Program Information Documents (PID)

Appraisal Stage | Date Prepared/Updated: 28-Jun-2023 | Report No: PIDA278548

BASIC INFORMATION

A. Basic Program Data

Country	Project ID	Program Name	Parent Project ID (if any)
China	P178401	China: Yellow River Basin Ecological Protection and Environmental Pollution Control Program (Gansu and Shandong)	
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
EAST ASIA AND PACIFIC	24-Jul-2023	26-Oct-2023	Environment, Natural Resources & the Blue Economy
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Program-for-Results Financing	People's Republic of China	Regional Economy Department of NDRC, Gansu Provincial Department of Water Resources, Shandong Provincial Department of Natural Resources	

Proposed Program Development Objective(s)

Program Development Objective is to improve land and water resource management and restore degraded ecosystems in selected areas in the Yellow River Basin in Gansu and Shandong Provinces.

COST & FINANCING

SUMMARY (USD Millions)

Government program Cost	1,715.00
Total Operation Cost	1,715.00
Total Program Cost	1,715.00
Total Financing	1,715.00
Financing Gap	0.00

FINANCING (USD Millions)

Total World Bank Group Financing	300.00
World Bank Lending	300.00

Total Government Contribution	1,415.00

Decision

The review did authorize the team to appraise and negotiate

B. Introduction and Context

Country Context

1. **Large river basins hold huge socio-economic and ecological importance.** The world's ten most populous river basins are home to 30 percent of the global population and will account for almost a quarter of global GDP by 2050.[1] River basins provide important ecosystem services that are critical to local and global economies. These include: (a) provisioning of water, food, and other products critical to society; (b) supporting aquatic, riparian and terrestrial biodiversity; and (c) carbon sequestration and protection from climate-exacerbated natural disasters. In particular, China's large number of river basins, including some of the world's longest rivers and largest wetlands (65.9 million ha or 10 percent of the global total), provide critical habitats for precious and productive ecosystems that support socio-economic development and harbor biodiversity of global significance.

2. **Ecosystems in China's river basins are under increasing threats from declining water security caused by water scarcity and water pollution, land use change, and climate change, and the country is committed to taking actions.** Projections indicate a decrease in precipitation across western China under all climate scenarios, thereby increasing the likelihood of extreme weather events, particularly extreme temperatures, droughts. Consequently, water security is becoming increasingly vulnerable in China, particularly in the northern and northwestern regions where available water is anticipated to decrease by up to 24 percent by 2050.[2] Water security serves as a foundation for essential ecosystem services, particularly in water-scarce river basins such as the Yellow River Basin (YRB). As a result, water conservation and ecosystem restoration have become crucial tasks in river basin management throughout China. Addressing these challenges is imperative to ensure the sustainability and resilience of ecosystems, as well as to safeguard the vital services they provide within river basins. China has developed national strategies for environmental protection and sustainable development. In 2020, China made additional commitments to peak CO_2 emissions by 2030 and achieve carbon neutrality by 2060. China is actively promoting ecosystem restoration and biodiversity conservation, as evidenced by its presiding role in the fifteenth Conference of the Parties (COP-15) Convention on Biological Diversity in 2022.

Sectoral and Institutional Context

3. **The Yellow River Basin (YRB) is one of the most important river basins in both China and East Asia, providing important ecosystem services for socio-economic development and a critical biodiversity corridor in the East Asian-Australasian and Central Asian flyways of global migratory birds.** As the country's second-longest river, the Yellow River flows through nine northern provinces and is regarded as the cradle of Chinese

[1] According to research by Frontier Economics laid out in a study commissioned by HSBC in 2012.

[2] Mo, Xing-Guo, Shi Hua, Zhong-Hui Lin, Su-Xia Liu, and Jun Xia. 2017. "Impacts of Climate Change on Agricultural Water Resources and Adaptation on the North China Plain." *Advances in Climate Change Research* 8 (2): 93–8 (link)

civilization.[3] These nine provinces have a total population of 420 million (30 percent of the national total) with 160 million living within the basin (12 percent of the national total). It annually generates a GDP of over US$4.4 trillion (25 percent of the national total and nearly 5 percent of the world's GDP) and produces more than one-third of the total national grain and meat. The YRB also hosts biodiversity hotspots of global importance, including eight wetlands – one of which is the Yellow River Delta – recognized by the Ramsar Convention on Wetlands and identified as a national conservation priority in the National Biodiversity Strategy and Action Plan. The Delta is home to hundreds of species and provides critical wintering, breeding, and stop-over sites for millions of domestic and migratory birds.[4]

