

Project Administration Manual

Project Number: 53052-001
Loan Number: {LXXXX}
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People's Republic of China: Hunan Miluo River
Disaster Risk Management and Comprehensive
Environment Improvement Project

ABBREVIATIONS

ADB	– Asian Development Bank
BARA	– Bureau of Agriculture and Rural Affairs
BEE	– Bureau of Ecology and Environment
BOE	– Bureau of Education
BWR	– Bureau of Water Resources.
CBOF	– County Bureau of Finance
CPP	– community participation in procurement
CPS	– country partnership strategy
DMF	– design and monitoring framework
EIA	– environmental impact assessment
EMP	– environmental management plan
FCUP	– Foreign Capital Utilization Plan
FSR	– feasibility study report
GAP	– gender action plan
GPS	– global positioning system
GRM	– grievance redress mechanism
ha	– hectare
IEE	– initial environmental examination
km	– kilometer
kW	– kilowatt
LIBOR	– London Interbank Offered Rate
LIEC	– Loan Implementation Environmental Consultant
LURT	– land use right transfer
m ²	– square meter
m ³ /d	– cubic meter per day
MOF	– Ministry of Finance
NDRC	– National Development and Reform Commission
OCB	– open competitive bidding
PCG	– Pingjiang County Government
PDOF	– Provincial Department of Finance
PDRC	– Provincial Development and Reform Commission
PIC	– project implementation consultant
PIU	– project implementation unit
PLG	– project leading group
PMO	– project management office
PPMS	– project performance monitoring system
PRC	– People's Republic of China
PSA	– poverty and social analysis
QCBS	– quality- and cost-based selection
RFI	– Results Framework Indicator
RP	– resettlement plan
SDAP	– social development action plan
t/a	– tons per annum
t/d	– tons per day
TGs	– township government
TRTA	– transaction technical assistance
VCs	– village committees
YREB	– Yangtze River Economic Belt

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Project Administration Manual Purpose and Process

The project administration manual (PAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with the policies and procedures of the government and Asian Development Bank (ADB). The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.

The Pingjiang County Government, the project executing agency; and Pingjiang Project Management Office, the implementing agency, are wholly responsible for the implementation of ADB-financed projects, as agreed jointly between the borrower and ADB, and in accordance with the policies and procedures of the government and ADB. ADB staff is responsible for supporting implementation including compliance by the executing agency and implementing agencies of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At loan negotiations, the borrower and ADB shall agree to the PAM and ensure consistency with the loan agreement. Such agreement shall be reflected in the minutes of the loan negotiations. In the event of any discrepancy or contradiction between the PAM and the loan agreement, the provisions of the loan agreement shall prevail.

After ADB Board approval of the project's report and recommendations of the President (RRP), changes in implementation arrangements are subject to agreement and approval pursuant to relevant government and ADB administrative procedures (including the Project Administration Instructions) and upon such approval, they will be subsequently incorporated in the PAM.

I. PROJECT DESCRIPTION

1. The proposed project will promote rural vitalization and ecological protection by (i) instituting and applying international best practices for flood and integrated disaster risk management; (ii) improving access to safe drinking water and sanitation services for urban and rural residents; (iii) promoting circular agricultural development by linking sustainable livestock waste management and eco-farming; (iv) piloting green procurement practices and mainstreaming environmental education; and (v) enhancing institutional coordination capacity to maximize the project impact. The project is envisaged to serve as a model for counties facing climate change and ecological pressures in the Yangtze River Economic Belt (YREB), other parts of the People's Republic of China (PRC), and other developing member countries. The project leverages cofinancing from German development cooperation through KfW and counterpart financing from the Pingjiang County Government (PCG).

2. **Impact and outcome.** The project is aligned with the following impact: rural vitalization and ecological protection in the YREB realized.¹ The project will have the following outcome: rural living environment in Pingjiang County improved.

3. **Outputs.** The project will deliver four major outputs to address the key constraints.

4. **Output 1: Water-related disaster risk management strengthened.** This output will mitigate the potential impact of flooding on people's livelihoods and property, and the socio-economic consequences resulting from flood events. This output includes (i) construction of 38.9 kilometers (km) of ecological embankment and/or riverbank reinforcement in 12 towns along Miluo River in Pingjiang County to control flooding events; (ii) establishment of riparian buffers from the edge of riverbank by using nature-based solutions to control water and soil losses; (iii) restoration and protection of Huangjin River National Wetland Park to enhance biodiversity conservation, increase flood storage and water quality purification capacity as well as to promote environmental education; and (iv) establishment of an integrated smart disaster risk management system for early warning to inform disaster-related decision-making and improved institutional coordination.

5. **Output 2: Access to safe drinking water and sanitation services enhanced.** This output will improve the quality of life for both urban and rural communities in Pingjiang County. This output includes (i) construction of a drinking water supply plant and supply of safe drinking water to 107 villages in 14 towns; (ii) separation of rainwater from sewers in urban and rural Pingjiang County to prevent the overflow of sewer systems during rainy periods; (iii) establishment of concentrated rural wastewater treatment services for rural households in 21 villages of 12 towns and public facilities (in 136 schools and 26 health clinics); and (iv) upgrading of rural toilets for 59,732 households and connecting these to wastewater collection systems in 464 villages of 24 towns. Items (i)–(iii) will be undertaken by KfW through parallel co-financing. In conjunction, the government shall provide assistance to poor and low-income households, such as partial exemption from water pipe connection fee and water tariff and sewage treatment tariff increase.

6. **Output 3: Circular agriculture for sustainable livestock waste management and eco-farming demonstrated.** This output will demonstrate circular agricultural practices in the management of livestock waste and produce organic fertilizer for eco-farming demonstration farms, to reduce greenhouse gas emissions, enhance soil fertility, increase crop yield and sustainability. This output includes (i) carrying out livestock waste treatment in livestock farms prior to soil application, to significantly reduce non-point source pollution into waterbody; and (ii)

¹ Government of the PRC. 2018. *Outline of the Rural Vitalization Plan, 2018–2022*. Beijing.

establishment of 1,930 hectares of demonstration farms to pilot eco-farming techniques, such as soil conservation, soil testing, and fertilizer recommendations (4R principles),² organic fertilizer application, integrated pest management, and other climate-resilient farming practices to promote sustainable agricultural development.

7. **Output 4: Green procurement practices piloted and environmental education mainstreamed.** This output includes (i) piloting green procurement practices under the project's activities; (ii) developing green procurement guidelines for selected categories of goods and services to promote, implement, and monitor green procurement practices in two key sectors (agriculture or eco-farming and education); (iii) mainstreaming environmental education in the local educational system; and (iv) improving overall environmental literacy of Pingjiang County residents by engaging students' families and local communities in environmental education and outreach activities. The experience and learnings will be disseminated through national and international fora to replicate and scale-up project best practices and innovations.

8. A summary of the project outputs and activities is presented in Table 1 and the indicative subproject locations are presented in Table 2.

Table 1: Main Activities by Output and Subproject

No.	Subproject	Major Activities
Output 1: Water-related disaster risk management strengthened		
1.	Flood prevention and risk management in Miluo River	<ol style="list-style-type: none"> 38.93 km of riverbank reinforcement and ecological embankment (including floodways and channels) in 12 towns along Miluo River in Pingjiang 5.14 km of river dredging Construction of one drainage pumping station (90 kW capacity) Rehabilitation of two drainage pumping stations Restoration of 1.6 km shoals (sandbanks) Rehabilitation of two culvert gates Riparian buffers (riverbank greenbelt and storm drain ditches) from the edge of riverbank
2.	Huangjin River National Wetland Park restoration and protection	<ol style="list-style-type: none"> Biodiversity protection and monitoring center <ul style="list-style-type: none"> Biodiversity protection and monitoring center (floor area: 806.6 m²) and associated facilities Solid waste collection and transportation station (20 m²) Protection equipment (patrol boats and cars, interphones and field tools, and forest fire protection) Public awareness-raising on wetland park protection <ul style="list-style-type: none"> Park protection education gallery (floor area: 119.6 m²) and associated facilities Bird watching tower (floor area: 37.3 m²) and associated facilities Information display systems and facilities Capacity building to park management staff (200 person-times [PTs]) and public awareness-raising training to communities (300 PTs) Wetland monitoring and management <ul style="list-style-type: none"> Wetland monitoring equipment (4 binoculars, monocular telescope, 50 AIR wildlife cameras, 20 GPS trackers for birds and wild animals, 4 multirotor drones, 3 cameras and 11 lens, 4 tablets, 4 handheld laser altimeters and 4 handheld laser rangefinders) Wetland monitoring and management system (including data collection and control system) Habitat restoration and protection

² Right amount, right type, right time, right place.

