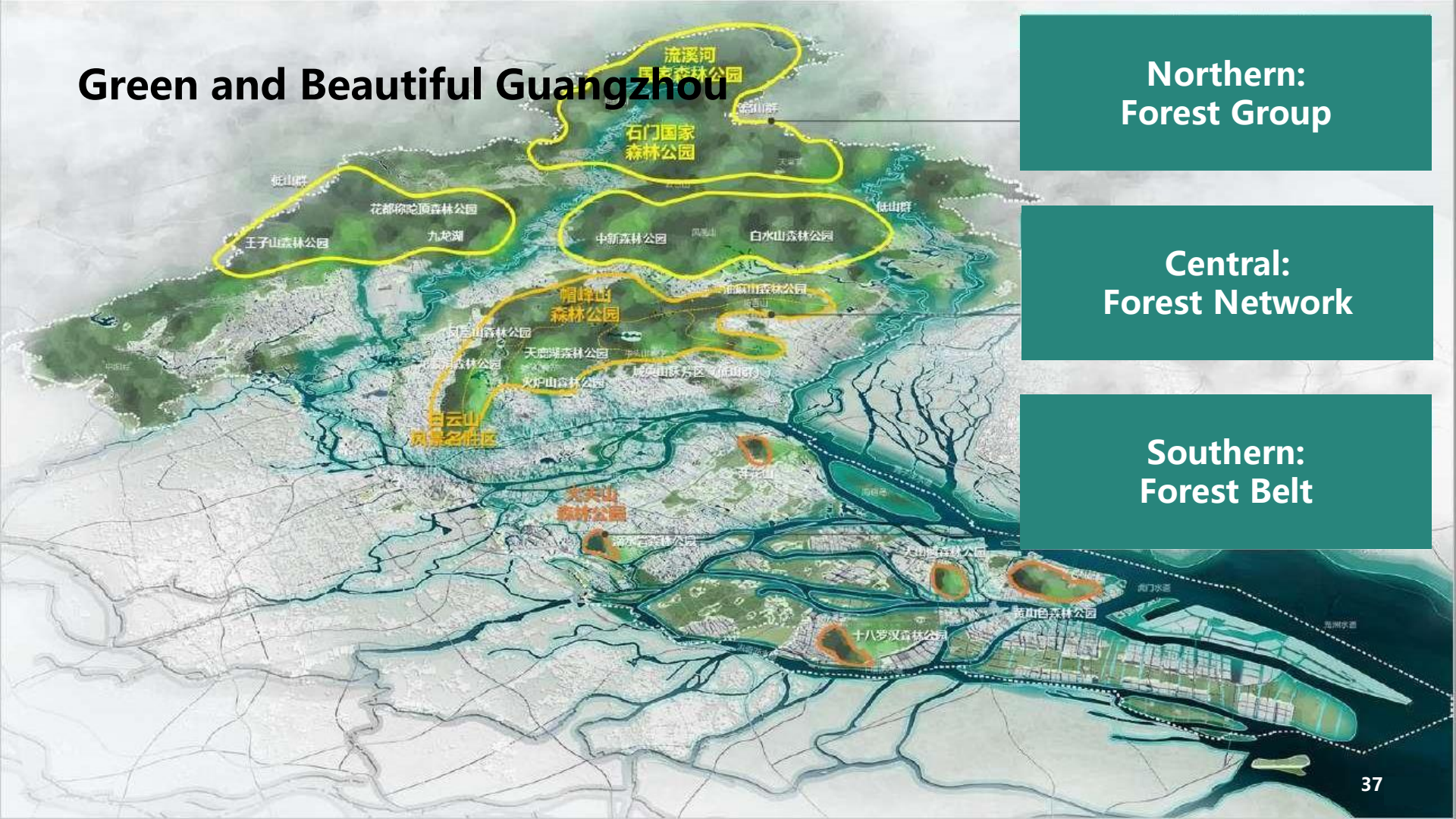


11 Ecotourism



12 Green finance

Green and Beautiful Guangzhou



Northern:
Forest Group

Central:
Forest Network

Southern:
Forest Belt

Build South China National Botanical Garden System

"1" South China
National Botanical
Garden



"3" Three relocated
protected demonstration
areas



北部

中部

南部

"N"
Specialized
botanical
gardens

"N"
Ecological
science
education
sites



Thank You!