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Water Funds in China

TNC China Water Security Team

Quan Mu

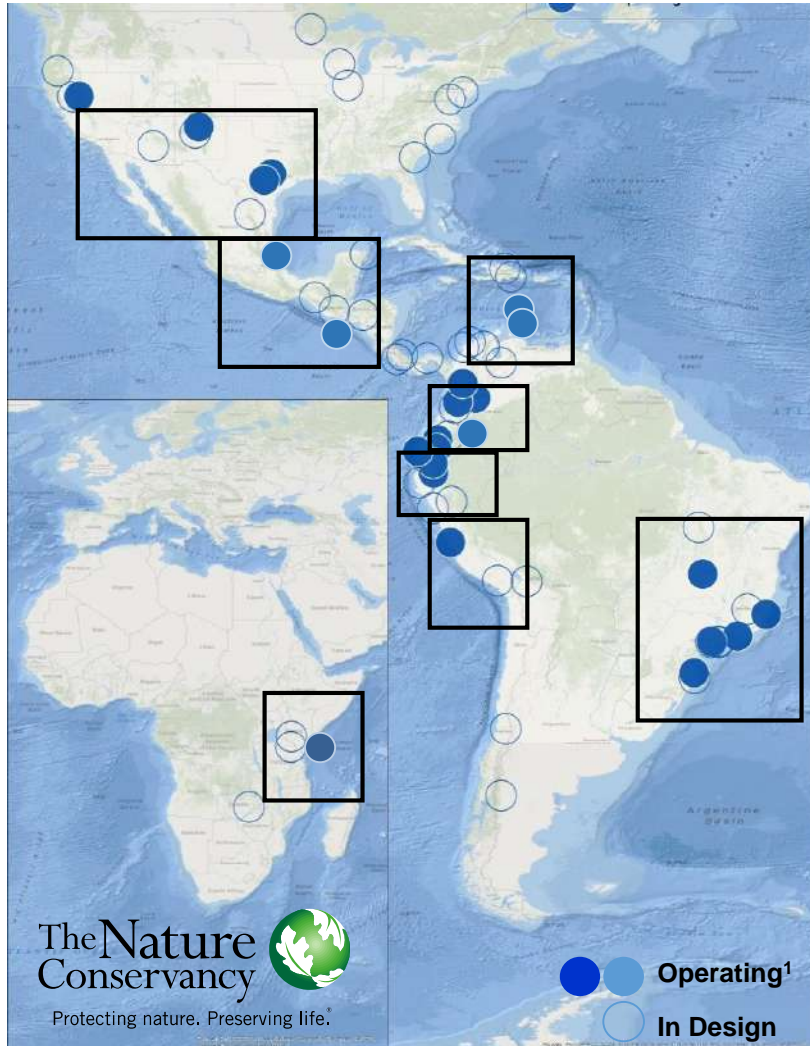


Water Pollution in China



- About a **quarter** of China urban residents lack access to proper drinking water and sanitation facilities.
- **Over 50%** of China's water pollution comes from non-point source pollution.
- China government is investing **330 billion U.S. dollars** to protect water during 2015-2020.

Water Fund Scheme



24 Operating Water Funds across 8 countries ¹

¹ Defined as having a written agreement formalizing the partnership (as of Mar 2015)

Agricultural Diffuse Pollution(TP)

Long-term Solution

Water Fund Scheme

Scientific Watershed Planning

Public-Private Partnership

Sustainable Agri. Pollution reduction

Flexible Collaboration Form

Transparent Governance

Enhanced Green Economy

3 In china

- Small scale , Longwu
- Medium scale , Qiandaohu
- **Big scale , Dongjiang watershed**