No.	Subproject	Major Activities
		<ul style="list-style-type: none"> Habitat restoration for bird conservation (242.1 ha), with plantation of about 120,106 native trees Wetland restoration in Qingmei Bay (0.8 ha), with plantation of about 2,376 native wetland plants
3.	Integrated smart disaster risk management system	<ol style="list-style-type: none"> Rehabilitation of emergency management center in Emergency Management Bureau An integrated smart disaster risk management information system <ul style="list-style-type: none"> Unmanned aerial vehicle-based sensor web monitoring system Online water quality monitoring system Online hydrology monitoring system Remote forest fire prevention video surveillance system Geological disaster monitoring and warning system Online mine monitoring system Online tailings monitoring system Software purchasing Data purchasing, collection, and analysis Training to staff for the system operation, maintenance, and software application Institutional coordination for disaster risk management in Pingjiang
Output 2: Access to safe drinking water and sanitation services enhanced		
4.	Integrated water supply in urban and rural Pingjiang	<ol style="list-style-type: none"> Drinking water supply plant (supply capacity 25,000 m³/d) in Northern Pingjiang (Nanjiang Town) Drinking water distribution <ul style="list-style-type: none"> Water distribution station (supply 10,000 m³/d capacity) in Dazhou Township 61.27 km water supply and distribution pipelines (DN200-DN700) 1,063.68 km of water supply pipelines (DN50-DN500) to rural households in 107 villages of 14 towns
5.	Separating rainwater from sewers in urban and rural Pingjiang	<ol style="list-style-type: none"> Separating rainwater from sewers in 12 areas in urban Pingjiang – reconstruction and/or expansion of 11.55 km rainwater pipes and 14.67 km domestic wastewater pipes Separating rainwater from sewers in 22 towns in rural Pingjiang – reconstruction and/or expansion of 6.31 km rainwater pipes and 45.74 km domestic wastewater pipes
6.	Rural domestic wastewater treatment and sanitary conditions improvement	<ol style="list-style-type: none"> Rural centralized domestic wastewater collection and treatment facilities (capacity between 100-350 t/d) in 21 villages of 12 towns, with a total wastewater treatment capacity of 3,300 m³/d Wastewater collection and treatment facilities (capacity between 20-100 t/d) for 136 schools in 23 towns, with a total wastewater treatment capacity of 5,460 m³/d Wastewater collection and treatment facilities (capacity between 5-60 t/d) for 26 health clinics in 20 towns, with a total wastewater treatment capacity of 555 m³/d Toilet reconstruction (change to flush water toilets) for 59,732 rural households in 464 villages of 24 towns
Output 3: Circular agriculture linked sustainable livestock waste management and eco-farming demonstrated		
7.	Sustainable livestock waste management	<ol style="list-style-type: none"> Application of livestock wastewater treatment and fertilization model (Model 1) in 77 pig farms (annual production between 500-1,999 hogs) in 16 towns (annual treatment capacity of 112,400 t/a) <ul style="list-style-type: none"> Dry manure collection systems Sewage (liquid manure) and rainwater separation systems Septic tanks and digestate storage tanks

No.	Subproject	Major Activities
		<ul style="list-style-type: none"> Oxidation ponds (for storing the liquid part of digestate for at least 60 days) <p>2. Application of “Energy-Ecological Model (Model 2)” (livestock waste treatment to produce biogas) in 15 pig farms (annual production between 2,000-5,000 hogs) in 8 towns (annual treatment capacity of 72,600 tons/a)</p> <ul style="list-style-type: none"> Solid manure collection tanks and liquid manure (sewage) collection tanks Biogas system (including reactors, biogas cleaning, storage, and utilization system) Digestate settling tanks and oxidation ponds <p>3. Application of manure composting (Model 3) in one cattle farm and one chicken farm in Wushi Town (annual treatment capacity of 1,760 t/a)</p> <ul style="list-style-type: none"> Solid-liquid separation machines Sewage (liquid manure) and rainwater separation systems Composting facilities Sewage storage tanks
8.	Promotion of eco-farming technology and practices	<p>1. Eco-farming for rice production piloting (120 ha) in 4 towns</p> <ul style="list-style-type: none"> 53.3 ha for double-season rice plantation 26.7 ha for rice-fish farming 40 ha for rice-crayfish farming <p>2. Eco-farming for vegetable production piloting (26.7 ha) in Changshou Town</p> <ul style="list-style-type: none"> 13.3 ha of open field vegetable 13.3 ha of greenhouse vegetable <p>3. Eco-farming for fruits production piloting (40 ha) in Yuanyi Center</p> <ul style="list-style-type: none"> 24 ha for pear orchards 16 ha for grapes <p>4. Eco-farming for tea production piloting (842 ha) in 35 villages of 12 towns</p> <ul style="list-style-type: none"> Construction of 637.7 ha of tea garden Rehabilitation of 204.3 ha of tea garden <p>5. Eco-farming for tea camellia production piloting (901.15 ha) in 72 villages of 11 towns</p> <ul style="list-style-type: none"> Construction of 889.51 ha of tea camellia garden Rehabilitation of 11.6 ha of tea camellia seedling nursery garden <p>6. Support and training for farmers’ cooperatives and farmers on good agricultural practices and technology</p> <p>Main construction activities including:</p> <ul style="list-style-type: none"> Land leveling and farm access roads Drainage ditches and water-conserving facilities Greenhouses Seedling plantation and nursery Sustainable farming techniques (integrated pest control, soil testing and fertilizing recommendations, fertigation, use of organic fertilizer and soil improvement)
Output 4: Green procurement practices piloted and environmental education mainstreamed		
9.	Green procurement and environmental education	<p>1. Green procurement practices to be piloted in subproject facilities for eco-friendly products</p> <p>2. Mainstream environmental education in the Pingjiang County local educational system</p> <ul style="list-style-type: none"> Establish an environmental protection exhibition center (450 m²), including three sections - the Past, the Present and the Future Essay contest for the topic of “<i>Practice Green Concept, Walking with Environmental Protection</i>” Speech contest for the topic of “<i>Green Homeland in My Heart</i>”

No.	Subproject	Major Activities
		<ul style="list-style-type: none"> • Contest for ideas of “<i>Green Innovations</i>” • Environmental protection campaign for “<i>Green Homeland • Beautiful Pingjiang</i>” and launching ceremony for “<i>Green Development Actions in Pingjiang County</i>” • Green education lectures and textbooks for schools and local communities • Select demonstration families through “<i>Small Hands Holding Big Hands, Development of Green and Harmonious Families</i>” activities • Promoting recycling of textbooks in schools • Election of “Green Guards” in schools • Promoting solid waste separation and reduction and establish “Green Development Center” in 36 schools • Piloting “Green Schools” • Public awareness raising in green development, forest protection, wild animal protection, water resources protection, eco-farming and wetland protection, jointly with local government agencies • Encourage students to participate in the voluntary tree planting activities • Public awareness raising program for the protection of “<i>Miluo River – My Mother River</i>” <p>3. Develop a green procurement guideline for PCG consideration to achieve environmental protection in public and private sectors in Pingjiang County</p> <p>4. Present in a national and international fora to disseminate project best practices and innovations</p>
10.	Institutional and project management capacity building	<ol style="list-style-type: none"> 1. Project implementation startup support 2. Technical support, project management and capacity development 3. Green promotion and environmental education support 4. External resettlement and social monitoring and evaluation 5. Training and workshops for project staff and stakeholders on project management, technologies 6. Public consultations in the project towns to gain public opinions about the project, and raise public awareness on flood prevention and disaster management, and sustainable green development 7. Purchase agricultural products testing equipment for Bureau of Agriculture and Rural Affairs to improve their testing capacity 8. Summarize project experience and facilitate project replication within the country and/or other ADB developing member countries

ADB = Asian Development Bank, GPS = global positioning system, ha = hectare, km = kilometer, kW = kilowatt, m² = square meter, m³/d = cubic meter per day, PCG = Pingjiang County Government, PMO = project management office
t/a = tons per annum, t/d = tons per day..

Source: Domestic Feasibility Study Reports, July 2020.

Table 2: Project Locations by Subproject

Output	Output 1			Output 2						Output 3			Output 4			
Subproject No.	1		2	3	4	5	6				7	8			9	10
Town/ship	Flood prevention and risk management in Miluo River		Huangjin River National Wetland Park restoration and protection	Integrated Smart Disaster Risk Management System	Integrated water supply in urban and rural Pingjiang	Separating rainwater from sewers in urban and rural Pingjiang	Rural domestic wastewater treatment and sanitary conditions improvement				Sustainable livestock waste management	Promotion of eco-farming technology and practices			Green procurement and environmental education	Institutional and project management capacity building
	Urban section	Rural section				Rural Households	Schools	Health clinics	Toilet reconstruction	Rice, vegetable and fruits		Tea	Tea camellia			
Chengguan Town	Y			Y	Y	Y				Y					Y	Y
An'ding Town		Y			Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y
Fushoushan Town					Y	Y		Y	Y	Y	Y		Y		Y	Y
Sanshi Town		Y			Y	Y		Y	Y	Y	Y		Y	Y	Y	Y
Jiayi Town		Y			Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y
Changshou Town		Y	Y		Y	Y	Y	Y	Y	Y	Y	Y			Y	Y
Mujin Township		Y			Y	Y		Y	Y	Y					Y	Y
Longmen Town		Y				Y	Y	Y	Y	Y					Y	Y
Hongqiao Town						Y	Y	Y	Y	Y	Y		Y	Y	Y	Y
Nanjiang Town					Y	Y	Y	Y	Y	Y	Y		Y		Y	Y
Banjiang Township						Y		Y		Y	Y				Y	Y
Meixian Town					Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y
Dazhou Township					Y	Y		Y	Y	Y			Y	Y	Y	Y
Wengjiang Town		Y			Y	Y	Y	Y	Y	Y	Y		Y		Y	Y
Wukou Town		Y				Y	Y	Y		Y	Y				Y	Y
Wushi Town		Y				Y	Y	Y	Y	Y	Y	Y		Y	Y	Y
Xiangjia Town						Y		Y	Y	Y			Y		Y	Y
Sanyang Township	Y			Y	Y	Y		Y	Y	Y	Y		Y		Y	Y
Tongshi Town						Y		Y	Y	Y	Y		Y	Y	Y	Y
Yuping Town					Y	Y		Y	Y	Y	Y	Y		Y	Y	Y
Sandun Township						Y	Y	Y	Y	Y			Y	Y	Y	Y
Shangtashi Town					Y	Y		Y		Y	Y		Y		Y	Y
Shiniuzhai Town						Y	Y	Y	Y	Y	Y			Y	Y	Y
Cenchuan Town						Y		Y	Y	Y	Y				Y	Y
Yuanvi Center		Y								Y	Y	Y			Y	Y

Source: Domestic Feasibility Study Reports, July 2020.

