

Yellow River Ecological Corridor (YREC) Seminar Series

Inaugural Session

Institutions and governance for a water-secure and resilient

Yellow River Basin



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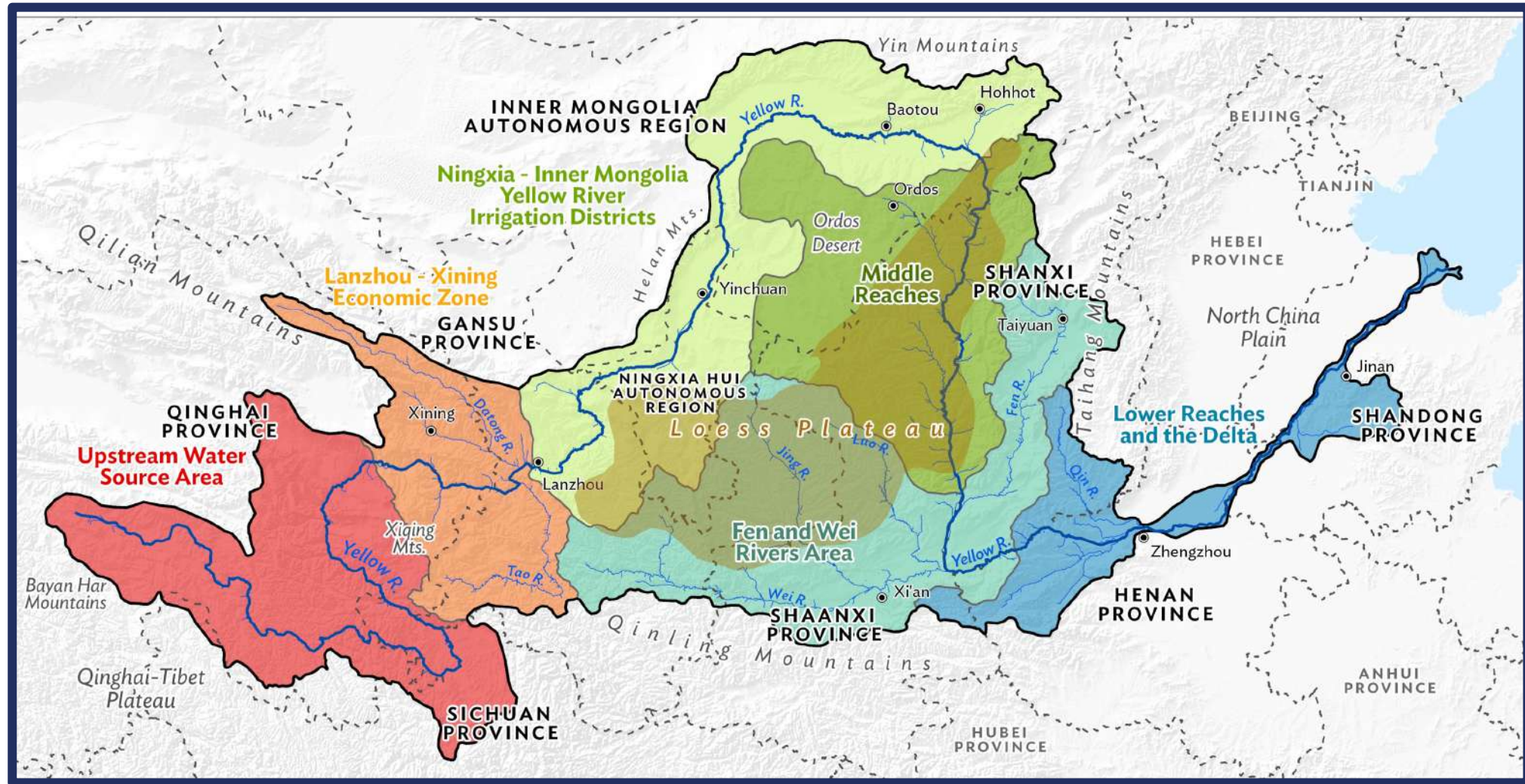


YELLOW RIVER
CONSERVANCY
COMMISSION

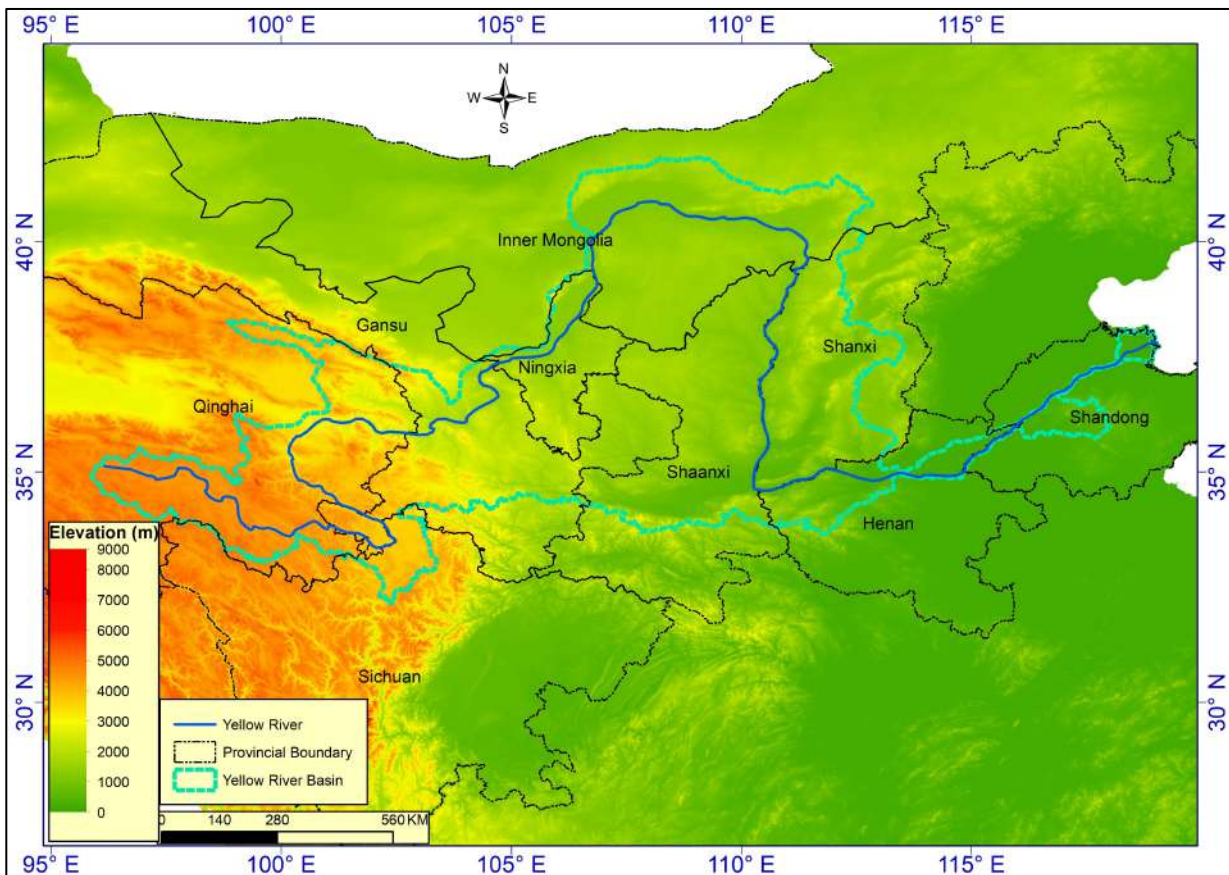
24-26 May 2023

Henan province (Zhengzhou city)