4. **Water scarcity, land conversion and unsustainable use, the spread of invasive species, and climate-induced natural disasters cause ecosystem degradation and threaten critical ecosystem services in the YRB, posing serious challenges to the inclusive and sustainable development of the basin.** Water scarcity is a defining challenge for YRB, which has very limited water resources, with a total available flow of 64.7 billion cubic meters (less than 7 percent of that of the Yangtze River and just 2 percent of the national total). The water resources development and utilization rate of YRB has reached 80 percent, significantly exceeding the nationally determined sustainable utilization threshold of 40 percent.[5] Furthermore, in the upper reaches, overgrazing and agricultural expansion as well as pollution from human activities have led to degradation of the natural environment, exacerbating soil erosion, nutrient and agro-chemical runoff, and water pollution. The basin's freshwater biodiversity is heavily impacted,[6] with the richness of fish species declining 35.4 percent over the past five decades.[7] Moreover, widespread invasive species, such as Saltmarsh Cordgrass, threaten local ecosystems and are associated with reduced freshwater flows to the Delta. The YRB is also vulnerable to extreme weather events and natural disasters, with these expected to worsen due to climate change.

5. **China declares the ecological protection and high-quality development (EP&HQD) in the YRB a national strategy in 2019.** The national strategy for EP&HQD in the YRB was officially declared in 2019, followed by a national YRB EP&HQD Plan (hereafter referred to as 'the YRB Plan') issued in 2021 which is an overarching document emphasizing ecological protection as a pre-requisite for high-quality development in the YRB that provides the guiding principles. A national Leadership Group–headed by the vice premier and housed in the National Development and Reform Commission (NDRC) –was established at the same time to coordinate cross-sector and inter-jurisdictional issues for implementing the YRB Plan. Provincial governments are responsible for developing and implementing provincial plans (including various sectoral plans), and municipal and county governments are responsible for implementing programs and activities at the local level. The country's 14th Five-Year Plan for National Economic and Social Development 2021-2025 and its Long-term Vision for 2035, both announced in 2021, set ecological protection, natural resource management, and climate change adaptation as top national priorities. The Yellow River Protection Law was approved by the National Congress in October 2022, further providing the legislative foundation for implementing the YRB plan.

[3] These nine provinces/autonomous regions from upstream to downstream are Qinghai, Sichuan, Gansu, Ningxia, Inner Mongolia, Shaanxi, Shanxi, Henan and Shandong.

[4] China Ministry of Ecology and Environment (MEE). 2018. Key River Basin Biodiversity Protection Plan.

[5] Interpretation of the Water Law of the People's Republic of China. National People's Congress. http://www.npc.gov.cn/zgrdw/npc/flsyywd/xingzheng/2003-09/17/content_321402.htm

[6] Zhao, Y et al. 2020. "Species Diversity and Conservation of Freshwater Fishes in the Yellow River Basin." *Biodiversity Science* 28 (12): 1496 -1510.

[7] Xie, J et al. 2018. "Fish Assemblage Changes over Half a Century in the Yellow River, China." *Ecology and Evolution* 8: 4173– 4182.

PforR Program Scope

6. **Guided by the YRB Plan, Gansu and Shandong developed their respective provincial 'YRB EP&HD Plans' (hereafter the Gansu YRB Plan and Shandong YRB Plan) for 2021 - 2030.** These provincial plans are further underpinned by a series of sector-specific implementation plans, with municipal and county governments responsible for their implementation. This proposed PforR Program will support a subset of activities from the provincial programs in Gansu and Shandong provinces. The Gansu YRB Plan calls for a new and integrated model for natural resource and ecosystem management in the upper reach of the Yellow River. Specifically, it outlines tasks in twelve priority areas, including enhancing water conservation capacity through ecosystem restoration; promoting soil and water conservation in the Loess plateau; promoting integrated environmental pollution management; strengthening water saving; and improving resilience towards climate-exacerbated disasters. The Shandong YRB Plan aims to protect and restore the Yellow River Delta and calls for a new and integrated model for natural resource and ecosystem management. Specifically, it promotes activities in nine priority areas, including building an ecological corridor along the lower reaches of the Yellow River, promoting integrated environmental pollution management, strengthening water conservation, and improving resilience towards climate-exacerbated disasters. Government programs have been developed in each of the provinces to implement their provincial YRB Plan. Each provincial Government program supported by the proposed PforR Program includes a set of investments and technical assistance activities that meet two criteria: (a) included within the provincial 14th Five Year Plan project list; and (b) aligned with the provincial YRB plans.

