

The background features a light blue map of North China, showing the Bohai Sea, Yellow Sea, and surrounding landmasses. On the right side, there is a dynamic splash of blue water with many small droplets.

**Practice of Ecological and Environmental Restoration  
Actions for Rivers and Lakes in North China**

**华北地区河湖生态环境复苏  
行动实践**

**Haihe River Water Conservancy Commission, MWR**

**水利部海河水利委员会**

1

Status of River and Lake Ecological Environment  
河湖生态现状

2

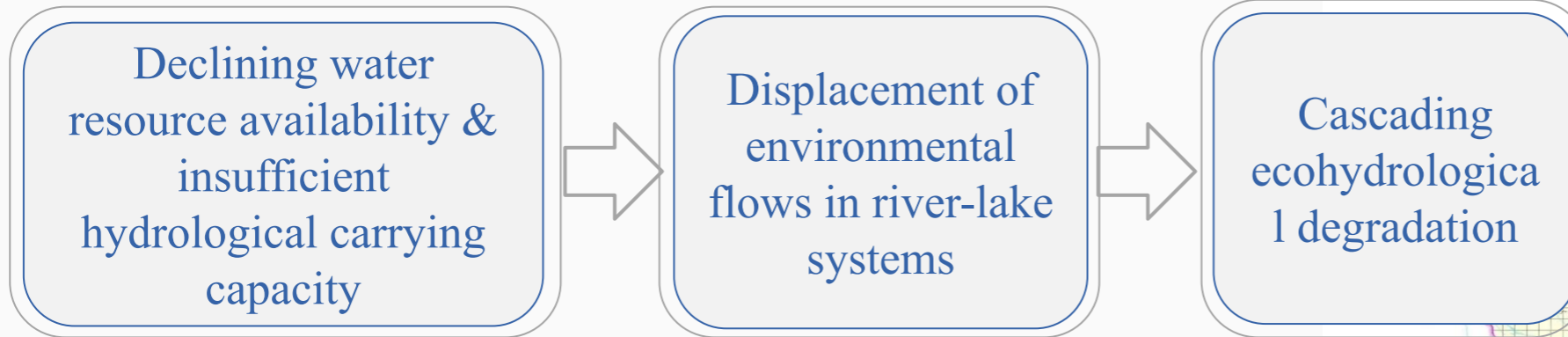
Restoration and Management Practices for River and Lake Systems  
治理实践

3

Key Takeaways and Transferable Implications  
经验总结

# 1. Status of River and Lake Ecological Environment in North China

- (1) Displacement of Ecological Flows Allocations
- (2) Impairment of River-Lake Ecohydrological Functions ;
- (3) Severe Groundwater Overexploitation



Riverbed desiccation & flow cessation



Lake and wetland contraction



Ground subsidence



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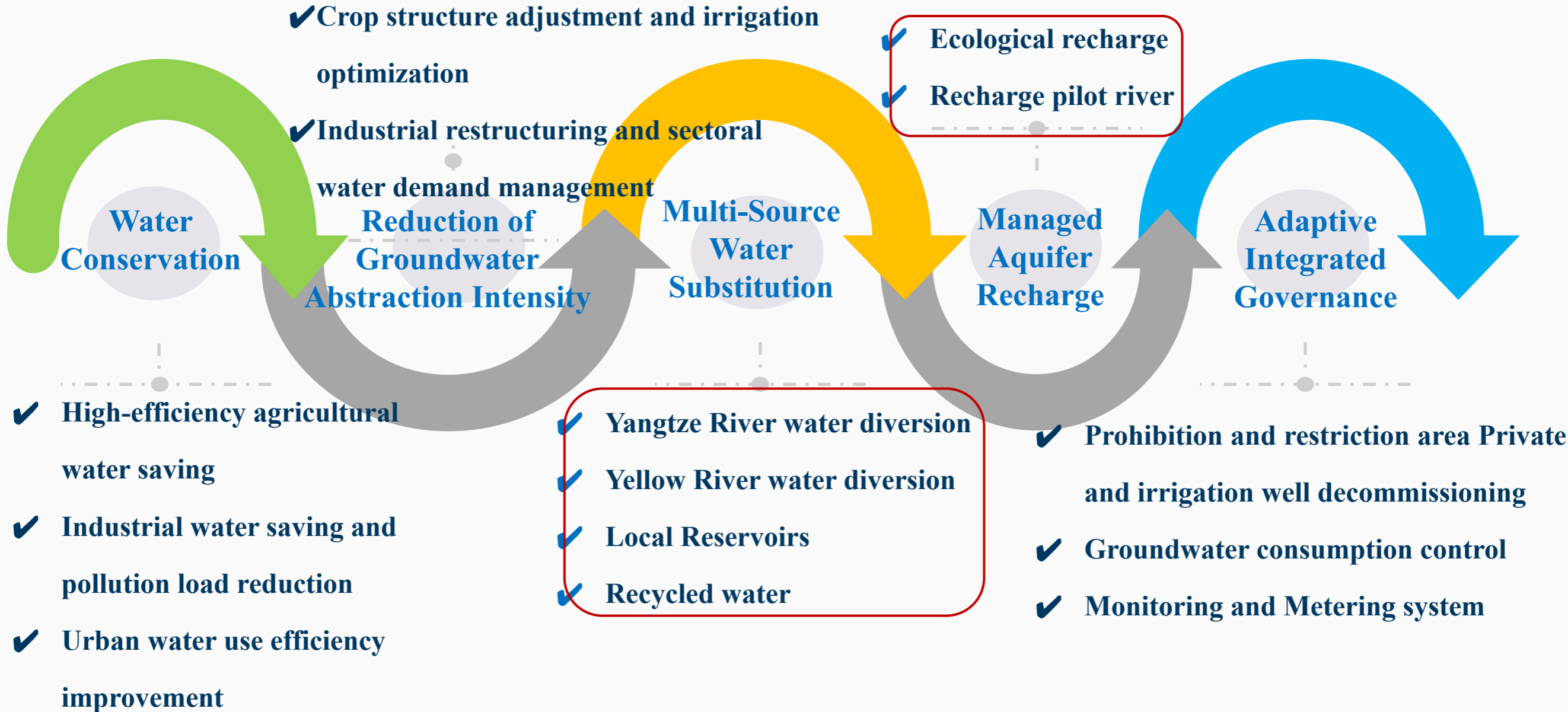
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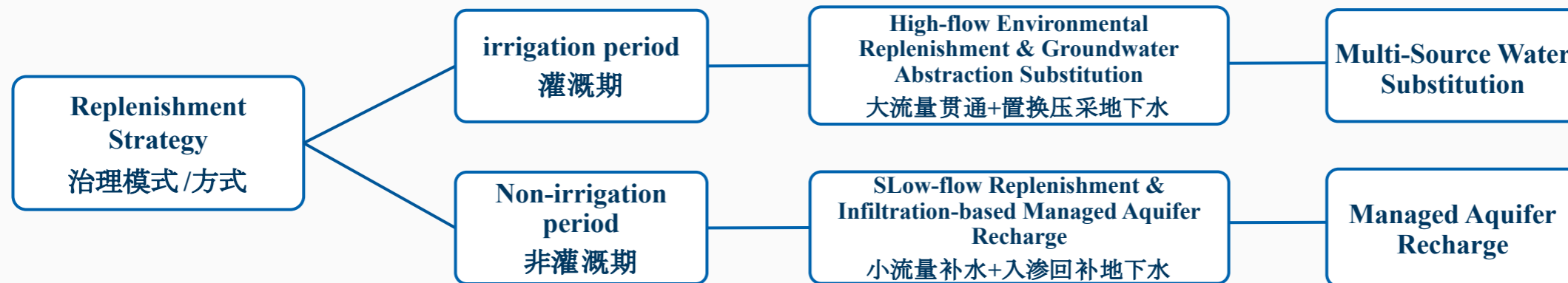
## 2 Restoration and Management Practices for River and Lake Systems