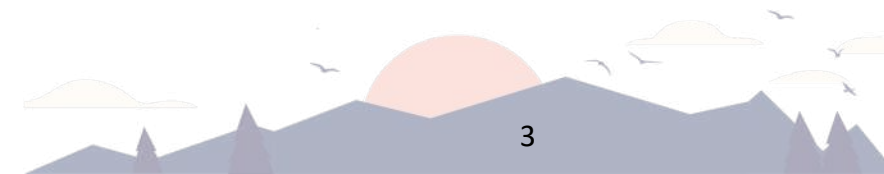
THE YELLOW RIVER BASIN: AN OVERVIEW



THE YELLOW RIVER BASIN: AN OVERVIEW



- **2nd longest river in the PRC:** total length is 5,464 kilometers and crosses 7 provinces and 2 autonomous regions
- **Key basin:** agriculture and food production, and mining
- **Water scarce basin:** 473 cubic meters per capita (23% of national average)
- **2% of PRC's water resources:** supplies 12% of the population, 15% of the arable land, and 14% of other economic activities
- **Flooding:** July 2021 flood event killed scores of people and caused 1.22 billion RMB damage in Zhengzhou City (annual recurrence). Twelve mega floods since 1950s
- **Severe erosion:** the Loess plateau – highest sediment concentration of the world
- **Unequal water distribution:** upstream v. downstream
- **Regional inequalities:** the less developed provinces upstream to the more developed ones downstream



YELLOW RIVER BASIN'S DIVERSE CHALLENGES

Lanzhou-Xining Economic Zone: Key urban and economic development area in NW China but constrained by water availability; future development requires improved water use efficiency.

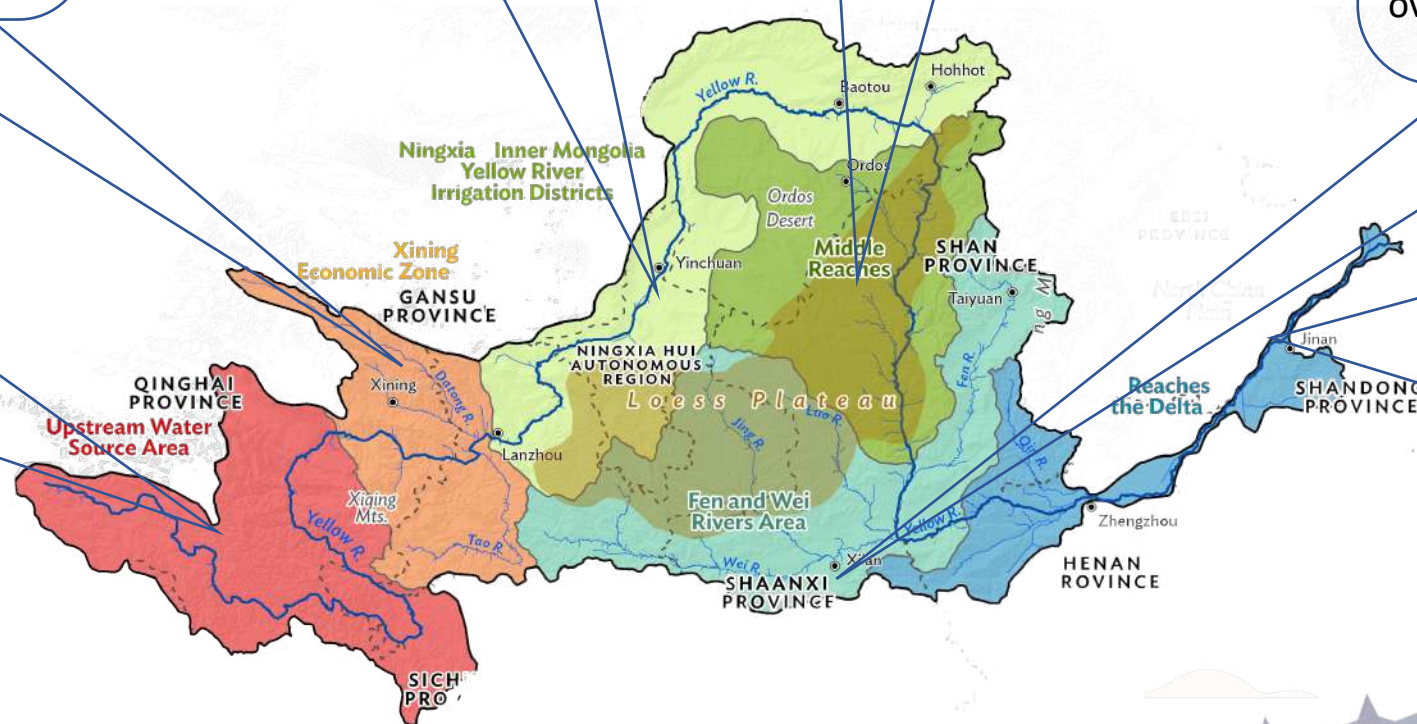
Ningxia-Inner Mongolia irrigation area: Arid region with desertification affecting important agricultural development areas, especially grain production.

Middle Reaches of Loess Plateau: Less developed, but important energy production area with poor water and soil conservation, and low water use efficiency in agriculture and energy sectors.

Fen and Wei river area: Most developed area of basin, focused on coal and grain production; 51% of basin population, 46% of GDP contribution and 38% of irrigated area, impacted by water scarcity, low environmental flows, and overexploited groundwater.

Upstream Water Source: Sparsely populated and economically less developed region with degraded ecosystems in need of ecological protection.

Lower Reaches and Delta: High population density, grain/cotton production and oil industries; suffers from high sediment loads, very low river flows, and shrinking wetlands due to water diversions.