China Securing Water Strategy

PROTECT

**Non-point source
pollution reduction**

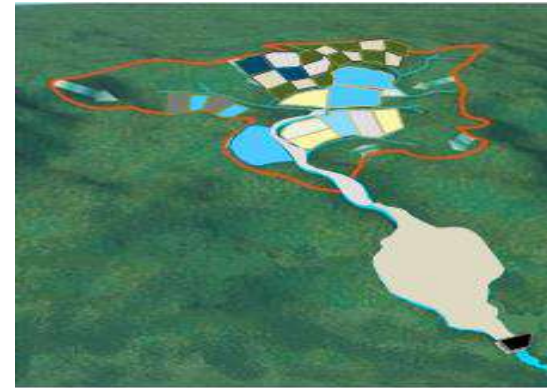
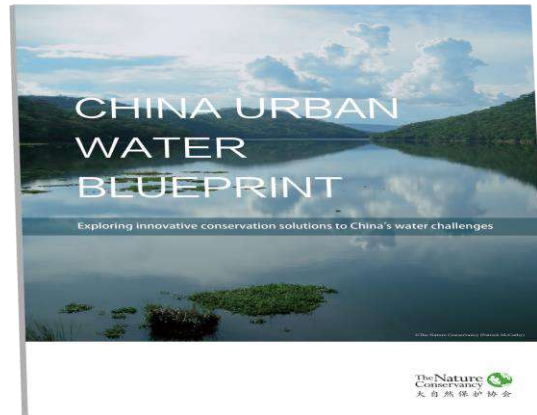
TRANSFORM

**Farming practice and
restoration**

INSPIRE

**Investors and public
policy**

Science



Financial
Governance
Implement

Water Fund

Efficient mechanism in
different scale

Small

Medium

Large

China Water Fund in Progress

Water Fund

Small

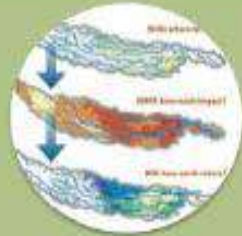
Medium

Large

PHASES



PRE-FEASIBILITY



DESIGN



CREATION



OPERATION

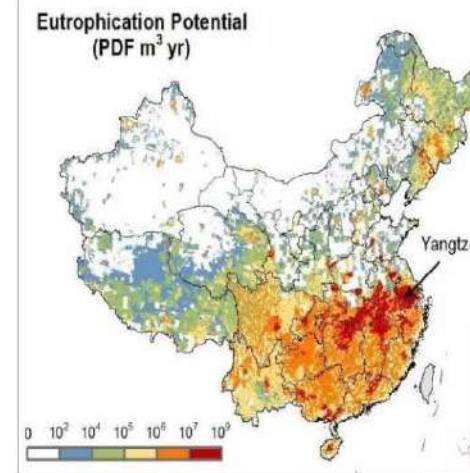
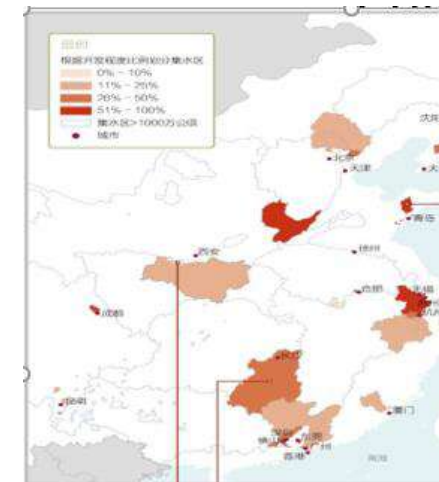


