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ONE NATURE,
ONE FUTURE
**LOCAL ACTION
SUMMIT**
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POST
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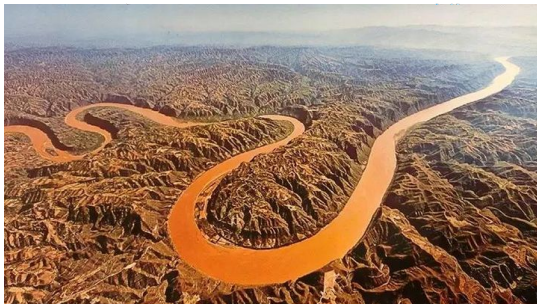
Local Action For Productive Landscape, Achieving Shared Prosperity within the Limits of Earth's Living Systems

Restore the nature by the nature - A NBS case from AFD financed Changyuan River project

Xiaoting JIN
23 June 2021

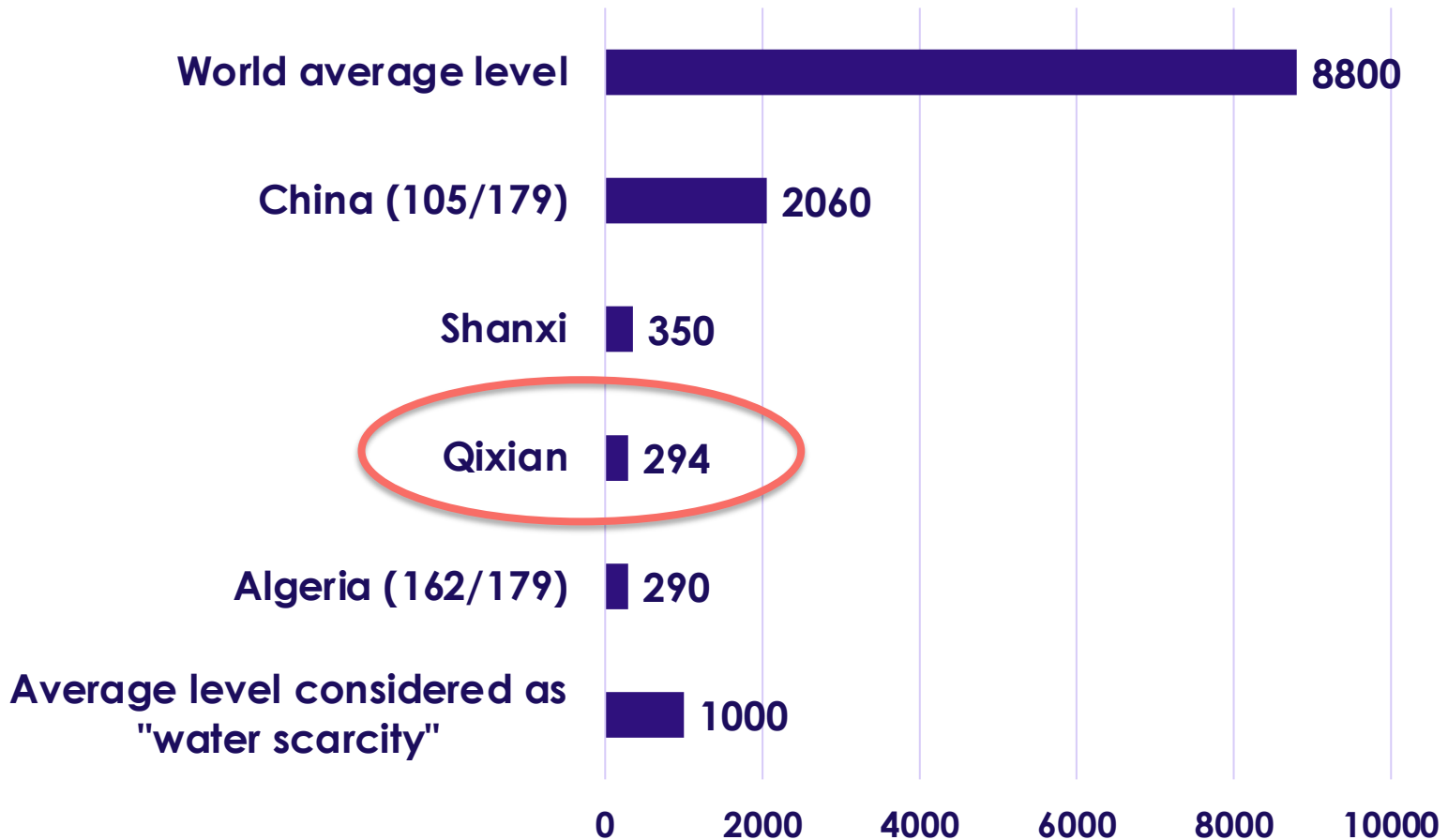
A challenging context for wetland restoration

- **Shanxi province**
 - **Coal capital of China**
 - **Serious pollution issues**
 - **Poor ecological conditions**
- **Qixian:**
 - **Central Shanxi, agricultural city**
 - **Loess Plateau and water scarcity**



A challenging context for wetland restoration

Freshwater resources per capita (m3)