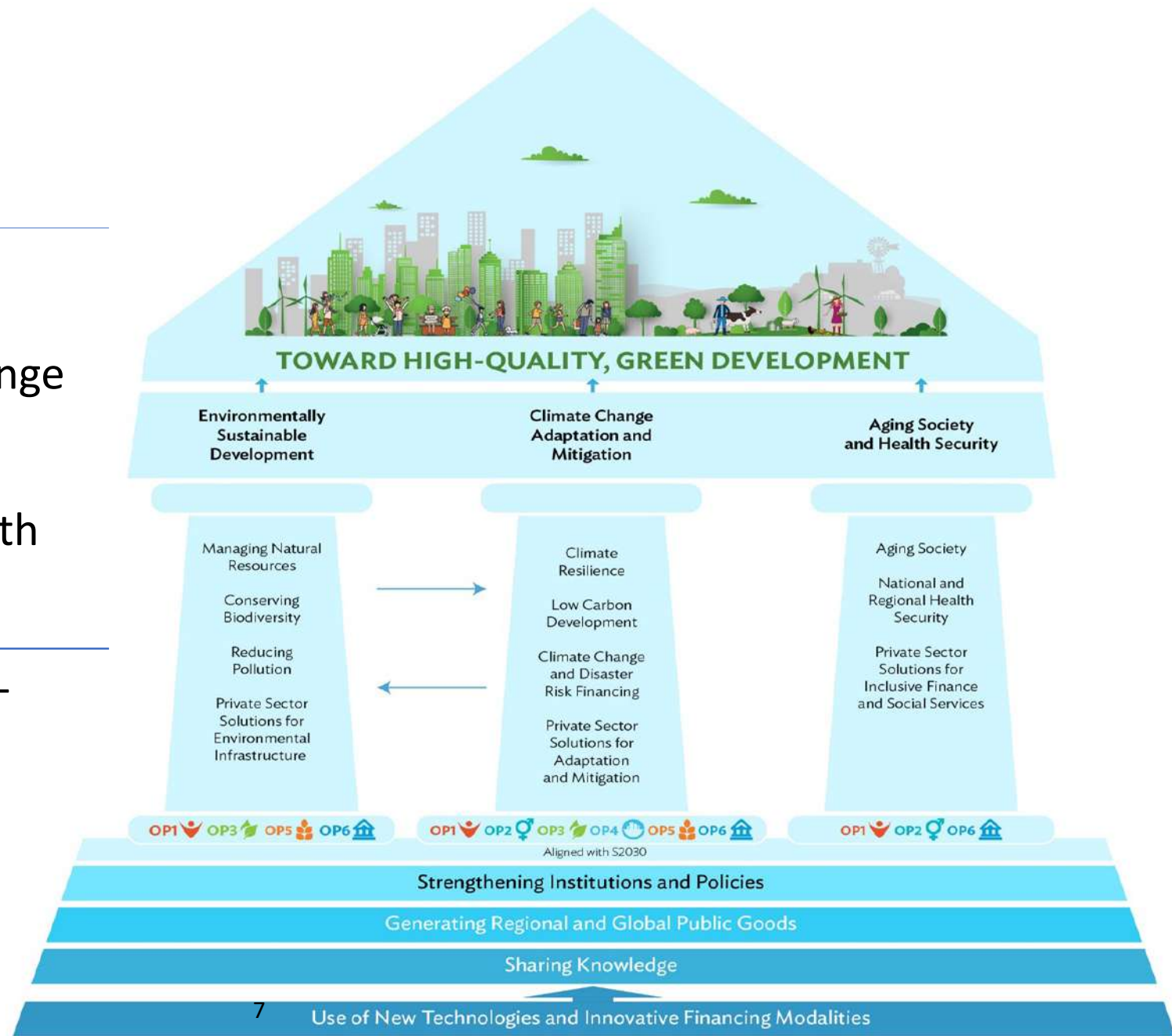


- An Ecological Corridor is a space that is governed and managed over the long-term to maintain or restore **ecological connectivity and ecosystem integrity**.
- River basins if well-managed, are vital natural ecological corridors.
- Healthy ecological corridors generate positive impacts for the **environment, economic growth, social well being, and climate change goals** in the PRC and elsewhere – they:
 - maintain biodiversity
 - ensure watershed, river and wetland health to mitigate water related disasters and improve water quality
 - provide economic and ecosystem services to benefit humans and aquatic and terrestrial environments and biota
 - provide a healthy and safe environment where people can thrive
 - create resilience to and mitigate climate change impacts

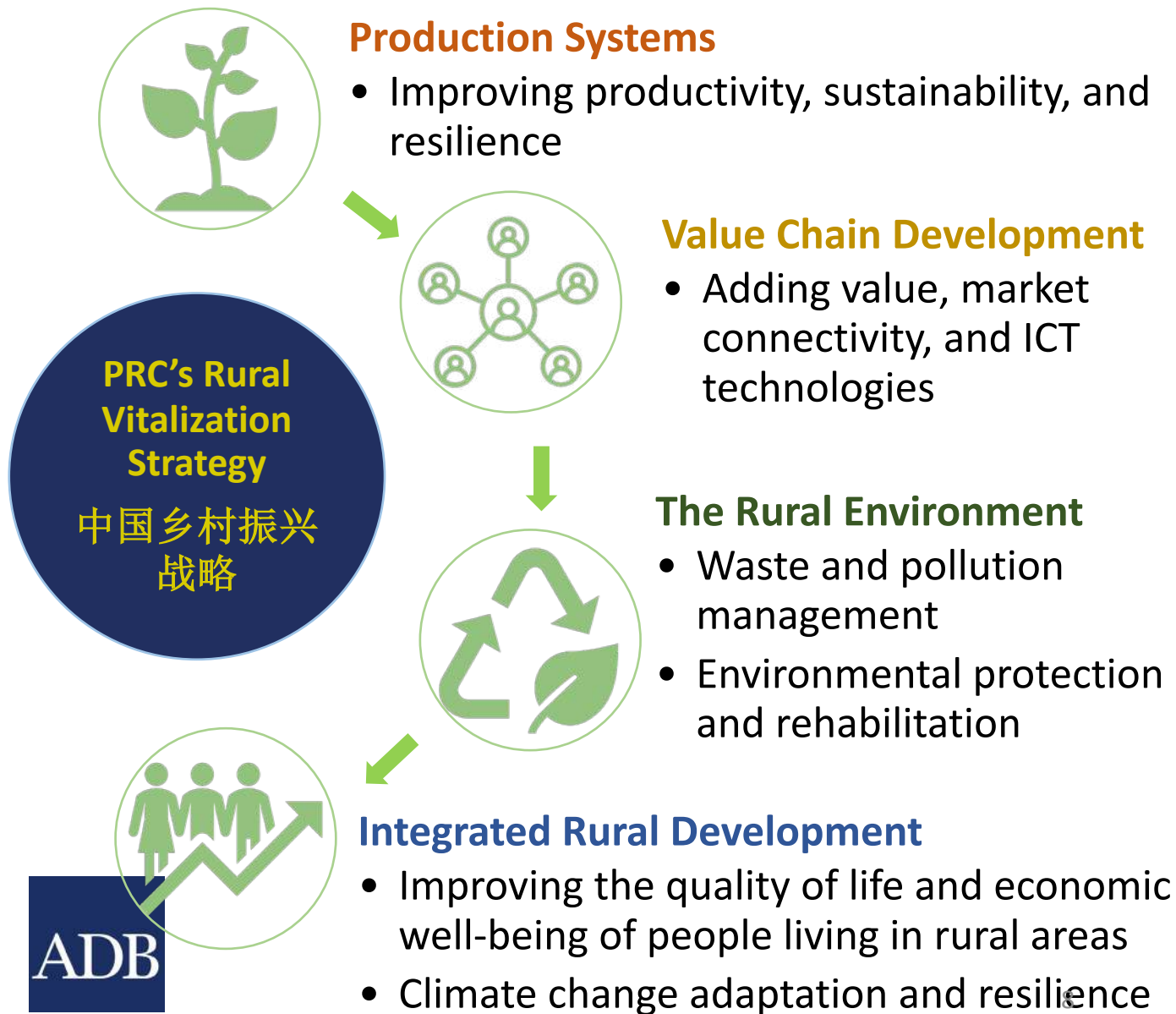
- **An integrated approach** to natural resources management, environment and ecological conservation, and climate change to support high-quality, green development through institutional and policy reforms, knowledge and innovation, and private sector solutions
- To protect and restore the **Yellow River basins' respective diverse and fragile aquatic and terrestrial ecological zones and ecosystems** and to enable more equitable and sustainable rural-urban economic development throughout the basins
- Building from the **strategic programmatic approach being implemented** of the Yangtze River Economic Belt initiative **to maximize catalytic and systemic impacts** through targeted and concentrated investments in the Yellow River Ecological Corridor – two significant economic and ecological regions in the PRC

EARD's program will focus on Environmentally Sustainable Development (Pillar1), Climate Change Adaptation and Mitigation (Pillar2), with an emphasis on private sector solutions and innovative finance with PSOD.