CONSOLIDATION

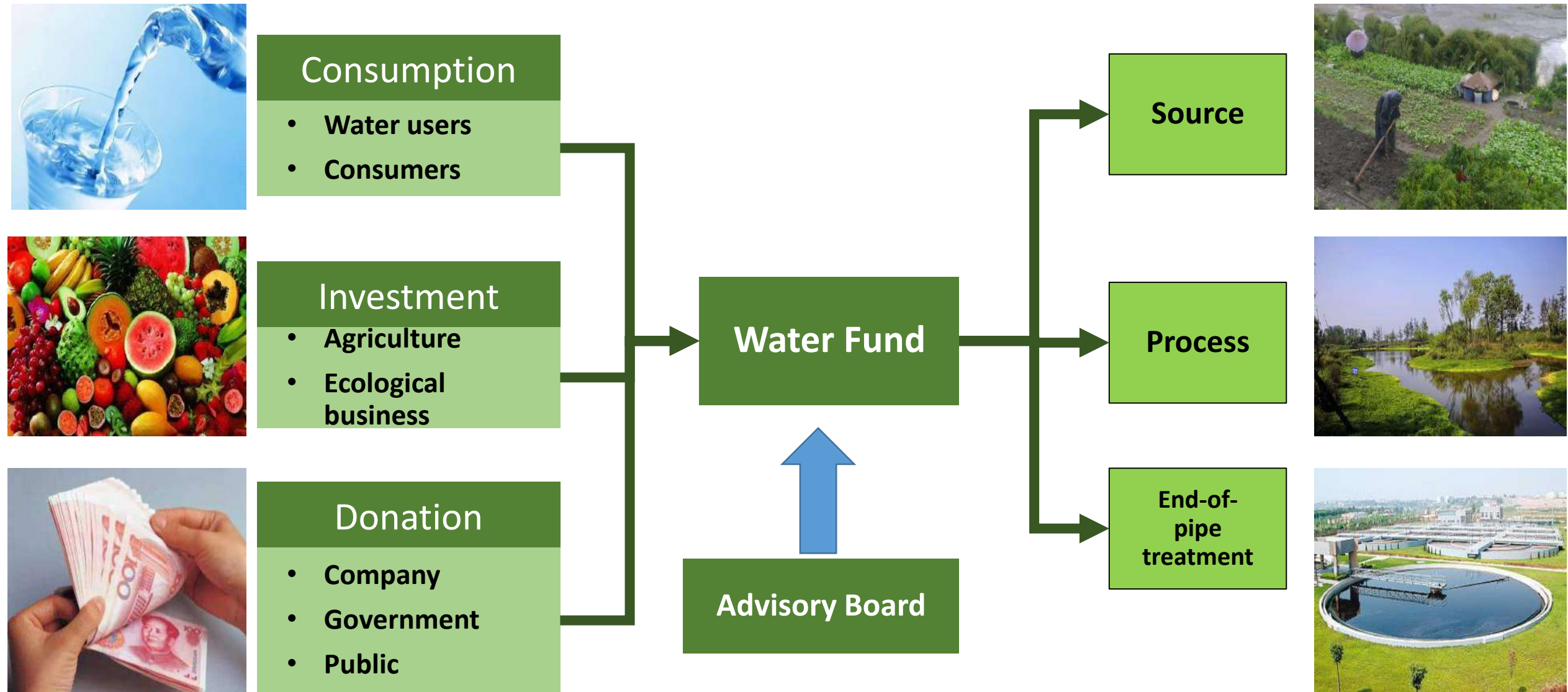
Longwu, Zhejiang Province

Qiandao Lake, Zhejiang Province

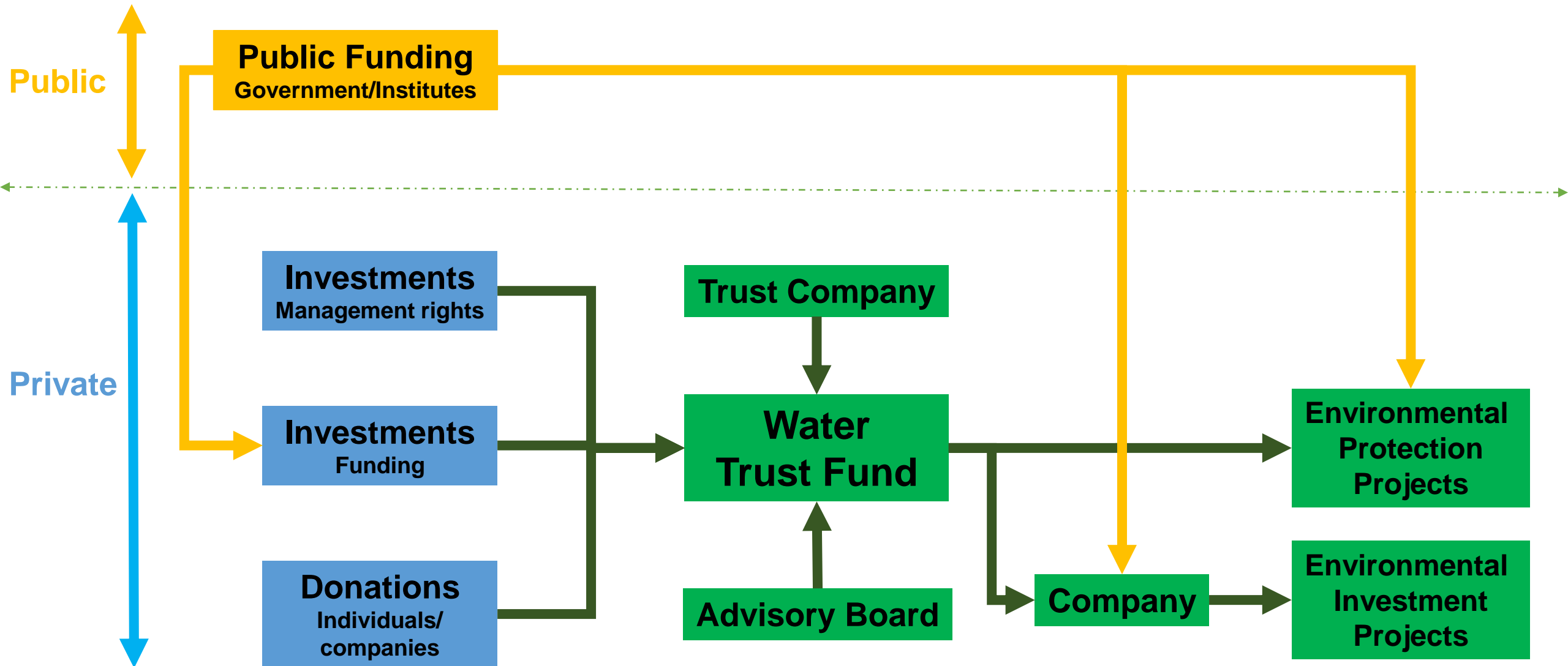
The East River, Guangdong Province



Water Fund Concept Model



Water Fund Operation Model



Longwu Water Fund

Established on November
1, 2015

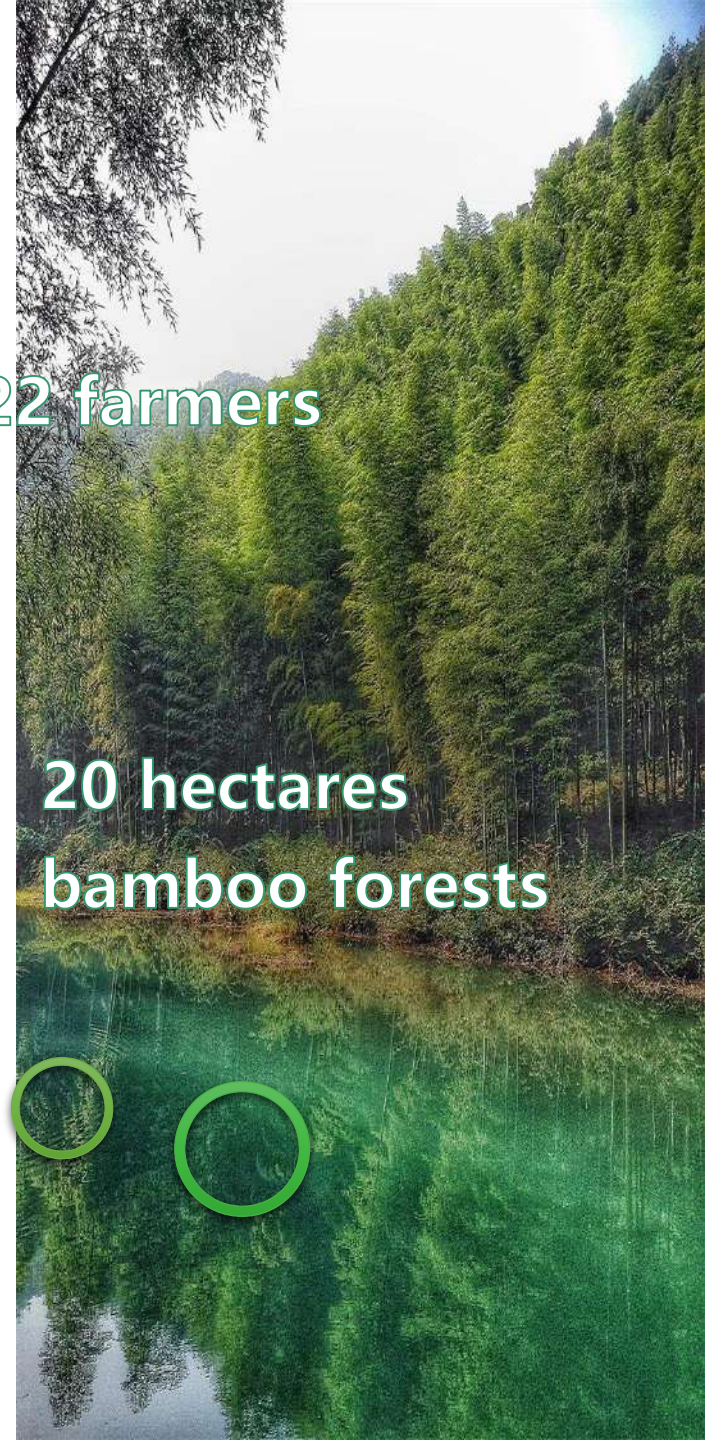
50,000 USD investment



22 farmers



20 hectares
bamboo forests