7. **The proposed PforR Program ("the Program") is intended to support institutional interventions at the provincial level and direct investments for ecosystem restoration and protection in selected sub river basins in Gansu and Shandong Provinces.** Program areas in Gansu Province cover six counties in the municipalities of Baiyin, Dingxi, and Tianshui. Among them, Dingxi and Tianshui municipalities are in the Wei River basin (a main tributary of the Yellow River, which drains into Shaanxi Province), with activities supported under YRB (Henan and Shaanxi); Baiyin is in the Zuli River basin (another Yellow River tributary), in which water quality poses serious challenges for ecosystem restoration and protection that are compounded by limited flows. Program areas in Shandong Province cover the municipalities of Binzhou, Dongying, and Liaocheng. They cover the Yellow River delta and the main stem of the Yellow River; Dongying is located on the Yellow River estuary, while Binzhou and Liaocheng are upstream. In all, 14 counties (one in Binzhou, seven in Dongying, and six in Liaocheng) are included in the Program's geographical boundary.

8. **The proposed Program supports a subset of provincial YRB program activities in the Gansu and Shandong program areas with results expected under three Results Areas (RA)**. Three criteria were used to screen proposed activities to be included in the Program boundary: (a) Relevance - alignment with national priorities and the proposed development objectives of the Program; (b) Scalability - potential to be scaled up and replicated for greater impact; and (c) Risks - with activities that may involve high social and environmental risks being excluded.

- **RA 1: Implement sustainable land and water management practices.** This RA aims to address the drivers of ecosystem degradation, such as soil erosion, water pollution, fires, and forest pests, and to achieve soil and water conservation and water pollution reduction. It will support: (a) soil and water conservation measures (farmland terracing and slope stabilization) and reduction of soil erosion; (b) improved forest and grassland management (fire and disease prevention and control); (c) improved management of soil salinity; (d) reduced pollution discharged to river systems through improving township domestic wastewater management (through new and rehabilitated wastewater treatment plants and networks); (e) improved monitoring and capacity building for addressing pollution from livestock and other non-point

source agricultural sources.

- **RA 2**: **Restore degraded ecosystems.** This RA focuses on the restoration of critical ecosystems that have been degraded, including degraded wetlands, riparian zones, grassland and forest ecosystems. Critical ecosystems for prioritized restoration are identified through Technical Assessment to increase landscape-level ecosystem service values and biodiversity and climate co-benefits. It will support: (a) restoration of wetlands (invasive species management including of plants and animals, restoration of coastal and riparian wetland ecosystems, and seagrass beds); (b) rehabilitation of river ecosystems, including river channel and riparian ecosystems, as well as flood plains; (c) reforestation and forest ecosystem restoration; and (d) grassland and other ecosystem restoration.
- **RA 3: Strengthen the capacity of integrated land and water resource management for ecosystem restoration and protection.** This RA aims to strengthen the government capacity of integrated landscape planning and decision-making for ecosystem restoration and protection. It will support: (a) development and approval of implementation plans for integrated landscape management for ecosystem restoration and protection in demonstration sub-basins, and technical guidelines at the province level; (b) piloting ecosystem health monitoring and evaluation systems; (c) improvement of female leadership in ecosystem protection, with more female forest, grassland, and wetland chiefs (including both official and civil chiefs); and (d) capacity improvement for government officials and practitioners.

C. Proposed Program Development Objective(s)

Program Development Objective(s)

9. Program Development Objective is to improve land and water resource management and restore degraded ecosystems in selected areas in the Yellow River Basin in Gansu and Shandong Provinces.