II. IMPLEMENTATION PLANS

A. Project Readiness Activities

Table 3: Project Readiness Activities

Indicative Activities	2020				2021		Responsibility
	Q1	Q2	Q3	Q4	Q1	Q2	
Loan fact-finding mission							ADB, PCG
Domestic FSRs approved							PDRC
ADB staff review meeting							ADB
FCUP submission and approval							PCG, PDRC, NDRC
Loan negotiations							ADB, MOF, PCG
ADB Board approval							ADB
Loan and project agreements signed							ADB, MOF, PCG
Government legal opinion provided							MOF, PCG
Onlending and Relending agreement signing							MOF, PCG
Loan effectiveness							ADB, MOF
Advance contracting actions							ADB, PCG
Retroactive financing actions							ADB, PCG

ADB = Asian Development Bank, FCUP = Foreign Capital Utilization Plan, FSR = feasibility study report, MOF = Ministry of Finance, NDRC = National Development and Reform Commission, PCG = Pingjiang County Government, PDRC = Provincial Development and Reform Commission.

Source: Asian Development Bank estimates.

B. Overall Project Implementation Plan

Table 4: Overall Project Implementation Plan

Activity		2021				2022				2023				2024				2025				2026				2027			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 1: Water-related disaster risk management strengthened																													
1.1	Complete flood prevention and risk management in Miluo River subproject by Q4 2026																												
1.2	Conduct Huangjin River National Wetland Park restoration and protection subproject by Q4 2026																												
1.3	Establish and operate the Integrated Smart Disaster Risk Management System by Q4 2023																												
Output 2: Accessibility to safe drinking water and sanitation services enhanced																													
1.1	Complete integrated water supply in urban and rural Pingjiang subproject by Q4 2025																												
1.2	Complete separating rainwater from sewers in urban and rural Pingjiang subproject by Q4 2025																												
1.3	Conduct rural wastewater treatment and sanitary conditions improvement subproject by Q4 2026																												
Output 3: Circular agriculture for sustainable livestock waste management and eco-farming demonstrated																													
1.1	Establish facilities for sustainable livestock waste management in 19 town/ships by Q4 2022																												
1.2	Establish 1,930 ha demonstration farms by Q4 2026																												
1.3	Carry out training to farmers, farmer cooperatives and enterprises for eco-farming practices by Q2 2027																												
Output 4: Green procurement practices piloted and environmental education mainstreamed																													
1.1	Pilot green procurement activities for ADB financed subproject facilities by Q2 2027																												
1.2	Undertake public awareness in environmental protection for schools and communities by Q2 2027																												
1.3	Develop green procurement guidelines to inform policy recommendations by Q2 2024																												
Management activities - reporting and monitoring																													
1	Project start-up consultant recruitment																												
2	External resettlement and social monitoring and evaluation agency recruitment																												
3	Environmental monitoring agency recruitment																												
4	Project ipementation consultants recruitment																												
5	PPMS establishment and implementation																												
6	Quarterly project progress reports																												
7	Semi-annual enviromental monitoring reports																												
8	Semi-annual social monitoring reports																												
9	Semi-annual external resettlement monitoring reports																												
10	Inception / Annual / Midterm / Final Review Mission																												
11	Project audited financial statements																												
12	Project completion report																												

Loan effectiveness

Mid-term review

Project completion

Loan closing

Loan effectiveness

Mid-term review

Project completion

Loan closing

PMO = project management office, PPMS = project performance monitoring system, Q = quarter.

Source: Asian Development Bank estimates.

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Implementation Organizations: Roles and Responsibilities

9. The project implementation organization, identifying the roles and responsibilities of the participating agencies, is shown below.

Table 5: Project Implementation Organizations' Roles and Responsibilities

Project Implementation Organizations	Management Roles and Responsibilities
Hunan Provincial Department of Finance (PDOF)	<ul style="list-style-type: none"> • Provide overall project guidance and supervision; • Sign onlending agreement with Ministry of Finance; • Sign onlending agreement with Pingjiang County Government. • Establish and manage the project advance account; • Submit withdrawal applications to Asian Development Bank (ADB); • Manage and supervise commitment charges and interest payment; • Manage and supervise loan repayment; and • Promote replication of the demonstrated technologies in the Province.
Executing agency	<ul style="list-style-type: none"> • Oversee and coordinate the project planning, management, and implementation;
Pingjiang County Government (PCG)	<ul style="list-style-type: none"> • Coordinate project implementation activities among government agencies;
Represented by PLG	<ul style="list-style-type: none"> • Execute the loan agreement and sign the project agreement; • Provide counterpart funds and repay the ADB loan; and • Promote replication of the demonstrated technologies in the County.
Pingjiang County Bureau of Finance (CBOF)	<ul style="list-style-type: none"> • In associate with PCG, sign relending agreement with PDOF; • Review and endorse the withdrawal applications that submitted by PMO, and submit them to PDOF; • Ensure timely provision of counterpart funds; • Monitor the implementation of loan agreement, especially for those financial covenants; and • Carry out commitment charges and interest payment and repayment of loan.
Implementing agency	<ul style="list-style-type: none"> • On behalf of PCG, manage all implementation works during preparation and implementation;
Project Management Office	<ul style="list-style-type: none"> • Coordinate with all involved agencies, departments, and project implementation units (PIUs); • Engagement of procurement agent and design institutes; • Prepare annual work programs and budgets; • Carry out procurement activities for all subprojects, including but not limited to the review and submission of bidding documents, bid evaluation reports, and other necessary documentations to ADB for necessary approval, and sign contracts, with the aid of procurement agent; • Undertake contract management, construction supervision, and quality control, with the support of supervision companies; • Ensure contractors and suppliers are in compliance with EMP, GAP, RP, and SDAP; • Prepare and update the procurement plan and other project documents; • Engage PICs;

Project Implementation Organizations	Management Roles and Responsibilities
<p>Project implementation units</p> <ul style="list-style-type: none"> • Livestock, Fisheries and Agricultural Machinery Affairs Center • Bureau of Agriculture and Rural Affairs • Bureau of Ecology and Environmental • Bureau of Education • Bureau of Natural Resources • Bureau of Water Resources • Bureau of Forestry • Emergency Management Bureau • Housing and Urban-Rural Development Bureau • Pingjiang County Water Supply Co., Ltd. 	<ul style="list-style-type: none"> • Engage external resettlement and social monitoring agency; • Engage environmental monitoring agency; • Prepare withdrawal applications, and submit withdrawal applications to PBOF; • Carry out project financial management, maintain the project's financial records, and making them ready for inspection by ADB missions; • Coordinate training and capacity development activities; • Establish PPMS to monitoring project progress, including regular monitoring of physical and financial progress, and safeguards compliance; • Provide ADB with (i) quarterly project progress reports; (ii) semiannual social monitoring reports; (iii) semiannual environmental monitoring reports; (iv) annual audit reports; and (v) midterm and project completion reports to ADB, HPG and PCG, with assistance from the PICs; • Forward the external resettlement and social monitoring reports to ADB; and • Summarize the project experience and facilitate project replication in Pingjiang and elsewhere. • Carry out day-to-day implementation activities to its related subproject(s); • Facilitate the preparation of bidding documents related to its related subproject(s); • Organize, participate and/or facilitate capacity building activities; • Ensure environmental and social safeguards are complied with based on ADB's Safeguard Policy Statement (2009); • Provide PMO with inputs to (i) quarterly project progress reports; (ii) semi-annual social monitoring reports; (iii) semi-annual environmental monitoring reports; and (iv) midterm report and project completion report, with assistance from the PICs; • Jointly with PMO, organize project acceptance verification; • Operate and maintain the facilities constructed or improved under the project; and • Liaise with PMO and other agencies as needed.
ADB	<ul style="list-style-type: none"> • Provide guidance to PCG and PMO to ensure compliance with loan and project covenants, and ADB policies and procedures; • Carry out regular loan review missions, a midterm review and a project completion review mission; • Review and/or approve procurement actions for ADB-financed procurement packages; • Approve withdrawal applications and disburse loan proceeds; • Monitor and review the project implementation progress and impact; • Review annual audit reports and follow up on audit recommendations;

Project Implementation Organizations	Management Roles and Responsibilities
	<ul style="list-style-type: none"> • Update regularly the project information documents for public disclosure in the ADB website; and • Monitor implementation of ADB's anticorruption policies.

ADB = Asian Development Bank, CBOF = Pingjiang County Bureau of Finance, EMP = environment management plan, GAP = gender action plan, HPG = Hunan Provincial Government, PCG = Pingjiang County Government, PDOF = Provincial Department of Finance, PIC = project implementation consultant, PLG = project leading group, PMO = project management office, PPMS = project performance monitoring system, RP = resettlement plan, SDAP = social development action plan.

Source: Asian Development Bank estimates.