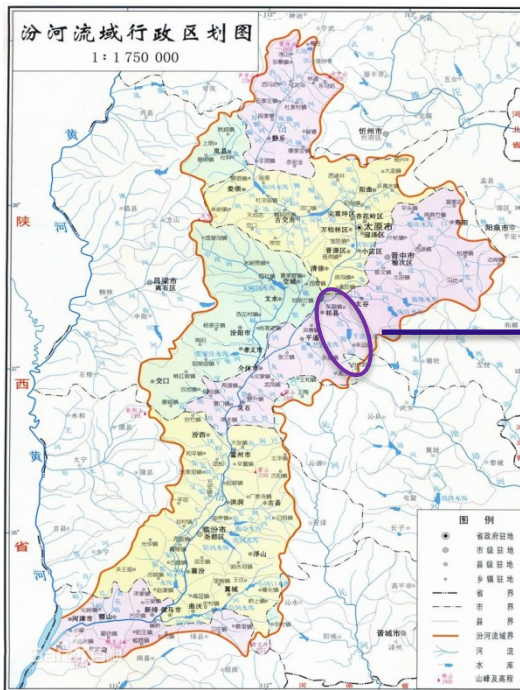


(Source: FAO, 2014)

Project background

- Changyuan River

- Tributary of Fen River (second largest tributary of Yellow River)
- National wetland park (948ha) accredited in 2017



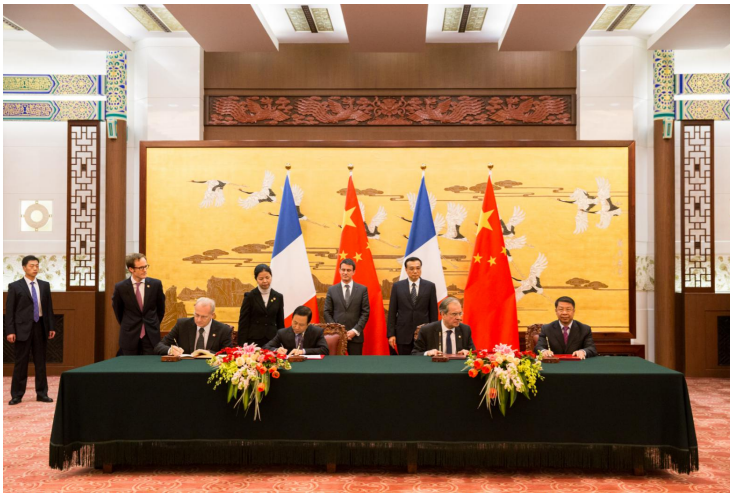
Project background

- **Situation before the project**
 - **Anthropic pressure and degraded ecological state**
 - **Disturbed hydrological regime**
 - **Severe pollution**
 - **Sandy soil and important leakage**
 - **Low rainfall in the region and water scarcity**
 - **Biodiversity to be preserved**



Project content

- **Financing**
 - **30M€ loan from AFD**
- **Target**
 - **Restore the ecological function of Changyuan River in order to preserve its biodiversity resources and strengthen its contribution to local development.**



Project content

- **Components**
 - **Restore the ecological and hydrological functions of Changyuan River**
 - **Recreate a strong biodiversity and conserve endangered species**
 - **Develop new eco-tourism services**
 - **Improve the management of wastewater and waste**
 - **Strengthen the institutional and technical capacity of Changyuan River Management Commission**



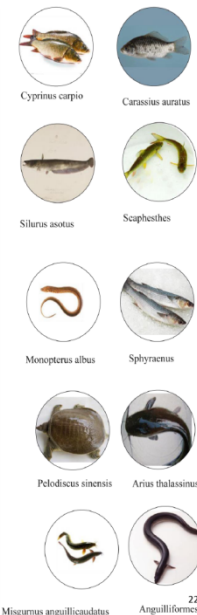
Component 1 – ecological restoration

- **Solutions provided by the project**
 - **Recreate a permanent flow riverbed**
 - **Regain a natural waterproof layer by vegetation of moderate flow riverbed and riverbanks**
 - **Provide water replenishment for wetlands(10 000m³/d) by recycling municipal wastewater with a filtering garden (2ha)**



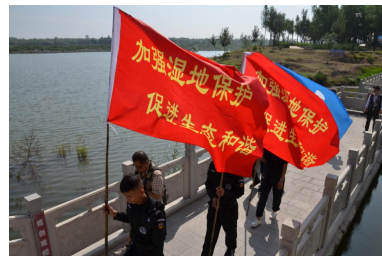
Component 2 – biodiversity protection

- Solutions provided by the project
 - Naturalize riverbed and riverbank
 - Reintroduce local plants
 - Create an ornithological park and divers natural habitats
 - Establish management plan for the two protected areas to better ensure the ecological continuity
 - Carry out continuous biodiversity inventory and monitoring



Component 3 – ecotourism development

- Create an eco-museum and an ornithological park
- Support to eco-touristic activities developed by local communities
- Organize environmental education and communication activities



Component 4 – wastewater and waste management

- Create a local biomass plant
- Create filtering gardens to treat wastewater
- Develop a system to collect and treat waste and wastewater of riparian villages



Component 5 – capacity building

- Biodiversity inventory and monitoring
- Hydrology and hydraulic studies
- Environmental and social impact assessment and follow-up
- Trainings to local authorities and communities



Lessons and experiences

- **Surprise from a small project of ordinary nature that we almost neglected at the beginning, with multiple functional values provided once it's well restored (ecological, socio-economic, recreational, sentimental...)**
- **Integrated management of wetland by institutional reform and organizational reinforcement**
- **Cross-sector cooperation (forestry, hydraulic, environment, tourism, natural resources, etc.) to ensure the project success**
- **Priority given to natural based solutions**
- **Adaptation of international solutions to local background**
- **Challenge for the operation phase**

Thank you!

JIN Xiaoting
AFD Beijing Office
jinx@afd.fr