Alignment with ADB Strategy 2030 - OP1, OP3, OP4, OP5 and OP6



Rural Vitalization Strategy and ADB's Priority Areas of Interventions



MOU between ADB and the Agricultural Development Bank of China

Signed	26 August 2021
Form of intervention	Rural infrastructure, environmental improvement and agribusiness value chains development
Preferred interventions	Knowledge solutions and co-financing of high-quality, innovative green agricultural and rural vitalization projects

MOU between ADB and NDRC/MOF to support PRC's Rural Vitalization Strategy

Signed	29 August 2018
Indicative budget	\$6.0 billion from ADB, PRC and development partners
Form of intervention	Financial assistance and knowledge contribution
Preferred interventions	Catalytic, innovative, and adoption of high-level technologies

PRC Climate Change Goals and ADB Support

PRC Carbon Neutrality by 2060



By 2025
Lower carbon intensity



By 2030
Peak carbon



By 2060
Carbon neutrality

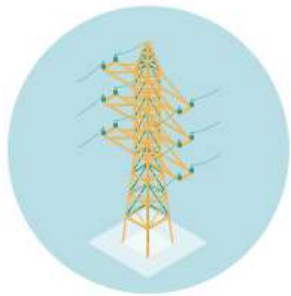
The National Strategy on Climate Change Adaptation 2035 (NSCA 2035 - ADB supported)

- Strengthen climate change monitoring, early warning, and risk management; Improve the climate adaptability of natural systems; Improve climate adaptability of economic and social systems; Construct regional structures adaptive to climate change
- Promote the use of nature-based solutions for integrated flood risk management and other adaptive solutions
- Support implementation of the Strategy 2035 – TA subproject focusing on developing a YREC climate change action plan
- ADB projects mainstream NSCA 2035 through design, institutions and implementation

The 14th Five-Year Plan's climate-related targets for 2025



Reduce carbon intensity by **18%** from 2020 levels



Reduce energy intensity by **13.5%** from 2020 levels



Increase forest coverage to **24.1%**



Increase share of non-fossil sources in the energy mix to around **20%**



Water and natural capital management, biodiversity conservation, and nature-based solutions

- Wetlands and forest restoration and conservation
- Supporting ecological protection and enhancing basin biodiversity
- Comprehensive water resources management to improve quality, quantity and allocation



Sustainable and efficient agriculture and value chains

- Enhancing efficiency and productivity of agricultural water use
- Piloting circular and climate-smart agricultural best practices
- Agricultural non-point source pollution control
- Application of ICT to enhance market connectivity



Climate change mitigation and adaptation

- Strengthening climate resilience and risk management frameworks and policy
- Integrated approaches for basin-level flood and disaster risk management
- Use of climate-smart agricultural and value chain practices
- Use a landscape approach to integrate natural, social and economic considerations to achieve climate change goals



Integrated urban-rural green development and circular economy

- Improved wastewater and solid waste management
- Rural vitalization and integrated economic development and pollution mitigation (air, water, soil, marine)
- Focus on the 3 Rs and transforming waste to a resource



Institutional Strengthening

- Improved governance and institutions
- Policy reforms and incentive mechanisms
- Cooperation frameworks and enabling environments



Innovative Approaches

- Technology
- Integrated solutions
- Project pilots
- Catalyze change at scale
- **Private sector solutions**
- **Innovative finance**
- Gender mainstreaming



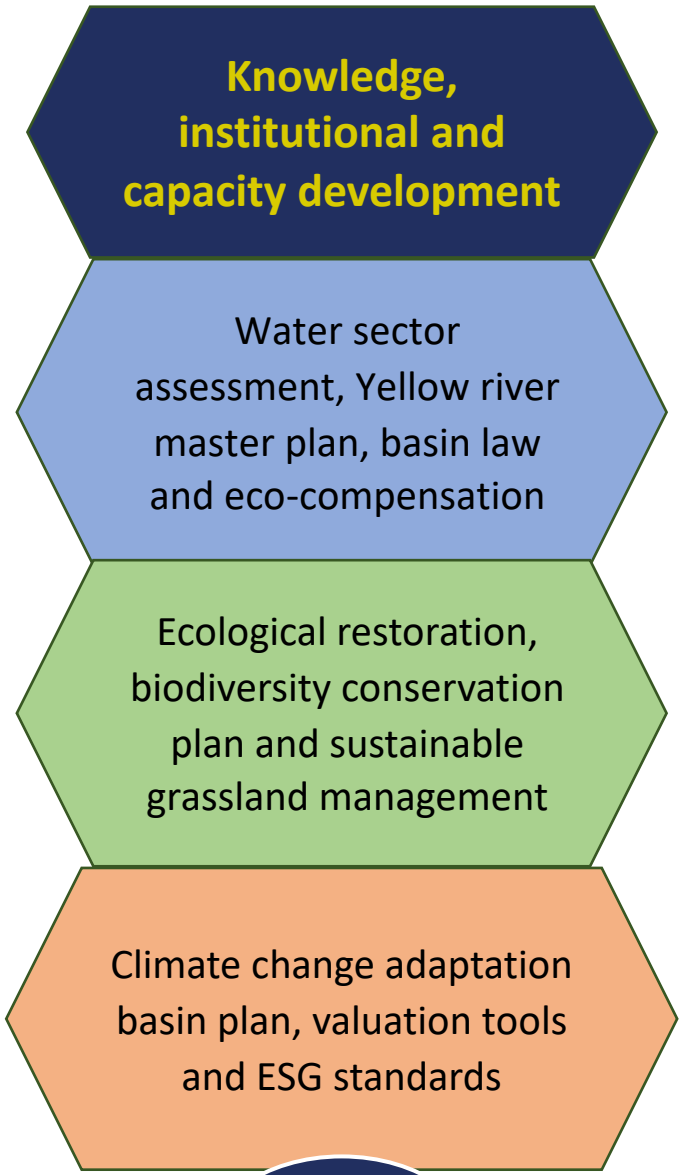
Knowledge Management

- High-quality knowledge generation and dissemination
- Capacity building
- Regional cooperation
- Multi-stakeholder platforms
- Strategic partnerships

Large Knowledge Program to Leverage Lending

- 1. Policy reforms and institutional strengthening**
- 2. Innovative technologies and integrated approaches**
- 3. Knowledge, partnerships, and private sector engagement**

- 13 subprojects in key thematic areas of the YREC Program
- \$ 3.8 million
- December 2020 to November 2024