B. Key Persons Involved in Implementation

Executing Agency

Project Management Office

Officer's Name: Mr. Zhan Jiejun
 Position: Director, Project Management Office
 Telephone No.: +86-18973005678
 Fax No.: +86-730-6236268
 Email address: hnpjmj@sina.com
 Office Address: 1st floor, Pingjiang County Government Building, Chengguan Town, Pingjiang County, Hunan Province, China

Asian Development Bank

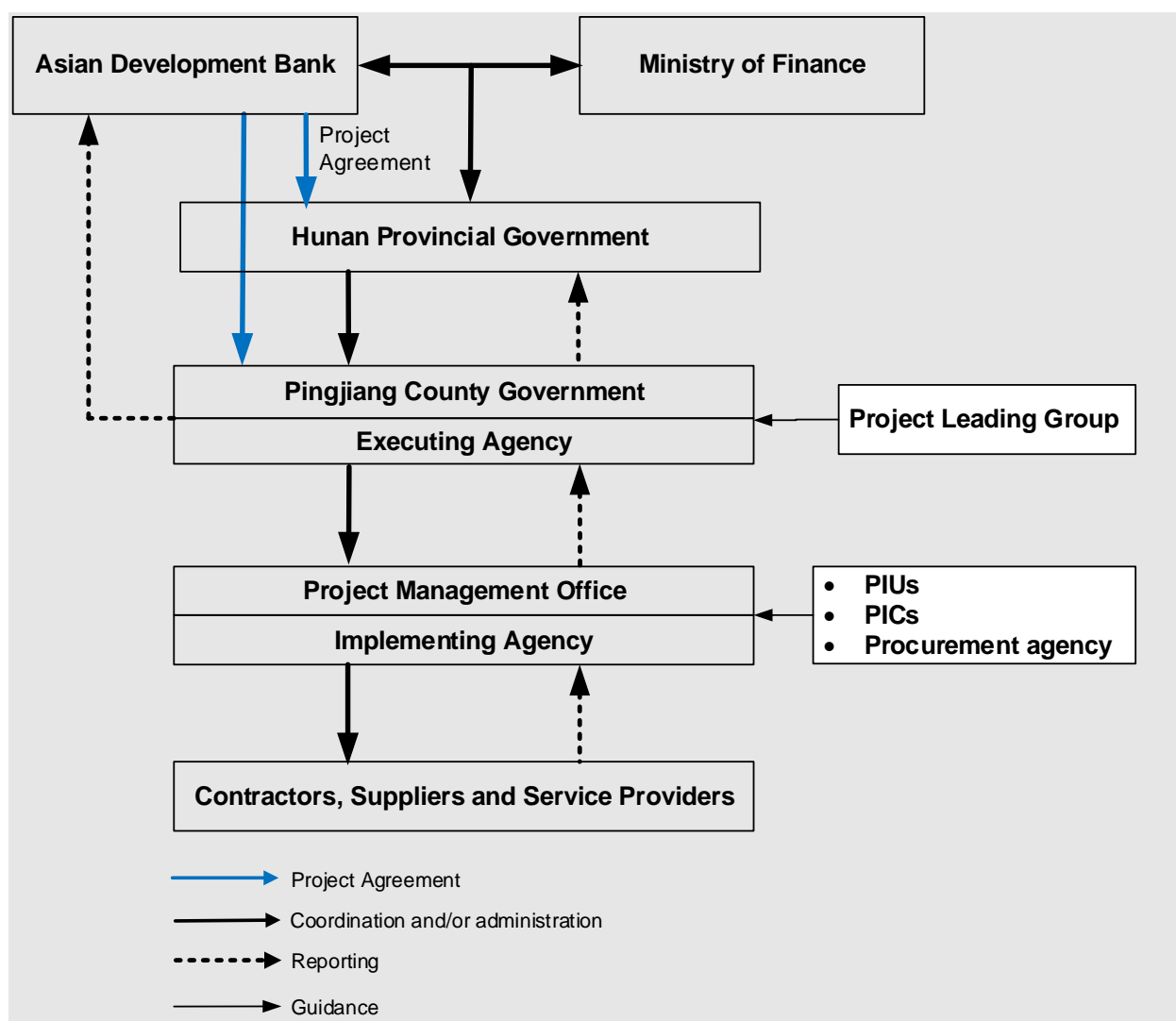
Division Director

Staff Name: Mr. Qingfeng Zhang
 Position: Director
 Environment, Natural Resources, and Agriculture Division
 East Asia Department, ADB
 Telephone No.: +632-8632 6219/4444
 Fax No.: +632-8636 2534/2444
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Mission Leader

Staff Name: Au Shion Yee
 Position: Senior Water Resources Specialist
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 Telephone No.: +632 8632-6607
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 Email address: asyee@adb.org
 Office Address: 6 ADB Avenue, Mandaluyong City, 1550 Metro Manila, Philippines

C. Project Organization Structure



PICs = project implementation consultants, PIUs = project implementation units

Source: Asian Development Bank

IV. COSTS AND FINANCING

A. Cost Estimates Preparation and Revisions

10. **Preparation.** The transaction technical assistance (TRTA) consultants worked closely with the design institutes for preparing the cost estimates following the national government's guidelines on preparing the cost estimates and ADB's guide note on Preparing and Presenting Cost Estimates for Projects Financed by the Asian Development Bank (ADB). The electronic file in Microsoft excel format was retained at the project management office (PMO) under PCG and by the ADB Project Officer.

11. **Revisions.** The PMO, with the assistance of the design institutes, will revise the cost estimates under the guidance of the ADB Project Officer during implementation based on the request for project cost reallocation and ADB's subsequent approval. During the midterm review, the project cost will be re-estimated and compared with the project cost at appraisal.

B. Key Assumptions

12. The following key assumptions underpin the cost estimates and financing plan.

- (i) Exchange rate: CNY6.6767 = \$1.00, CNY7.8932 = €1.00 (as of 23 October 2020).
- (ii) Price contingencies based on expected cumulative inflation over the implementation period are as follows:

Table 6: Escalation Rates for Price Contingency Calculation

Item	2020	2021	2022	2023	2024	2025	2026	Average
Foreign rate of price inflation	-0.5%	1.60%	1.70%	1.70%	1.80%	1.80%	1.80%	1.41%
Domestic rate of price inflation	3.60%	1.90%	2.20%	2.20%	2.20%	2.20%	2.20%	2.36%

Source: Asian Development Bank estimates.

C. Summary Cost Estimates and Financing Plan

13. The project is estimated to cost €299.07 million (Table 7), including physical and price contingencies, interest and other charges during the implementation.

Table 7: Summary Cost Estimates
(€ million)

Item	Amount ^a
A. Base Cost^b	
1. Output 1: Water-related disaster risk management strengthened	117.84
2. Output 2: Access to safe drinking water and sanitation services enhanced	113.60
3. Output 3: Circular agriculture for sustainable livestock waste management and eco-farming demonstrated	21.97
4. Output 4: Green procurement practices piloted and environmental education mainstreamed	6.78
Subtotal (A)	260.20
B. Contingencies^c	35.02
C. Financial Charges During Implementation^{d, e, f}	3.85
Total (A+B+C)	299.07

^a Includes taxes and duties of €21.83 million. Such amount does not represent an excessive share of the project cost. ADB will finance taxes and duties of €11.21 million. KfW will finance taxes and duties of €0.05 million. The government will finance taxes and duties of €10.57 million, which will be provided in cash contribution.

^b In mid-2020 prices as of 23 October 2020.

- ^c Physical and price contingencies, and a provision for exchange rate fluctuation are included. Physical contingency computed at 7.7% of base cost. Price contingencies computed at -0.5% for 2020, 1.6% for 2021, 1.7% for 2022 and 2023, and 1.8% for 2024 and thereafter on foreign exchange costs, and 3.6% for 2020, 1.9% for 2021, and 2.2% for 2022 and thereafter on local currency. Contingencies include provision for potential exchange rate fluctuation under the assumption of the purchasing power parity exchange rate.
- ^d Includes interests for ADB loan and KfW loan. For ADB loan, interest during construction for the ordinary capital resources was computed at the 7-year fixed swap rate for Euro plus an effective contractual spread of 0.5% and maturity premium of 0.2%. For KfW loan, interest during construction for promotional loan was computed at 5-year fixed swap rate for euro plus a margin of 0.7%.
- ^e Includes commitment charge for ADB ordinary capital resources loan at 0.15% per year and for KfW loan at 0.25% per year. Commitment charges are to be charged on the undisbursed loan amount.
- ^f Management fee for KfW's loan is 0.35%.

Source: Asian Development Bank estimates.

14. The Government of the PRC has requested a loan of €126,882,000 (equivalent to \$150 million) from ADB's ordinary capital resources to help finance the project. The loan will have a 30-year term, including a grace period of 7 years; an annual interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; a commitment charge of 0.15% per year; and such other terms and conditions set forth in the draft loan and project agreements. Based on the straight-line method, the average maturity is 18.75 years, and the maturity premium payable to ADB is 0.2% per year. The government will relend the loan proceeds through Hunan Provincial Government (HPG) to PCG upon the same terms and conditions applicable to the loan. PCG will bear the foreign exchange and interest rate variation risks of the loan proceeds. KfW will provide parallel co-financing (covering Output 2) through a promotional loan with tenure of up to 15 years, including a grace period of 5 years, with other conditions outlined in a project-specific memorandum of understanding to be signed between ADB and KfW by November 2020 and loan agreement between the Ministry of Finance and KfW which is expected to be approved by March 2021.

15. The ADB loan will finance 42.43% of the project cost, including civil works, goods, consulting services, training, and taxes and duties for eligible ADB-financed expenditures. KfW will finance €60.00 million, accounting for 20.06% of the project cost; PCG will finance €112.19 million (37.51%) of the project cost, including civil works, land acquisition and resettlement (LAR) cost, environmental monitoring cost, design and supervision cost, and contingencies (Table 8).

Table 8: Summary Financing Plan

Source	Amount (€ million)	Share of Total (%)
Asian Development Bank		
Ordinary capital resources (regular loan)	126.88	42.43
KfW Development Bank	60.00	20.06
Pingjiang County Government	112.19	37.51
Total	299.07	100.00

Source: Asian Development Bank estimates.

16. **Climate finance.** Climate mitigation is estimated to cost €5.21 million and climate adaptation is estimated to cost €6.47 million. ADB will finance €1.10 million (21.1%) of mitigation costs and €6.39 million (98.9%) of adaptation costs. Details are included in the RRP Linked Document 9: Climate Change Assessment.