10. **PDO-level Indicators:**

a. Land area under sustainable landscape management practices (Corporate Results Indicator, Ha)
b. Reduced Pollutant loads (COD) entering rivers (Tons/year)
c. Areas of critical ecosystems restored (Ha), cumulative
d. Sequestered CO_2eq due to ecosystem restoration (tons/year)
e. Capacity strengthened for integrated landscape planning and decision-making for ecosystem restoration and protection in selected river basins

D. Environmental and Social Effects

11. **An Environmental and Social Systems Assessment (ESSA) was conducted to assess environmental and social (E&S) risks and the existing management systems applied to the Program.** In general, the Program is expected to bring significant E&S benefits by restoring forestry, grassland, and riparian ecosystems; controlling soil erosion; reducing sewage discharges, and reducing pollution impacts to river water quality in selected areas of the Yellow River Basin in Shandong and Gansu provinces. The ESSA concludes that China has established comprehensive systems to manage the Program-related E&S impacts/risks at the national, provincial, and local levels, with some gaps identified and recommendations made through implementing the Program Action Plans, including: (a) to better address the social risk management issues in the key project documents (e.g., Feasibility Study Report, Design, Social Stability Risk Assessment, etc.) covering risk screening analysis and mitigation measures, budget estimates, monitoring arrangements, and records of meaningful stakeholder consultation;

(b) to develop, within six months after effectiveness, and implement E&S management manuals for typical program activities; and (c) to include E&S considerations in planning and implementing non-physical activities on risk screening and stakeholder engagement.

12. **E&S screening of the proposed Program activities excludes those with high-risk potential to the environment and/or affected people and communities.** Excluded activities include those that may: (a) involve new or significant expansion of large-scale infrastructure; (b) involve significant conversion or degradation of critical natural habitats; (c) lead to significant adverse impacts on the health or safety of people or ecosystems; (d) result in significant negative changes to water quality or availability; (e) involve the acquisition of Basic Farmland; (f) involve changes of land use not compliant with national and local terrestrial and spatial planning; (g) result in large-scale land acquisition, resettlement, or access restrictions to land, water and/or natural resources that affect livelihoods; (h) require land acquisition, resettlement, or changes in land use (including through restoration) that leads to forced eviction; (i) lead to any other potentially significant E&S impacts requiring the development of an Environmental Impact Assessment report under China's existing legislation.

13. **With these exclusions, the overall E&S risk associated with the Program is considered Substantial.** The expected associated adverse E&S effects are largely temporary, construction-related, and site-specific, neither significant nor irreversible, and are expected to be readily avoided, minimized, and mitigated through known technologies. These E&S risks and impacts will be managed under existing and generally well-performing national, provincial, and local E&S management systems. The presence of ethnic minority populations (mainly Hui) within the Program areas in both provinces makes the contextual social risk Substantial. Neither OP/BP 7.50 Projects on International Waterways, nor OP/BP 7.60 Projects in Disputed Areas, will be triggered.

14. **Meaningful stakeholder engagement was conducted during ESSA preparation.** Since December 2022, relevant governmental authorities at provincial/city/county/district levels and local communities/villagers from the two provinces have been consulted in face-to-face meetings, through field visits, and online interviews to understand the Program-related E&S issues and the management practice. The draft ESSA report in Chinese was shared with the two provinces for comments in late March 2023, followed by consultation meetings in Gansu and Shandong in April 2023, and the feedback received was addressed in the current ESSA revision. The revised ESSA was disclosed locally on June 12, 2023 in Shandong and on June 16, 2023 in Gansu; as well as on the World Bank's website on June 12, 2023.

15. **Grievance redress.** Communities and individuals who believe that they are adversely affected as a result of a Bank-supported PforR operation, as defined by the applicable policy and procedures, may submit complaints to the existing program grievance mechanism or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address pertinent concerns. Project-affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted at any time after concerns have been brought directly to the Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the Bank's Accountability Mechanism, please visit https://accountability.worldbank.org. In parallel, communities and individuals who believe that they are adversely affected by the PforR operation may also submit complaints through the existing Grievance Redress Mechanism (GRM) at the community, village, and enterprise levels.

E. Financing

Program Financing

Sources	Amount (USD Million)	% of Total
Counterpart Funding	**1,415.00**	**82.51**
Borrower/Recipient	1,415.00	82.51
International Bank for Reconstruction and Development (IBRD)	**300.00**	**17.49**
Total Program Financing	**1715.00**	

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