HIGHLIGHTS OF ADBs TECHNICAL ASSISTANCE WORK SO FAR

1. INSTITUTIONS AND GOVERNANCE

2. BIODIVERSITY AND NATURAL CAPITAL

3. ECO-COMPENSATION AND VALUATION

4. CLIMATE CHANGE ADAPTATION



Key drivers for legislative reform

Ecological and environmental degradation are significant challenges

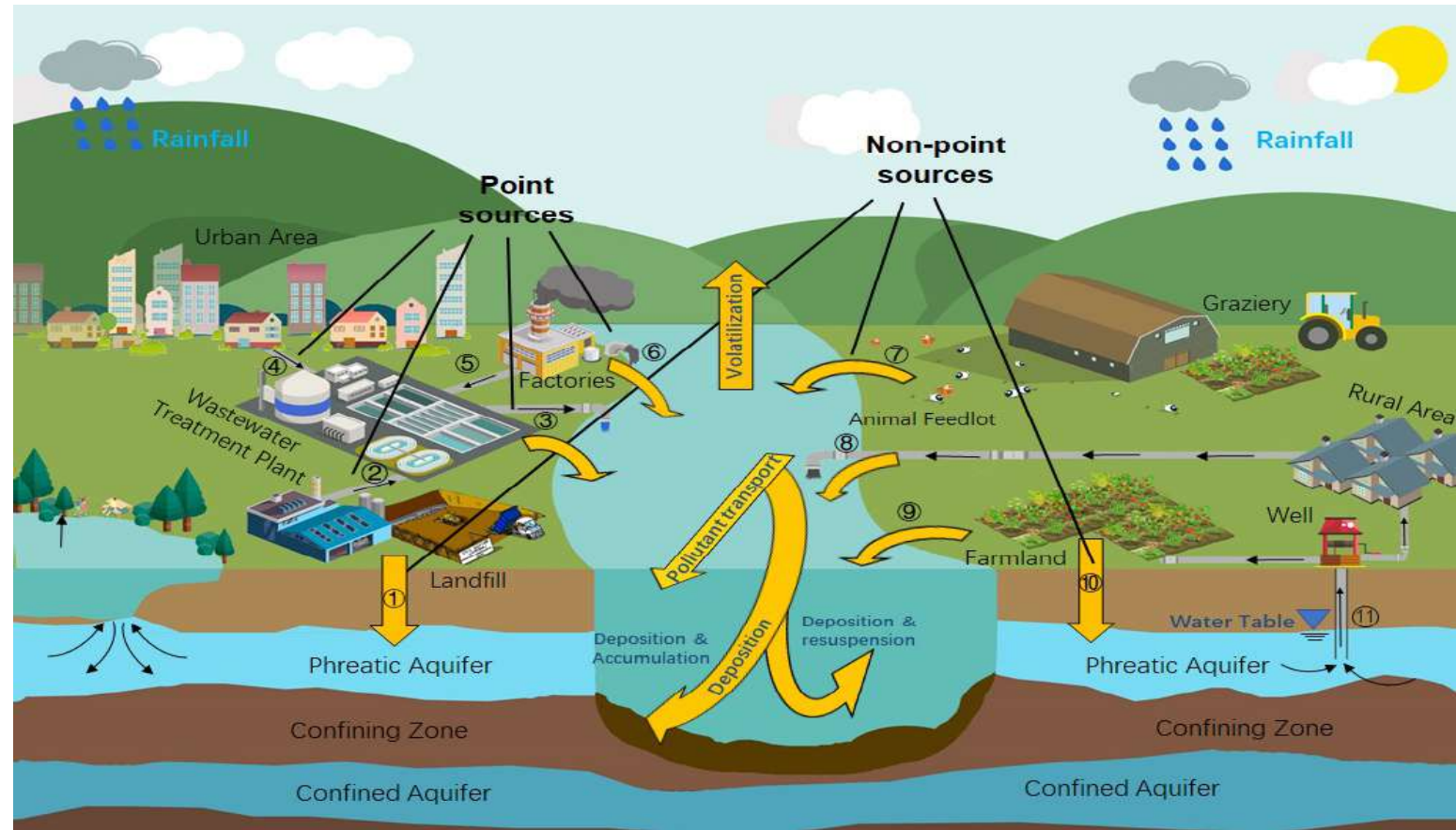
- Weak ecological protection measures and increasing ecological and environmental degradation
- Water pollution is significant, with annual sewage discharge in the basin two-thirds of the total sewage discharge in PRC, and discharge intensity per unit area is twice the national average
- Slow transformation of industrial areas along the river and inadequate drivers and incentives for green development

Lack of overarching legal framework for effective basin-wide protection

- Legal and regulatory mechanisms are inconsistent and scattered, lacking role clarity and clear enforcement authority, e.g.
- Conflicts between the Water Law and the Water Pollution Prevention Law in the definition of water resources protection and management functions, and lack of effective mechanisms for negotiation and settlement of inter-provincial water pollution control disputes
- The Flood Control Law and the Water Pollution Prevention Law are not unified in the implementation of flood control planning

1. INSTITUTIONS AND GOVERNANCE

- The **Yangtze** and **Yellow River basins** are the two largest river basins in PRC
- Facing significant environmental challenges
 - Lacking integrated and systemic protection; degraded ecosystems and ecology
 - Large amount of water pollutants, latent environmental risks; unbalanced industrial structure that pays little heed to green development.
- Existing governance system and legal provisions are inadequate to support the needs for environmental protection and overall coordinated management



- The **Yangtze River Protection Law** represents a landmark legislation which will serve as a model for designing legislation to protect other river basins, including informing the development of the Yellow River Law
- Establishes a **legal framework** for implementing actions towards achieving national carbon neutrality targets and demonstrating commitment to the Paris Climate Agreement
- Challenges lies ahead in effective implementation and enforcement, with further revision and amendments expected

KEY POINTS

- The Yangtze River Protection Law (YRPL) was adopted on 26 December 2020 by the Standing Committee of the National People's Congress and came into force on 1 March 2021.
- The YRPL represents a landmark legislation to strengthen environmental protection and ecological restoration of a specific river basin in the People's Republic of China (PRC).
- Lessons and experiences from the legislative reforms reflected in the YRPL will serve as an important model to share knowledge and inform legislative frameworks planned for other river basins in the PRC, including the Yellow River basin, and for river basins in other developing member countries.

Yangtze River Protection Law of the People's Republic of China: Overview of Key Provisions and Policy Recommendations

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INTRODUCTION

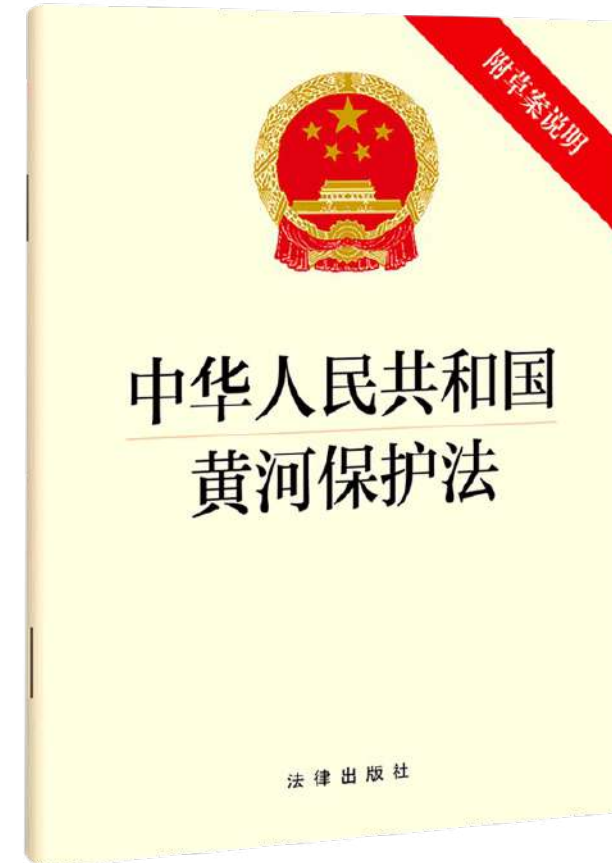
This brief presents an overview of the policy recommendations prepared under a technical assistance (TA) project of the Asian Development Bank (ADB), which provided technical support and policy advice in the formulation and design of the Yangtze River Protection Law (YRPL), 2020 of the People's Republic of China (PRC).¹ The YRPL represents a legislative landmark for strengthening policy and regulatory frameworks to achieve environmental protection and Sustainable Development Goals in the PRC's largest and most significant river basin.²