D. Detailed Cost Estimates by Expenditure Category

Table 9: Detailed Cost Estimates by Expenditure Category^a

Item	CNY (million)			EURO (million)			% of Total Base Cost
	Foreign Exchange	Local Exchange	Total Cost	Foreign Exchange	Local Exchange	Total Cost	
A. Base Cost							
1 Civil works, including materials	316.50	1,266.01	1,582.52	40.10	160.39	200.49	77.05
a. ADB Financed	182.38	729.52	911.90	23.11	92.42	115.53	44.40
b. Non-ADB Financed	134.12	536.49	670.61	16.99	67.97	84.96	32.65
2 Equipment, Vehicles, Furniture	140.05	93.37	233.42	17.74	11.83	29.57	11.37
a. ADB Financed	46.00	30.67	76.67	5.83	3.89	9.71	3.73
b. Non-ADB Financed	94.05	62.70	156.75	11.92	7.94	19.86	7.63
3 Consultancy and Training (Consulting services)	10.12	10.12	20.23	1.28	1.28	2.56	0.99
a. ADB Financed	6.14	6.14	12.29	0.78	0.78	1.56	0.60
b. Non-ADB Financed	3.97	3.97	7.95	0.50	0.50	1.01	0.39
4 Other Training (Training and Fellowships)	1.17	1.17	2.34	0.15	0.15	0.30	0.11
a. ADB Financed	0.32	0.32	0.65	0.04	0.04	0.08	0.03
b. Non-ADB Financed	0.85	0.85	1.69	0.11	0.11	0.21	0.08
5 Land acquisition and Resettlement	-	57.13	57.13	-	7.24	7.24	2.78
6 Project Management and others	15.81	142.33	158.15	2.00	18.03	20.04	7.70
Subtotal (A)	483.66	1,570.12	2,053.78	61.28	198.92	260.20	100.00
Total Base Cost (A)	483.66	1,570.12	2,053.78	61.28	198.92	260.20	100.00
B. Contingencies	-	-	-	-	-	-	-
Physical Contingency	33.52	108.81	142.33	4.25	13.79	18.03	6.93
Price Contingency	31.59	102.54	134.13	4.00	12.99	16.99	6.53
Total Contingencies (B)	65.10	211.35	276.45	8.25	26.78	35.02	13.46
C. Financial Charges During Implementation	30.38	-	30.38	3.85	-	3.85	1.48
Total Project Cost (A+B+C)	579.14	1,781.47	2,360.61	73.37	225.70	299.07	114.94

^a Numbers may not sum precisely because of rounding.

^b Non-consulting services include (1) disposal of waste chemical reagents (Package No. EE-NCS01), under Subproject 9; and (2) trainings to staff and communities under Subproject 2.

Notes: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

E. Allocation and Withdrawal of Loan Proceeds

Table 10: Allocation and Withdrawal of Loan Proceeds

Item	Total Amount Allocated for ADB Financing (€)	Percentage and Basis for Withdrawal from the Loan Account
	Category	
Works, Goods, Services, trainings and workshops*	126,882,000	100% of total expenditure claimed
Total	126,882,000	

* Subject to the condition for withdrawal described in paragraph 7 of Schedule 3 of the Loan Agreement.

Source: Asian Development Bank estimates.

F. Detailed Cost Estimates by Financier

Table 11: Detailed Cost Estimates by Financier
(€ million)

Item	ADB		KfW		PCG		Total Cost
	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	
A. Base Cost							
1 Civil works, including materials	115.53	57.62%	44.48	22.19%	40.48	20.19%	200.49
a. ADB Financed	115.53	100.00%					115.53
b. Non-ADB Financed			44.48	52.36%	40.48	47.64%	84.96
2 Equipment, Vehicles, Furniture	9.71	32.84%	14.72	49.76%	5.14	17.39%	29.57
a. ADB Financed	9.71	100.00%					9.71
b. Non-ADB Financed			14.72	74.10%	5.14	25.90%	19.86
3 Consultancy and Training (Consulting services)	1.56	60.72%	0.80	31.29%	0.20	7.99%	2.56
a. ADB Financed	1.56	100.00%					1.56
b. Non-ADB Financed			0.80	79.65%	0.20	20.35%	1.01
4 Other Training (Training and Felloaiships)	0.08	27.66%		0.00%	0.21	72.34%	0.30
a. ADB Financed	0.08	100.00%					0.08
b. Non-ADB Financed					0.21	100.00%	0.21
5 Land acquisition and Resettlement					7.24	100.00%	7.24
6 Project Management and others					20.04	100.00%	20.04
Subtotal (A)	126.88	48.76%	60.00	23.06%	73.31	28.18%	260.20
Total Base Cost (A)	126.88	48.76%	60.00	23.06%	73.31	28.18%	260.20
B. Contingencies							
Physical Contingency					18.0316	100.00%	18.03
Price Contingency					16.9925	100.00%	16.99
Total Contigencies (B)	-	0.00%	-	0.00%	35.02	100.00%	35.02
C. Financial Charges During Implementation					3.85	100.00%	3.85
Total Project Cost (A+B+C)	126.88	42.43%	60.00	20.06%	112.19	37.51%	299.07
% of Total Project Cost	42.43%		20.06%		37.51%	37.51%	100.00%

Note: Numbers may not sum precisely because of rounding.

^a Non-consulting services include: (1) disposal of waste chemical reagents (Package No. EE-NCS01), under Subproject 9; and (2) trainings to staff and communities under Subproject 2.

Source: Asian Development Bank estimates.

G. Detailed Cost Estimates by Outputs

Table 12: Detailed Cost Estimates by Outputs

Item	Total Cost	Water-related disaster risk management strengthened		Accessibility to safe drinking water and sanitation services enhanced		Circular agriculture linked sustainable livestock waste management and eco-farming demonstrated		Green procurement practices piloted and environmental education mainstreamed	
		Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category
A. Base Cost									
1 Civil works, including materials	200.49	94.27	47.02%	84.25	42.02%	20.09	10.02%	1.89	0.94%
a. ADB Financed	115.53	79.23	68.58%	18.09	15.66%	16.32	14.13%	1.89	1.63%
b. Non-ADB Financed	84.96	15.04	17.70%	66.16	77.87%	3.77	4.43%	-	-
2 Equipment, Vehicles, Furniture	29.57	10.76	36.37%	16.92	57.23%	0.36	1.21%	1.53	5.18%
a. ADB Financed	9.71	8.45	86.99%	-	0.00%	-	0.00%	1.26	13.01%
b. Non-ADB Financed	19.86	2.31	11.62%	16.92	85.22%	0.36	1.81%	0.27	1.35%
3 Consultancy and Training (Consulting services)	2.56	0.19	7.41%	-	0.00%	-	-	2.37	92.59%
a. ADB Financed	1.56	0.19	12.21%	-	0.00%	-	-	1.37	87.79%
b. Non-ADB Financed	1.01	-	0.00%	-	0.00%	-	-	1.01	100.00%
4 Other Training (Training and Fellowships)	0.30	0.04	12.81%	-	0.00%	-	-	0.26	87.19%
a. ADB Financed	0.08	0.04	46.30%	-	0.00%	-	-	0.04	53.70%
b. Non-ADB Financed	0.21	-	0.00%	-	0.00%	-	-	0.21	100.00%
5 Land acquisition and Resettlement	7.24	3.47	47.95%	3.77	52.05%	-	-	-	-
6 Project Management and others	20.04	9.12	45.51%	8.66	43.24%	1.52	7.60%	0.73	3.65%
Total Base Cost (A)	260.20	117.84	45.29%	113.60	43.66%	21.97	8.44%	6.78	2.61%
B. Contingencies									
Physical Contingency	18.03	9.52	52.80%	7.83	43.44%	0.59	3.26%	0.09	0.50%
Price Contingency	16.99	8.90	52.37%	6.29	37.03%	1.44	8.48%	0.36	2.12%
Total Contingencies (B)	35.02	18.42	52.59%	14.13	40.33%	2.03	5.79%	0.45	1.29%
C. Financial Charges During Implementation	3.85	1.84	47.77%	1.55	40.21%	0.35	9.03%	0.11	2.99%
Total Project Cost (A+B+C)	299.07	138.10	46.18%	129.28	43.23%	24.34	8.14%	7.35	2.46%
% of Total Project Cost		46.18%		43.23%		8.14%		2.46%	

Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

H. Detailed Cost Estimates by Year

Table 13: Detailed Cost Estimates by Year
(€ million)

Item	Total Cost	2021	2022	2023	2024	2025	2026	2027
A. Base Cost								
1 Civil works, including materials	200.49	5.42	55.21	55.40	38.45	31.96	14.05	-
a. ADB Financed	115.53	-	23.73	26.24	27.31	27.15	11.10	-
b. Non-ADB Financed	84.96	5.42	31.48	29.16	11.14	4.81	2.95	-
2 Equipment, Vehicles, Furniture	29.57	0.85	15.05	7.88	4.56	1.17	0.06	-
a. ADB Financed	9.71	-	9.20	0.29	0.11	0.11	-	-
b. Non-ADB Financed	19.86	0.85	5.85	7.59	4.45	1.06	0.06	-
3 Consultancy and Training (Consulting services)	2.56	0.23	0.53	0.48	0.48	0.48	0.25	0.12
a. ADB Financed	1.56	-	0.31	0.30	0.29	0.29	0.25	0.12
b. Non-ADB Financed	1.01	0.23	0.21	0.19	0.19	0.19	-	-
4 Other Training (Training and Fellowships)	0.30	-	0.09	0.10	0.10	0.01	-	-
a. ADB Financed	0.08	-	0.02	0.02	0.02	0.01	-	-
b. Non-ADB Financed	0.21	-	0.07	0.07	0.07	-	-	-
5 Land acquisition and Resettlement	7.24	5.42	1.82	-	-	-	-	-
6 Project Management and others	20.04	1.05	6.20	5.32	3.57	2.67	1.18	0.03
Total Base Cost (A)	260.20	12.97	78.89	69.19	47.16	36.30	15.54	0.14
Physical Contingency	18.03	0.45	5.00	4.98	3.55	2.78	1.27	-
Price Contingency	16.99	0.35	3.31	4.16	3.70	3.60	1.86	0.01
Total Contingencies (B)	35.02	0.79	8.30	9.14	7.25	6.38	3.14	0.01
C. Financial Charges During Implementation	3.85	0.55	0.41	0.52	0.61	0.70	0.52	0.54
Total Project Cost (A+B+C)	299.07	14.32	87.60	78.85	55.03	43.38	19.20	0.70

Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

I. Contract and Disbursement S-Curve

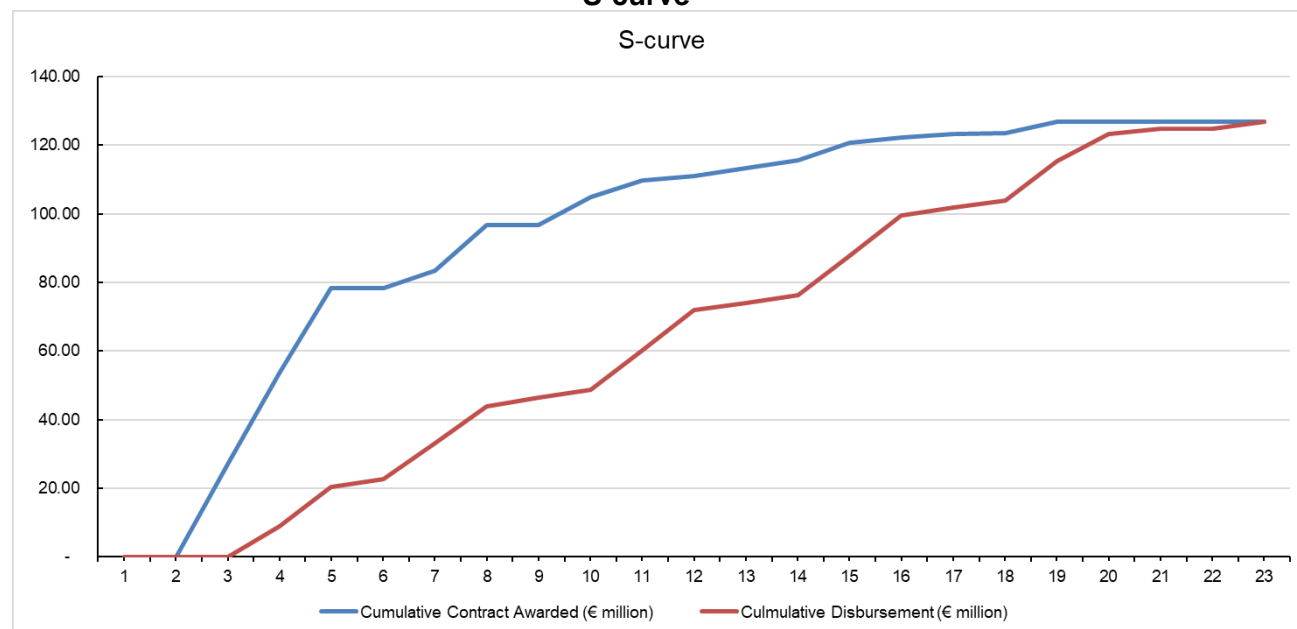
Table 14: Contract Awards and Disbursements
(€ million)

Year	Projected Contract Awards					Projected Disbursement				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2021				27.08	27.08					0.00
2022	26.54	24.71	0.11	5.09	56.46	8.81	11.71	2.30	10.44	33.26
2023	13.31	1.84	8.10	4.76	26.16	10.68	2.43	2.32	11.42	26.85
2024	1.42	2.23	2.30	5.09	11.04	11.82	2.21	2.10	11.61	27.74
2025	1.54	1.06	0.23	3.31	6.13	11.61	2.44	2.01	11.52	27.57
2026					0.00	8.02	1.35	0.06	1.92	11.35
2027					0.00	0.06	0.06			0.12
Total	42.81	28.01	10.75	45.32	126.88	50.99	20.20	8.79	46.90	126.88

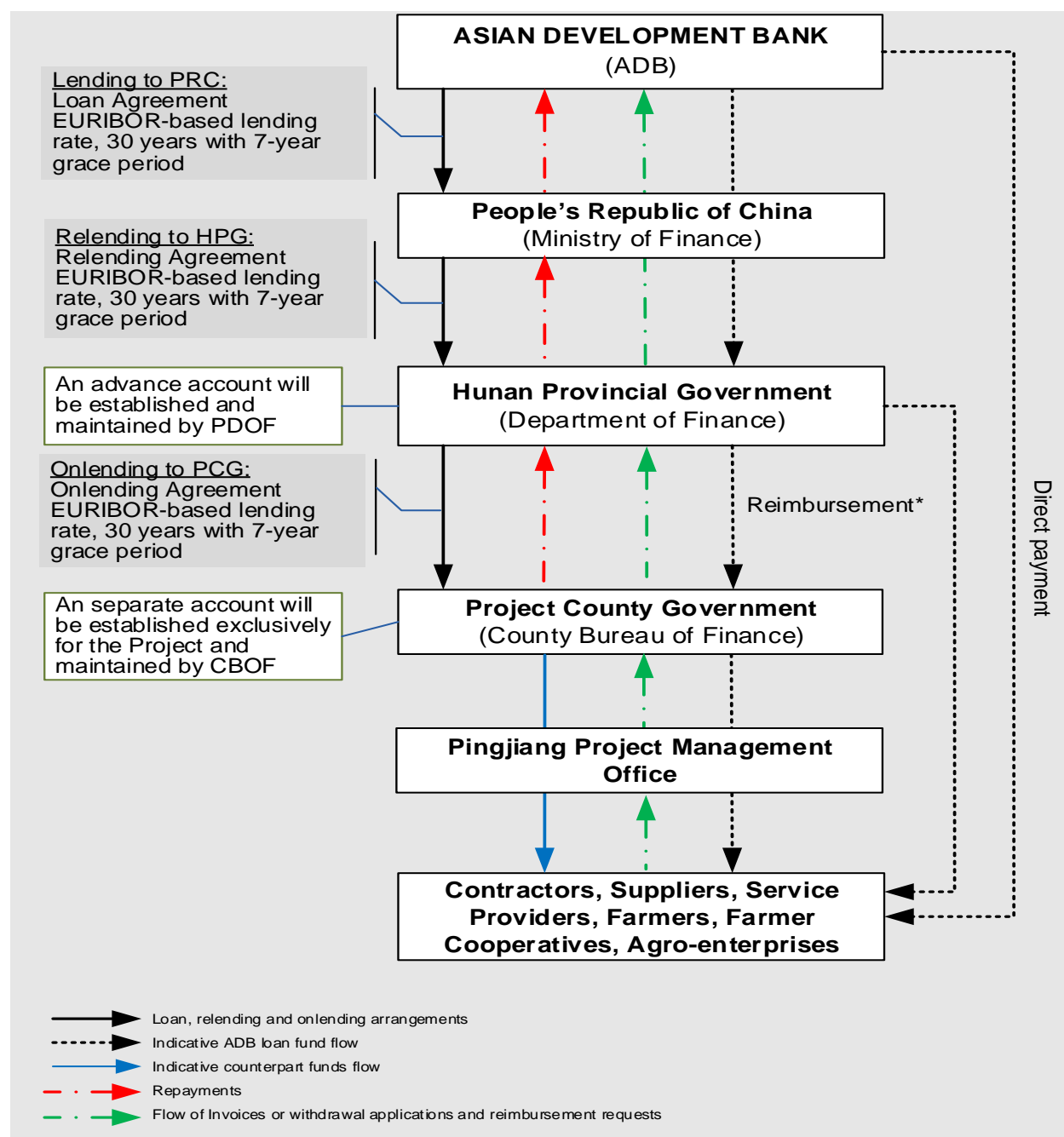
Q = quarter.

Source: Asian Development Bank estimates.

S-curve



J. Fund Flow Diagram



ADB = Asian Development Bank, CBOF = County Bureau of Finance, EURIBOR = Euro interbank offered rate, HPG = Hunan Provincial Government, PCG = Pingjiang County Government, PDOF = Provincial Department of Finance.

* Disbursement of ADB funds from the Advance Account to CBOF/project management office is subject through reimbursement procedure.

Source: Asian Development Bank.

V. FINANCIAL MANAGEMENT

D. Financial Management Assessment

17. The financial management assessment (FMA) was conducted from January to July 2020 in accordance with ADB's Guidelines.³ The FMA considered the capacity of the implementing agency (PMO), including funds-flow arrangements, staffing, accounting and financial reporting systems, financial information systems, and internal and external auditing arrangements. Based on the assessment, the key financial management risks identified are: (i) implementation risk – PMO lacks familiarity with ADB disbursement procedures and requirements which could delay project implementation, (ii) compliance risk – PMO lacks familiarity with ADB financial management requirements, particularly on accounting, reporting and auditing, which may delay project reporting and identification of issues on the use of loan proceeds; (iii) foreign exchange risk – PMO lacks experience in managing foreign exchange that might increase the financial burden to the potential depreciation of Chinese Yuan. The overall pre-mitigation financial management risk of implementing agency is substantial. PCG and PMO have agreed to implement an action plan as key measures to address the deficiencies.

18. The identified financial management risks will be closely monitored during project implementation. The financial management action plan is provided in Table 15.

