

# Programmatic Management of Natural Capital from Source to Sea The Yellow River Ecological Corridor Program (ADB-YREC)



**INBO Basin Segment Day: High Level Session on Better Integration of Ecological Security in Basin Level Approaches**

10<sup>th</sup> World Water Forum, Nusa Dua, Indonesia, 22 May 2024

**Tom Panella, PhD**

**Chair of the Action Platform for Source to Sea Management (hosted by SIWI)**





# Ecological Corridor as Basis for Sustainable Development

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:**

- maintain biodiversity
- 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 mitigate climate change impacts



An Ecological Corridor is a space that is governed and managed over the long-term to maintain or restore ecological connectivity and ecosystem integrity.

# 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.**

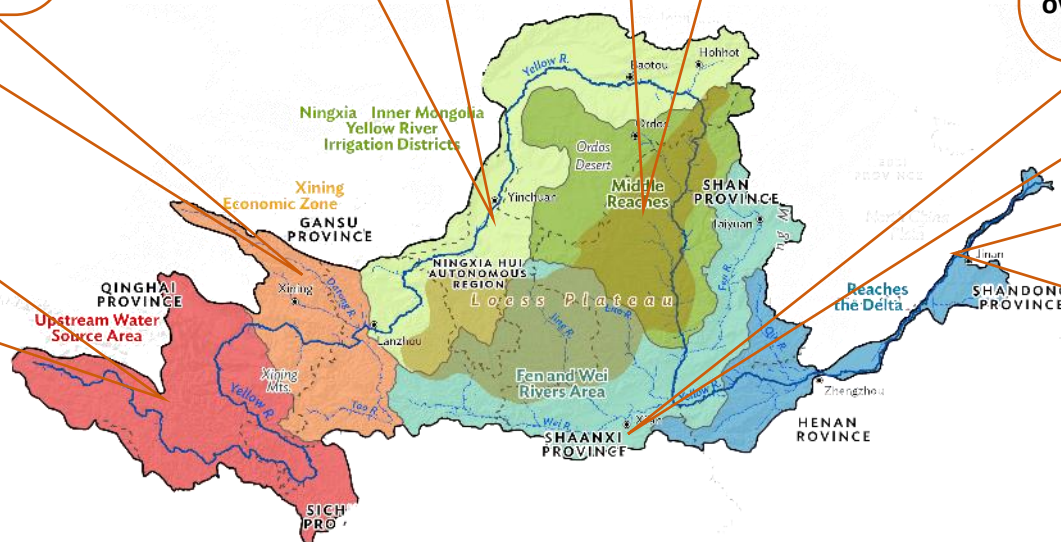
**Ningxia-Inner Mongolia irrigation area:** Arid region with **desertification affecting important agricultural development areas**, especially grain production.

**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.





## ADB's YREC Program's Strategic Approach

- **An integrated approach from source to sea** through natural resources management, environment and ecological conservation, and climate change to support high-quality, green development, institutional and policy reforms, and leveraging knowledge and innovation.
- To **protect and restore the Yellow River basin's diverse and fragile aquatic and terrestrial ecological zones and ecosystems** and to enable more equitable and sustainable rural-urban economic development across the basins
- Expand on operational experience of a **strategic programmatic approach** from in the Yangtze River basin **to maximize catalytic and systemic impacts through targeted project investments** through lending and non-lending support for a significant economic and ecological region to support the environment, green growth and the generation of regional and global public goods.





## Four YREC Thematic Areas for ADB Engagement: Aligned with ADB and PRC Priorities, Strategies and Policies



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

- Wetlands, grassland 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, climate-smart and regenerative agricultural best practices
- Agricultural non-point source pollution control
- Application of ICT to enhance market connectivity





# Four YREC Thematic Areas for ADB Engagement: Aligned with ADB and PRC Priorities, Strategies and Policies



## 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
- Improve social and economic development equity from upstream to the Bohai Sea



# River Basin Framework Approach – Three Principles



## Institutional Strengthening

- Improved governance and institutions – integration vertically and horizontally
- Policy reforms and incentive mechanisms – Yellow River Basin Law
- Cooperation frameworks and enabling environments – supporting Yellow River Basin Conservancy Commission
- Provide a convening platform for all stakeholders



## Innovative Finance and Approaches

- Private sector solutions
- Eco-compensation and payment for eco-system services
- FIL for climate and nature objectives
- Land value capture for environmental finance
- Applied data and technology – decision support
- Project pilots
- Catalyze change at scale



## Knowledge Management

- High-quality knowledge generation and dissemination
- YREC Seminar Series
- International PES and Eco-compensation Conference
- Capacity building as all levels
- Regional cooperation
- Multi-stakeholder platforms
- Strategic partnerships



# YREC ADB Non-lending and Lending Value Addition

## Large Knowledge Program to Leverage Lending

1. Policy reforms and institutional strengthening
2. Innovative finance and integrated approaches
3. Knowledge, partnerships, and capacity building

ADB Non-lending \$4.8 million

15 TA subprojects in thematic areas of the YREC Program to innovate investments

December 2020 to November 2027

ADB Lending - \$1.1 billion – 6 projects to date  
Total investment over double this amount

Knowledge,  
institutional and  
capacity development

Water sector  
assessment, Yellow river  
master plan, basin law  
and eco-compensation

Ecological restoration,  
biodiversity conservation  
plan, protected areas  
planning, sustainable  
grassland management

Climate change adaptation  
basin plan, valuation tools  
and ESG standards

Cluster  
KSTA

ADB





# Thank You

Tom Panella

[tpanella@gmail.com](mailto:tpanella@gmail.com)

For the latest information on the S2S Platform visit:  
<https://siwi.org/source-to-sea-platform/>

Subscribe to our newsletter and follow us on **LinkedIn** or **X**

Or contact us: [s2splatform@siwi.org](mailto:s2splatform@siwi.org) ; [ruth.mathews@siwi.org](mailto:ruth.mathews@siwi.org)