1. INSTITUTIONS AND GOVERNANCE

Yellow River Protection Law

- The law is a great achievement and significant milestone towards improved basin governance
- Preparing for law enforcement
 - Revision and repeal of inconsistent administrative regulations and rules by central and local governments
 - Formulation of supporting regulations and rules as mandated by the law
- Collect information and experiences to prepare for future amendment

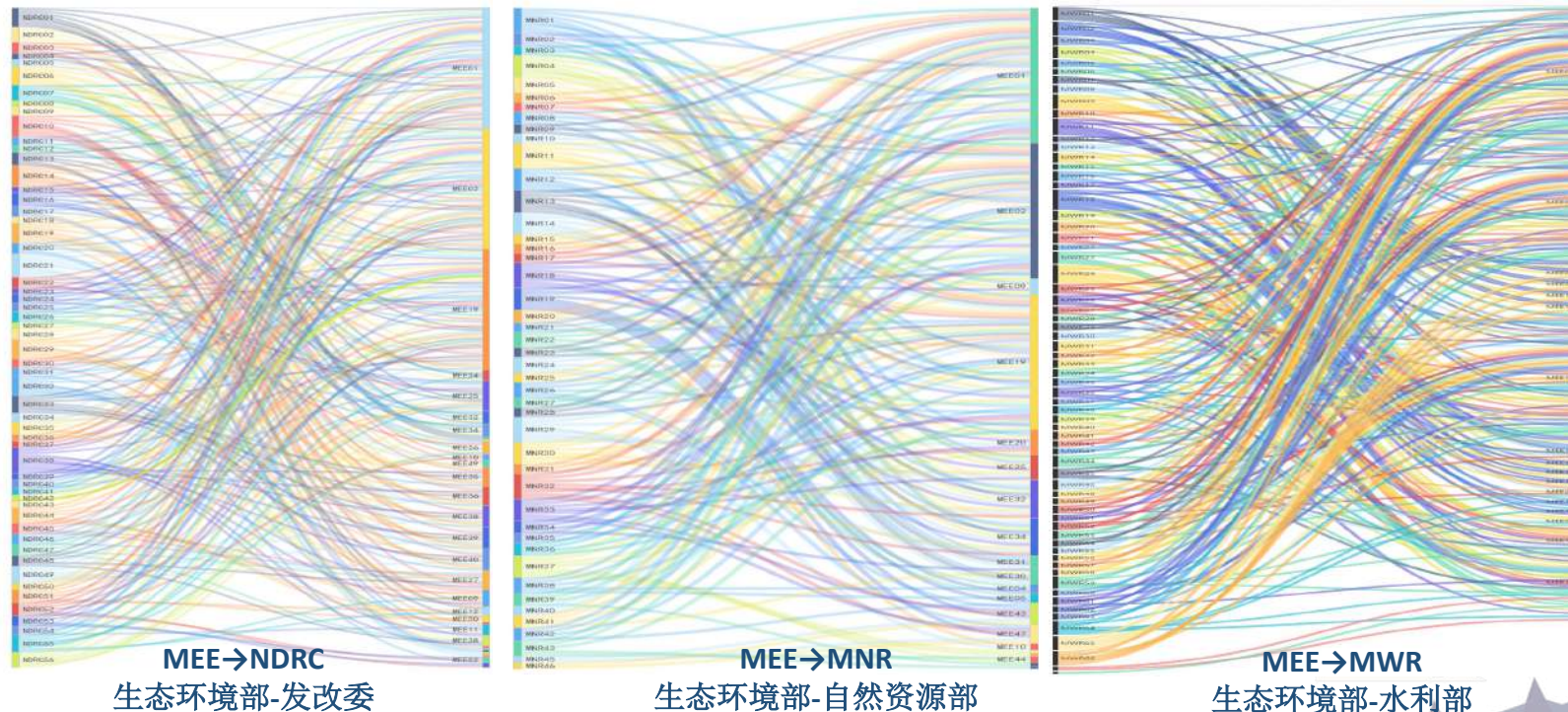


1. INSTITUTIONS AND GOVERNANCE

Institutional coordination towards harmonized basin strategies

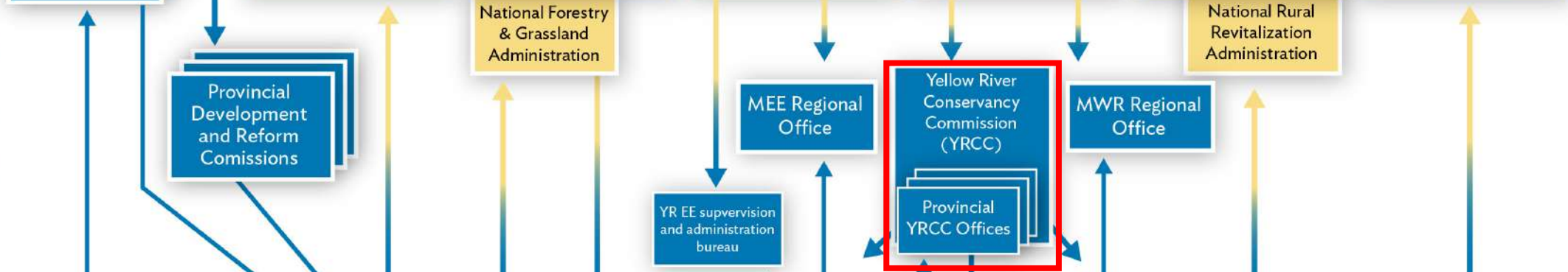
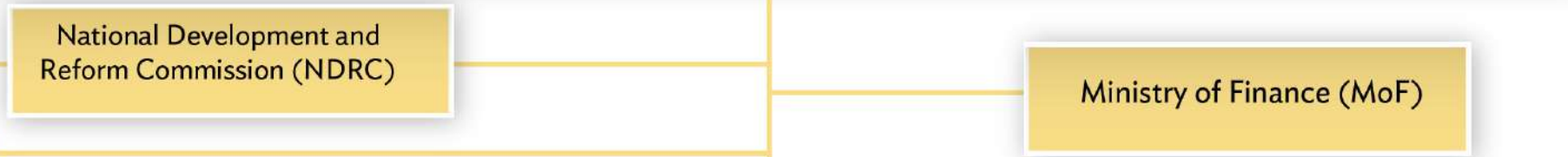
- A complex web of ministries and provinces
- Sometimes competing interests and priorities
- Information flow and engagement is crucial for harmonized basin approach

Consistency Analysis – MEE and MWR correlate & cooperate more?
政策一致性分析 – 生态环保部与水利部关联与合作更多?



State level
Provincial level
Sub-provincial level

CPC Central Committee



2. BIODIVERSITY AND NATURAL CAPITAL

- The Yellow River basin supports globally important biodiversity
- YREC subproject led by the **Henan Provincial Forestry Administration** to identify biodiversity values, conservation priorities, and preparation of a biodiversity strategy and action plan for the Yellow River basin within Henan Province
- To ensure a holistic approach the project includes the assessment of **climate change impacts**, environmental flows, **evaluation of ecosystem services**, **natural capital values and financing**
- **Biodiversity strategy and action plan** to provide a blueprint to protect, manage and/or expand key sites for biodiversity
- support **conservation planning** at the provincial and national levels and provide a model for sub-watershed conservation planning for other parts of the basin, the PRC, and Asia-Pacific region.