Qiandao Lake and Xin'an River Basin Water Fund



- Watershed area of 11,453 km²
- drinking water source for 900 residents of Hangzhou
- Biggest lake in Yangtze River Delta
- NRDC" *An Integrated Plan for Water Resources and Eco-Environment Protection in the Basin of Qiandao Lake and its Upstream Xin'an River*"

Dongjiang(DJ) Watershed

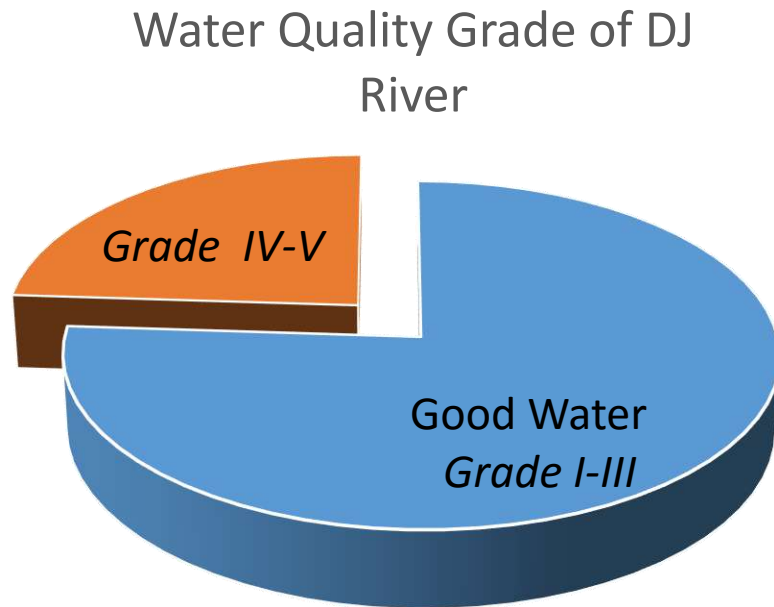


- Watershed areas of 35,340 km², **90%** located in Guangdong Province
- **Drinking water source** for **40Million** residents in Pearl River Delta(PRD), one of the top economic pioneering regions of China
- Accounts for **60% GDP** of Guangdong Province
- Coverage of Nanning **biodiversity priority areas** and ecological security key regions

Challenges to DJ Watershed

Status quo

Water quality of DJ river is generally good.