Table 15: Financial Management Action Plan

Identified risk	Risk level	Action	Responsibility Unit	Timing
PMO has no experience with ADB loan and management of foreign currency risks	H	<ul style="list-style-type: none"> Recruitment of experienced PICs; Training and assistance from the PICs and ADB will be provided to help PMO to understand ADB's requirements. Training on foreign currency and interest risk management will be provided to PCG and PMO. 	ADB, PMO, PICs,	1 month before loan effectiveness
Lack of counterpart funds to pay contractors first and then reimbursed from ADB delays ADB loan disbursement and subsequently the project implementation	H	<ul style="list-style-type: none"> A revolving fund with total capacity of CNY30 million will be established upon the first payment of the project to contractors 	PCG	1 month before the first payment of the project to contractors
PMO Staffing – The position of accountant is vacant. None of the existing staff have experience in ADB guidelines and policies	H	<ul style="list-style-type: none"> Recruitment of qualified accountant Training on ADB's financial management requirements, including accrual-based accounting and auditing, loan disbursement, and foreign 	ADB, PMO, PICs	1 month before loan effectiveness

³ ADB. 2005. *Financial Management and Analysis of Projects*. Manila; ADB. 2009. *Financial Due Diligence: A Methodology Note*. Manila; and ADB. 2015. *Financial Management Technical Guidance Note: Financial Management Assessment*. Manila.

Identified risk	Risk level	Action	Responsibility Unit	Timing
PMO Internal Audit – there is no internal audit function to assure the project funds will be used properly for the purpose of the project Accounting and Reporting – PMO has no accounting software to help them prepare project financial report. Information Systems - Financial reports will be prepared manually by spreadsheets.	H	exchange and interest risk management to the PCG and PMO • Frequent monitoring by PCG's agencies, including County Finance Bureau, County Audit Office, etc. • External audits	PCG, external auditor	During the entire project period
	M	• Finalization of project financial management manual(s) • Segregation of duties will be implemented to ensure reliability of financial reports.	PCG, PMO	1 month before loan effectiveness
	S	• Segregation of duties will be implemented to ensure reliability of financial reports.	PCG, PMO	During the entire project period

ADB = Asian Development Bank, PCG = Pingjiang County Government, PICs = Pingjiang Implementation Consultants, PMO = project management office. H = high, S = substantial, M = moderate, L = low.

Source: Asian Development Bank.

19. PCG and PMO will enhance their coordination and capabilities by (i) setting clear institutional arrangements, (ii) recruiting a financial management consultant; (iii) undertaking training on ADB's disbursement and financial management requirements for all staff, particularly financial staff; (iv) developing financial management manual for the budgeting, accounting, internal controls, reporting and auditing arrangements in line with project activities; and (v) streamlining of approval processes for the use of the loan proceeds, including setting up revolving fund to pre-finance the expenditure portion to be financed by ADB and KfW loans. In addition, frequent monitoring by PCG's agencies can help mitigate the risk of lack of internal audit function. With these appropriate mitigation measures, the project financial management arrangements are considered satisfactory.

E. Disbursement

1. Disbursement Arrangements for ADB Funds

20. The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time),⁴ and detailed arrangements agreed upon between the government and ADB. Online training for project staff on disbursement policies and procedures is available.⁵ Project staff are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

21. PMO will (i) prepare withdrawal applications (WAs) and submit them to ADB through Hunan Provincial Department of Finance (PDOF); and (ii) collect and retain all supporting documents. At the end of each year, PMO will prepare realistic projections of contract awards and

⁴ The handbook is available electronically from the ADB website <https://www.adb.org/documents/loan-disbursement-handbook>

⁵ ADB. *Disbursement eLearning*. Manila.

disbursements for the following year and submit them to ADB.

22. **Advance fund procedure.** On behalf of HPG, an advance account in loan currency will be set up for the project by PDOF in a commercial bank. PDOF will be responsible for the management, monitoring, and reconciliation of the advance account. The PDOF, who administers the advance account is accountable and responsible for proper use of advances to the advance account.

23. The total outstanding advance to the advance account should not exceed the estimate of ADB's share of expenditures to be paid through the advance account for the forthcoming 6 months. The executing agency, through PDOF, may request for initial and additional advances to the advance account based on an Estimate of Expenditure Sheet⁶ setting out the estimated expenditures to be financed through the account for the forthcoming 6 months. Supporting documents should be submitted to ADB or retained by the PDOF and/or PCG (through PMO) in accordance with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time) when liquidating or replenishing the advance account.

24. **Statement of expenditure procedure.**⁷ The SOE procedure may be used for reimbursement of eligible expenditures or liquidation of advances to the advance account. Supporting documents and records for the expenditures claimed under the SOE should be maintained and made readily available for review by ADB's disbursement and review missions, upon ADB's request for submission of supporting documents on a sampling basis, and for independent audit.

25. Before the submission of the first WA, the borrower should submit to ADB sufficient evidence of the authority of the person(s) who will sign the WAs on behalf of the government, together with the authenticated specimen signatures of each authorized person. The minimum value per WA is stipulated in the *Loan Disbursement Handbook* (2017, as amended from time to time). Individual payments below such amount should be paid (i) by the executing agency and subsequently claimed to ADB through reimbursement, or (ii) through the advance fund procedure, unless otherwise accepted by ADB. The borrower should ensure sufficient category and contract balances before requesting disbursements. Use of ADB's Client Portal for Disbursements (CPD)⁸ system is encouraged for submission of WAs to ADB.

2. Disbursement Arrangements for Counterpart Fund

26. The PMO will prepare disbursement projections and request budget allocations from PCG for counterpart funds. PCG will allocate the counterpart from its budget resources in line with its budget regulations and procedures. PCG may also obtain financial support from the provincial and national governments through various comprehensive agricultural development, flood control, environmental and water resources improvements.

F. Accounting

27. The PCG and PMO will maintain, or cause to be maintained, separate books and records

⁶ Estimate of Expenditure sheet is available in Appendix 8A of ADB's *Loan Disbursement Handbook* (2017, as amended from time to time).

⁷ SOE forms are available in Appendix 7B and 7D of ADB's *Loan Disbursement Handbook* (2017, as amended from time to time).

⁸ The CPD facilitates online submission of WA to ADB, resulting in faster disbursement. The forms to be completed by the Borrower are available online at <https://www.adb.org/documents/client-portal-disbursements-guide>.

by funding source for all expenditures incurred on the project following the equivalent national accounting standards; and (ii) prepare annual financial statements for the project in accordance with the government's accounting laws and regulations which are consistent with international accounting principles and practices.

G. Auditing and Public Disclosure

28. The PCG will cause the detailed consolidated project financial statements to be audited in accordance with International Standards on Auditing and the national auditing standards by an independent auditor acceptable to ADB. The audited project financial statements together with the auditor's opinion will be presented in the English language to ADB within 6 months from the end of the fiscal year by the executing agency.

29. The audit report for the project financial statements will include a management letter and auditor's opinions, which cover (i) whether the project financial statements present an accurate and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting standards; (ii) whether the proceeds of the loan were used only for the purpose(s) of the project; and (iii) whether the borrower or executing agency was in compliance with the financial covenants contained in the legal agreements (where applicable).

30. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal program supervision, and followed up regularly with all concerned, including the external auditor.

31. The government, PCG and PMO have been made aware of ADB's approach to delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements.⁹ ADB reserves the right to require a change in the auditor (in a manner consistent with the constitution of the borrower), or for additional support to be provided to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

32. Public disclosure of the audited project financial statements, including the auditor's opinion on the project financial statements, will be guided by ADB's Access to Information Policy 2018.¹⁰ After the review, ADB will disclose the audited project financial statements and the opinion of the auditors on the project financial statements no later than 14 days of ADB's confirmation of their acceptability by posting them on ADB's website. The management letter and additional auditor's opinions will not be disclosed.

⁹ ADB's approach and procedures regarding delayed submission of audited project financial statements:

- (i) When audited project financial statements are not received by the due date, ADB will write to the executing agency advising that (a) the audit documents are overdue; and (b) if they are not received within the next 6 months, requests for new contract awards and disbursement such as new replenishment of advance accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.
- (ii) When audited project financial statements are not received within 6 months after the due date, ADB will withhold processing of requests for new contract awards and disbursement such as new replenishment of advance accounts, processing of new reimbursement, and issuance of new commitment letters. ADB will (a) inform the executing agency of ADB's actions; and (b) advise that the loan may be suspended if the audit documents are not received within the next 6 months.
- (iii) When audited project financial statements are not received within 12 months after the due date, ADB may suspend the loan.

¹⁰ Access to Information Policy 2018: <https://www.adb.org/documents/access-information-policy>.

VI. PROCUREMENT AND CONSULTING SERVICES

A. Project Procurement Risk Assessment

33. A project procurement risk assessment was conducted in accordance with the *Guidance Note on Procurement Risk Framework* (2018, as amended from time to time)¹¹ and the *Guidance Note on Strategic Procurement Planning* (2018, as amended from time to time).¹² Overall project procurement risk is **moderate** before mitigation measures to be taken.

34. According to the assessment, the main strengths identified include: (i) PMO has existing Procurement Division consisting of 5 full-time staff with adequate background and practical experiences; (ii) PMO has procurement regulations and procedures based on the Tendering and Bidding Law (TBL); (iii) PMO has 9 staff, which were assigned by PIUs, with professional background to support the technical designs, as well as the technical related in the preparation of bidding documents; and (iv) The PMO will recruit experienced procurement agent and project management consulting firm to support the procurement and contract management during the project implementation. The main weaknesses identified include: (i) PMO has no internationally financed project experience, (ii) PMO does not have staff with professional background in green procurement, and (iii) There is no specialized structured procurement training program for the staff involved in undertaking procurement.