The **great bustard** (*Otis tarda*)
Status: vulnerable

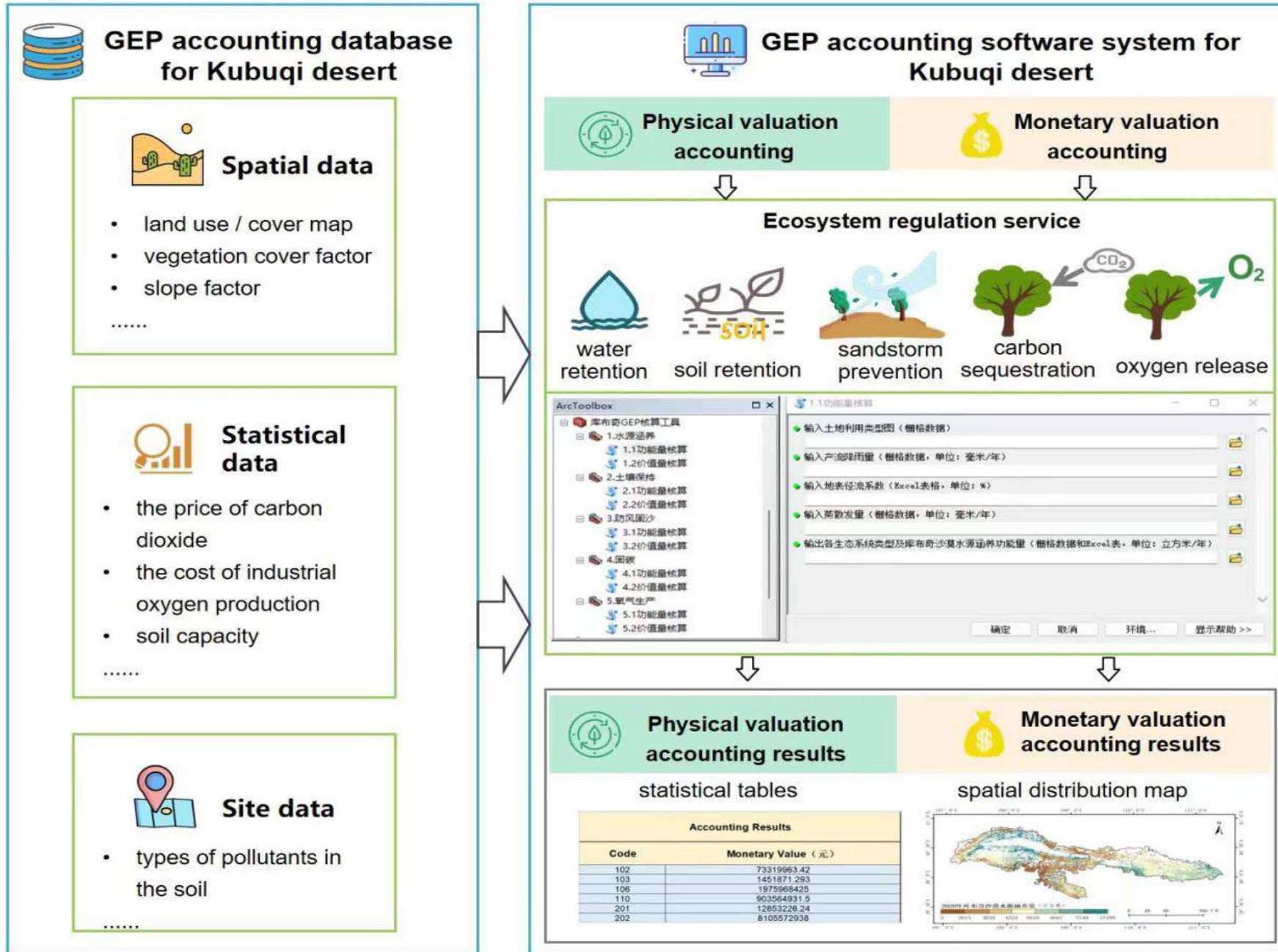
3. ECO-COMPENSATION AND VALUATION

- Ecological Valuation and Compensation Mechanisms in the Kubuqi Desert
- Capacity building for ecological products valuation in the forestry and grassland departments of the Inner Mongolia Autonomous Region
- **Kubuqi Desert ecological valuation framework** for ecosystem services valuation and methods
- Comprehensive technical guidelines and valuation software for ecological valuation of the Kubuqi Desert
- Climate risk and vulnerability with water resources assessment demand in the Kubuqi Desert
- **Ecosystem valuation and cost-benefit analysis** on desertification to improve local capacity



The **Kubuqi Desert** was elected as a *UNEP Eco-economic Demonstration* project in 2014

3. ECO-COMPENSATION AND VALUATION



4. CLIMATE CHANGE ADAPTATION

Planning for climate adaptation and resilience in the Yellow River basin (MEE – Climate Change Department)

Climate risk assessment and recommendations on adaptation measures



- Quantify climate risks in the upper, middle and lower reaches
- Rank threatened ecosystems and sensitive socio-economic sectors
- Prioritize the most vulnerable sectors
- Identify adaptation measures with mitigation co-benefits
- Gender and social inclusion

Yellow River basin adaptation plan (YRBAP) aligned with the PRC's NSCA 2035

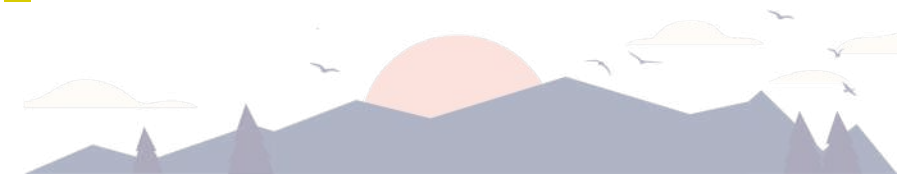


- Review of sector-relevant policies and regulations
- Conduct a stakeholder assessment
- Prepare a draft YRBAP including an implementation workplan, proposed institutional roles of key government agencies, a monitoring framework, an analysis of costs

Knowledge and capacity on adaptation planning and resilience



- Conduct a capacity building program to train sector agencies on the YRBAP
- Conduct a regional stakeholder workshop to present the plan
- Raise public awareness on climate change risks and adaptation measures proposed for the Yellow River basin



- 1. Silk Road Ecological Protection and Rehabilitation Project**
\$200 million ADB; \$335 million total (EAER - 2021)
- 2. Gansu Environmentally Sustainable Rural Vitalization and Development Project**
\$150 million ADB; \$300 million total (EASI - 2022)
- 3. Green Farmland Demonstration and High-Quality Agricultural Development Program in Yellow River Basin**
\$200 million ADB; \$435 million total (EAER - 2022)
- 4. Shanxi Changzhi Low-Carbon Climate-Resilient Circular Economy Transformation Project**
\$300 million ADB; \$500 million total (EASS - 2023)
- 5. Shanxi Low-carbon and Inclusive Rural Development Project**
\$160 million ADB; \$602 million total (EASI - 2023)
- 6. Shandong Qixia Ecological Conservation Demonstration Project**
\$150 million ADB; \$300 total (EAER – 2024)

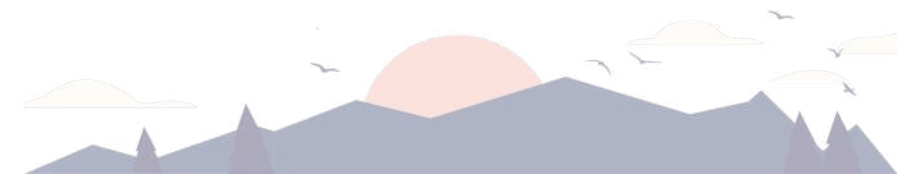
~ 1.8 billion investment (~\$1.1 billion ADB investment)