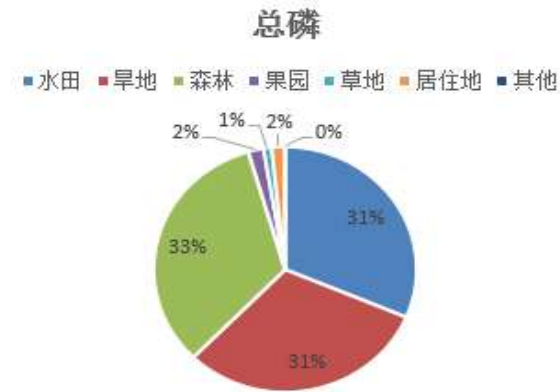


Source: Guangdong and Jiangxi Provincial Department of Water Resources, 2014

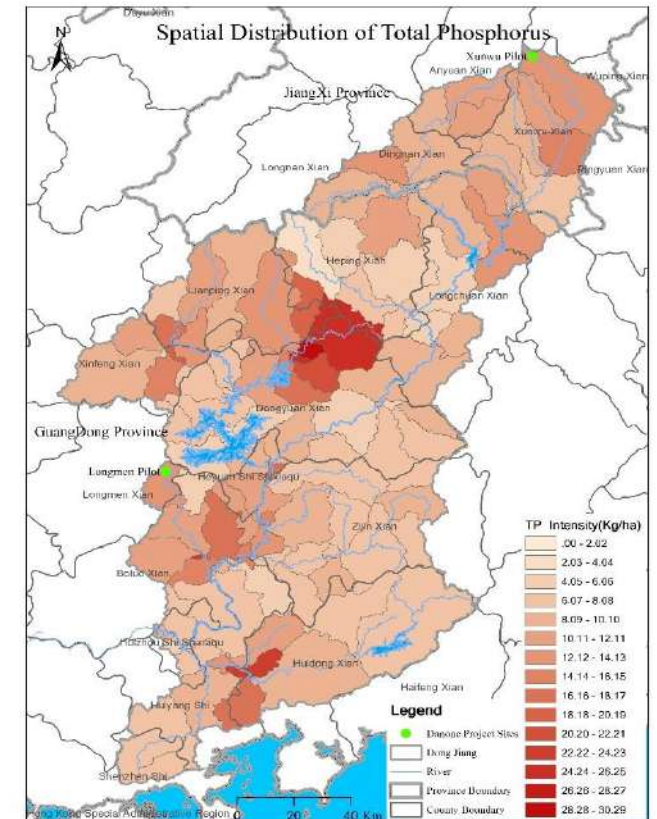


Challenges

Agricultural diffuse pollution has loomed over DJ Watershed.



Diffuse pollution from agriculture source makes up **78%** of watershed Total Phosphorus (TP) pollution.



Goal and Objectives

Goal: Providing an innovative solution to improve water quality of DJ watershed by science-based approach to establish a watershed protection plan and partnership approach to build up a sustainable funding mechanism.

Environmental Goal

Implementing Agricultural Best Management Practice on **1‰ key lands** (4,000 ha land including 3,850 ha farmland, 150 ha orchard) as **pilots** to demonstrate agricultural non-point source pollution control. which could reduce the **0.6~0.9‰ of total phosphorus load** of the **whole DJ watershed** in 10 years.

Economic Goal

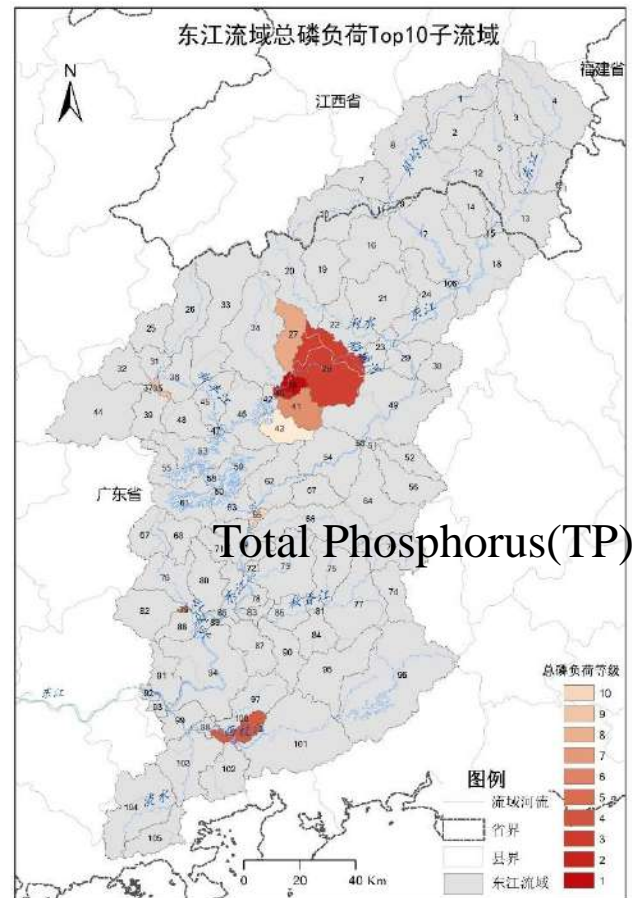
DJ Water Fund is supposed to reach **RMB 30 million in five years** and impact RMB 50 million investment. The total fund scale will be about 200 million in 10 years, and to have 10 core partners on board.

Social Goal

At least **2,000 farmers** are supposed to be directly involved in Water Fund pilot projects, in which **10%+ of the poverty** ones will have significantly improvement in income.

Water Fund Projects

TOP10 TP intensity hotspots



4% of DJ watershed
TP loading contribution 11%

**Investment
Projects**
(Cash Returns)

**Protection
Projects**
(Envi. Returns)

Agriculture BMPs

4R Farming Management

Pest Management

Protective Cultivation

Source Reduction

Water Quality Monitoring

Reduction Monitoring



Ecological BMPs

Natural Education

Eco-tourism

Pathway Control

Vegetation Buffer

Ecological ditches

Wetland Protection



Timeline