## 2 Restoration and Management Practices for River and Lake Systems

### • Ecological Water Replenishment Mode for Rivers and Lakes

- This approach is well-suited for North China Plain, as it addresses both the ecological restoration of rivers and lakes and the control of groundwater overdraft.

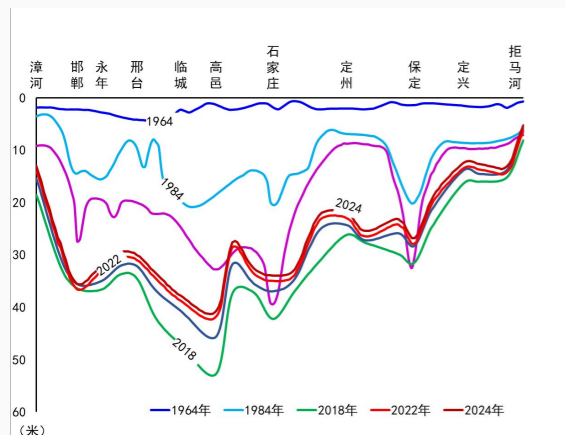


- ◆ In the central and eastern North China Plain, where agricultural water demand is intensive, high-flow replenishment during the irrigation season enables surface water to substitute deep groundwater abstraction for agricultural irrigation, directly relieving aquifer stress
- ◆ In the piedmont plain of the Taihang Mountains, large unconfined aquifer storage capacity and widespread exposed riverbed sand layers create favorable conditions for infiltration-based managed aquifer recharge, particularly effective during the non-irrigation season

## 2 Restoration and Management Practices for River and Lake Systems

### 2.2 Ecohydrological Recovery Outcomes (2018–2025)

- Aquatic habitat extent has expanded substantially, with groundwater levels along river and lake corridors rising markedly
- Several rivers with flow cessation exceeding 20 years — including the Yongding, Chaobai, and Hutuo Rivers — have regained continuous longitudinal connectivity and recovered recognizable channel morphology
- Cumulative infiltration-based managed aquifer recharge has exceeded 8 billion m<sup>3</sup>
- Groundwater levels across the Beijing-Tianjin-Hebei region have recovered significantly



滹沱河（治理前）  
Before replenishment  
(Hutuo river)



滹沱河（修复后）  
After restoration  
(Hutuo river)



永定河（补水前）  
Before replenishment  
(Yongding river)



永定河（补水后）  
After restoration  
(Yongding river)

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# 3. Key Takeaways and Transferable Implications

□ Cross-sector collaboration for unified ecological restoration policies.

多方协调，制定统一的修复政策

□ Systematic governance optimizing river-lake management.

系统治理，固根本优化复苏模式



□ A well-developed national water network enables multi-source water integration to secure and sustain river-lake restoration.

依托国家水网，多水源保障复苏成效。

□ Precision adaptive scheduling across entire river systems maximizes the ecological benefits and temporal extent of flow restoration.

完善精细调度，全方位提升复苏效益。





# Thank You!

**Mr. MU Dongjing**

**Senior engineer, Science and Technology Consultation Center,**

**HWCC, MWR**

**E-mail: [mudongjingcool@163.com](mailto:mudongjingcool@163.com)**

**Tel.: 0086 22 24103732**