EXAMPLE: Silk Road Ecological Rehabilitation and Protection Project (Approved in 2022)

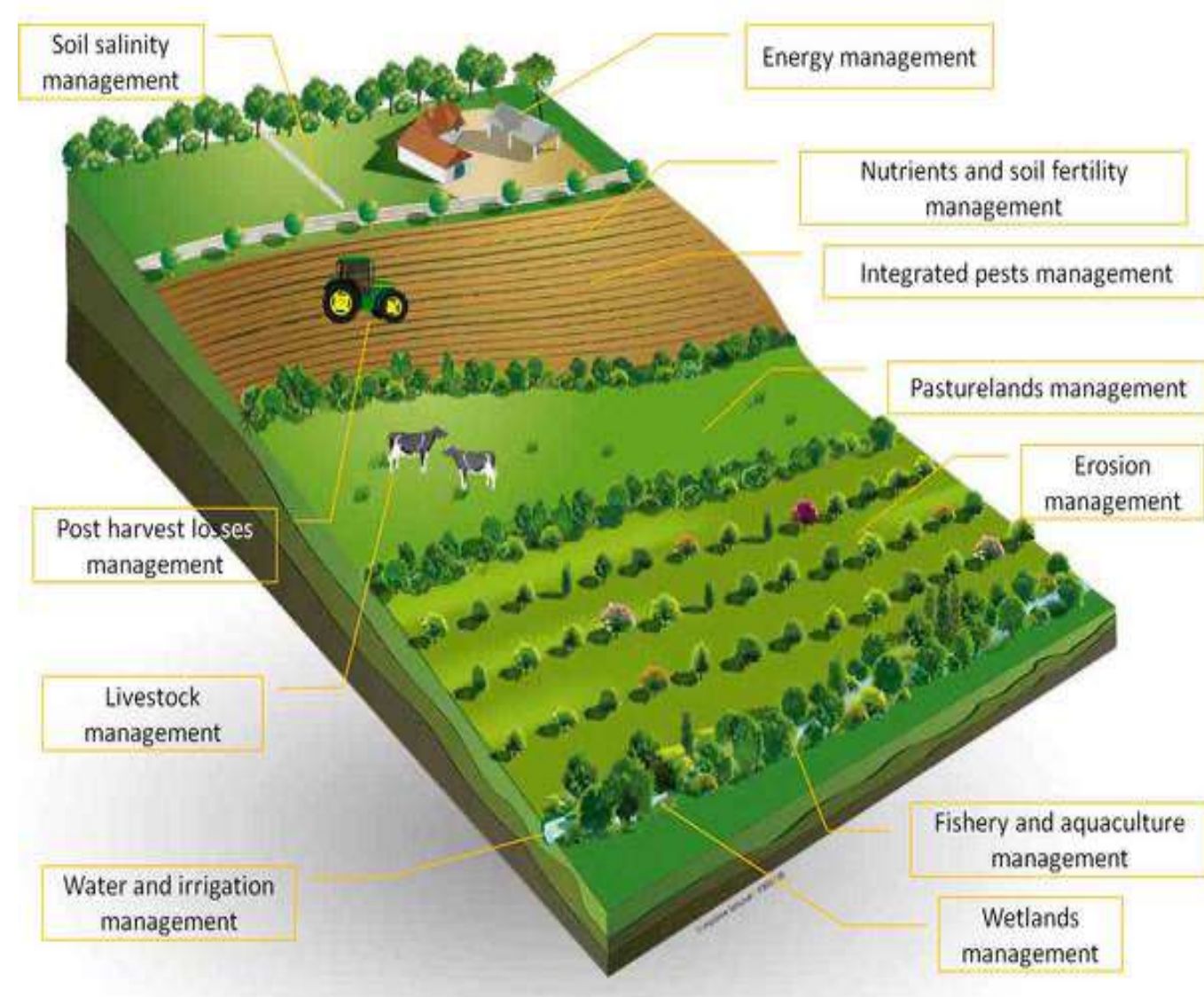
Rationale: Demonstrate integrated ecosystem management and multifunctional benefits of climate resilient, community-based forestry and wetland restoration and protection.

- **Institutional strengthening** through improved trans-provincial coordination mechanism for protection of fragile ecosystems involving local community stakeholders
- **Disseminate knowledge** of the landscape support systems (forest planning and management) and interaction between system elements with other areas
- **Improved climate-resilient forestry** planning supported by real-time data collection and monitoring using high-level technology
- **Enhance the multifunctional benefits** of forests and wetlands by restoration, afforestation, construction and by diversifying rural livelihood opportunities through ecotourism development and environmental education.



EXAMPLE: Green Farmland Demonstration and High-Quality Agricultural Development Program (2022)

- **Modality:** Sector-based project approach for flexible implementation
- **Sites:** 24 counties in seven provinces 7 provinces within the Yellow River basin
- **Impact:** Resilient ecological protection and security in the Yellow River basin achieved
- **Outcome:** Sustainability of green agricultural production systems improved
- The project shifts focus of ADB financing from agriculture infrastructure to a production system, and value chain approach balancing the importance of agriculture, value addition and the environment complemented by institutional strengthening.



EXAMPLE: Shandong Qixia Ecological Conservation and Demonstration Project

Impact: Ecological restoration and ecological quality improvement in key regions crucial to national ecological security promoted

Outcome: Ecological resilience and rural livelihoods in Yantai City enhanced

- **Output 1:** Institutional capacity and knowledge on integrated ecological management strengthened
- **Output 2:** Green circular agriculture model established
- **Output 3:** Natural capital protected and rehabilitated



Shandong Qixia Ecological Conservation Demonstration Project



Looking forward: YREC actions (2023- 2025)

1. To provide a **platform** in which the PRC partners (ministries, administrations, provinces, etc.) socialize and discuss the issues in the Yellow River they jointly will have to solve
2. To disseminate **YREC results**, for technical assistance and loan projects
3. For ADB, to learn from the PRC partners about the challenges in the basin
4. **South-south cooperation** among PRC and other ADB regional developing member countries
5. To **explore opportunities of cooperation, knowledge sharing and ADB financial support** in the context of the current ADB-PRC Country Partnership Program (2021-2025)



Learn more about ADB support to YREC



ADB loan project: Yellow River Basin Green Farmland and High-Quality Agriculture Development Project



ADB loan project: Silk Road Ecological Rehabilitation and Protection Project



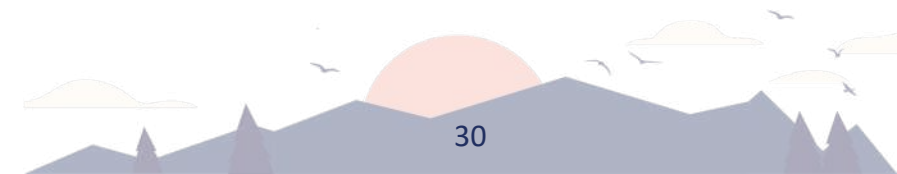
ADB knowledge technical assistance (13 sub-projects across four areas of intervention)



ADB commitment: UN Water Agenda



Policy brief Scaling Natural Capital Investments in the Yellow River Ecological Corridor





Thank you

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