35. Proposed mitigation measures include training to be provided to relevant staff of the PMO and other stakeholder agencies. Some procurement training was delivered by ADB Procurement Specialist and TRTA consultants during the project preparation to the PMO on topics in ADB procedures for procurement of goods, works and consulting services to ensure that the non-familiarity with ADB procurement framework has been addressed. The procurement training will be delivered on a well-defined interval by the PICs during the project implementation to ensure that procurement activities are undertaken in full conformity with ADB Procurement Policy and Procurement Regulations (2017, as amended from time to time). To achieve value for money, at the strategic procurement planning (SPP) stage, market conditions, operational context, client capability, contract duration and timing, previous experience, risks present, and all appropriate procurement modalities and bidding arrangements have been considered. Furthermore, chances for conducting advertisement through Yueyang Municipal e-procurement Public Resources Trade Center (PRTC) will be reviewed before the first advertisement.

36. Strategic procurement planning (SPP, Appendix 4) was carried out to identify procurement risks, develop mitigating measures, review procurement options, and agree on fit-for-purpose procurement arrangements. Value for money will be achieved through assigning dedicated in-house PMO staff as green procurement focal, applying community participation approach for eco-farming, assigning early start-up consulting as non-banked financed packages to ensure mobilization efficiency, advance contracting for the ADB-financed project management and capacity building consulting services to ensure proper capacity building and technical guidance since early implementation stage, the use of request for quotations modalities for standard readily available goods with low quality risk, the use of point scoring system for design, build and equipment supply of the exhibition center packages as well as clean delineation of ADB and KfW funded packages to avoid dual agencies procurement review on the same package.

¹¹ Available at: <https://www.adb.org/sites/default/files/procurement-risk-framework.pdf>.

¹² Available at: <https://www.adb.org/sites/default/files/procurement-planning.pdf>.

B. Advance Contracting and Retroactive Financing

37. All advance contracting and retroactive financing will be undertaken in conformity with ADB Procurement Policy: Goods, works, Nonconsulting and Consulting Services (2017, as amended from time to time)¹³ and Procurement Regulations for ADB Borrowers: Goods, works, Nonconsulting and Consulting Services (2017, as amended from time to time).¹⁴ The issuance of invitations to bid under advance contracting and retroactive financing will be subject to ADB approval. Advanced contracting for the project management and capacity building consulting services (Contract package No.: CS-TA-01) has been proposed under the project. The borrower, executing and implementing agencies have been advised that approval of advance contracting and retroactive financing does not commit ADB to finance the project.

38. **Retroactive financing** will apply to the urgent procurement of civil works, goods and consulting services. Retroactive financing will be subject to a maximum amount equivalent to 20% of the loan amount for eligible expenditures incurred prior to loan effectiveness, but not earlier than 12 months before the loan agreement is signed.

C. Procurement of Goods, Works, and Consulting Services

39. All procurement of ADB financed works and goods will be undertaken in accordance with ADB Procurement Policy: Goods, works, Nonconsulting and Consulting Services (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers: Goods, works, Nonconsulting and Consulting Services (2017, as amended from time to time).

40. Before the start of any procurement, ADB and the government will review the public procurement laws of the central and state governments to ensure consistency with ADB's Procurement Policy and Procurement Regulations for ADB Borrowers.

41. An 18-month procurement plan indicating procurement method, cost estimation, and review procedures for goods, works, nonconsulting and consulting service contract packages and guidelines on open competitive bidding (OCB) with national advertising is in Section C.

1. Open Competitive Bidding for Goods and Works

42. OCB will be used for most of the ADB financed contract packages for works and goods. If a bidding attracts foreign companies, the bidding document will be written in English using the latest ADB standard bidding document for OCB advertised internationally packages, which can be downloaded from ADB website. If a bidding does not attract foreign companies, the following provisions will be applied: (i) the advertisement will be limited to the national press, an official gazette, or an open access website; (ii) standard bidding documents for OCB advertised nationally packages issued by the Ministry of Finance will be used; and (iii) bidding documents will only be in Chinese (except for contracts which require ADB's prior review and approval), and the currency for bidding and payment will be in Chinese Yuan (CNY). If a bidding document is internationally advertised, the invitations for bids need to be submitted to ADB at latest 1 week before the advertisement for parallel advertisement in Business Opportunities of ADB's website. Unless otherwise agreed between PCG and ADB and set forth in the procurement plan, procurements under OCB will use the single-stage one-envelope procedure except the contract package for exhibition center contract package (EE-CW03). The point scoring system for design,

¹³ Available at: <https://www.adb.org/documents/adb-procurement-policy>

¹⁴ Available at: <https://www.adb.org/documents/procurement-regulations-adb-borrowers>

build and equipment supply of the exhibition center contract package (EE-CW03) will be applied to incorporate concept design submission as part of technical proposal evaluation given the quality of design is important to the public awareness objective and legacy of the project. Single-stage two-envelope procedure for this contract package will be applied.

2. Consulting Services

43. All ADB financed individual consultants, consulting firms, and monitoring agencies will be recruited according to ADB's Procurement Policy and Procurement Regulations for ADB Borrowers (2017, as amended from time to time). The indicative terms of reference are included in Appendices 1-3.

44. An estimated 27 person-months for project start-up individual consultants (ICs) and 150 person-months of consulting services (advance contracting will be applied) are required to (i) facilitate project management and implementation, and (ii) strengthen the institutional and operational capacity of the executing and implementing agencies. An external resettlement and social monitoring and evaluation agency will be recruited to conduct regular monitoring of the implementation of the Resettlement Plan (RP) and Land Use Right Transfer (LURT) Framework. ICs will be recruited prior to loan effectiveness through the domestic counterpart funds. Consulting firms will be engaged using the quality- and cost-based selection (QCBS) method with a quality-cost ratio of 90:10 or Consultants' Qualifications Selection (CQS) method.

3. Community Participation in Procurement

45. To ensure sustainability and to achieve the social objectives of the project, community participation approach will be used. Civil works for Eco-Farming Demonstration Subproject and Environmental Education Subproject will be contracted out to the communities (farmers, village committees, farmer cooperatives, agricultural enterprises and/or forestry enterprises, and schools) based on community participation implementation agreements (CPIA) between PMO, PIUs (Bureau of Forestry or Bureau of Agriculture and Rural Affairs) and communities, and in compliance with the requirements for community participation in procurement in accordance with ADB Procurement Regulations for ADB Borrowers: Goods, works, Nonconsulting and Consulting Services (2017, as amended from time to time). Specific procedures for contracting local communities under community participation, and a draft CPIA are included as Appendix 5, the detailed design of facilities to be constructed, clear duties and responsibilities of each party for the project activities, quality control, project acceptance standards and funds payment are included. The first CPIA will be submitted to ADB for prior review before its implementation.

4. ADB's Prior Review and Post Review (Sampling)

46. Following the ADB Procurement Review: Guidance Note on Procurement (June 2018, as amended from time to time),¹⁵ for (i) all ADB-financed contracts with advance contracting, and (ii) the first ADB-financed contract of each type (OCB advertised internationally or nationally) for civil works and goods, ADB's prior review and approval of the following documents (if applicable) will be required: invitation for bids, bidding document and relevant clarification and addendum (if any), bid evaluation report, draft negotiated contract, signed contract, and contract variations.

47. To avoid procurement risks, ADB's prior review is applicable to the first package of each type of procurement category for each subproject, along with integrated disaster management

¹⁵ Available at: <https://www.adb.org/sites/default/files/procurement-review.pdf>.

system and the design, build and equipment supply of exhibition center will be subject to prior review of ADB, and all ADB-financed consulting service contracts should be applicable with prior review, based on the procurement risk assessment and strategic procurement planning.

48. For OCB packages under post review (sampling), (i) ADB's prior approval of the invitation for bids, bidding document, bid evaluation report, and draft negotiated contract (if applicable) will not be necessary, as long as the first type of OCB bidding document approved by ADB is used as the master bidding document without substantial modification; (ii) procurement process can be conducted without ADB's prior approval (if a bidding document is internationally advertised, the invitations for bids need to be submitted to ADB at latest one week before the advertisement for parallel advertisement in Business Opportunities of ADB's website); (iii) after the contract is signed, the issued invitation for bids, issued bidding document and relevant clarification and addendum (if any), bid evaluation report, screenshot of bid evaluation result publication, notification of contract award, and signed contract (if applicable) needs to be submitted to ADB for review and approval; and (iv) noncompliance in procurement may be determined by ADB for procurement transactions in compliance with ADB Procurement Policy and Procurement Regulations (2017, as amended from time to time). Remedial actions must be taken by the borrower and sub-borrowers.

49. For all ADB-financed consultant recruitments, ADB's prior review and approval of each step will be required.

5. KfW Procurement

50. KfW will provide parallel co-financing (covering Output 2) through a promotional loan. All KfW financed packages are as indicated in the Procurement Plan (in the Non-ADB financing section), and is subject to KfW procurement regulations and review procedures.¹⁶ KfW has agreed to allow the use of ADB bidding documents for its financed contract packages for the ease of project administration by the PMO.

D. Procurement Plan

1. Basic Data

Project Name: Hunan Miluo River Disaster Risk Management and Comprehensive Environment Improvement Project		
Project Number: 53052-001	Approval Number:	
Country: People's Republic of China	Executing Agency: Pingjiang County Government	
Project Procurement Classification: Category B	Implementing Agency: Pingjiang County Project Management Office	
Procurement Risk: Moderate	Project Closing Date: 30 November 2027	
Project Financing Amount: €299.07 million ADB Financing: €126,882,000 (loan) Non-ADB Financing: €172.19 million	Date of this Procurement Plan: 23 October 2020	
Date of First Procurement Plan: June 2020	Advance Contracting: Yes	
Procurement Plan Duration (in months): 18	e-Procurement: To be confirmed before the first advertisement	

¹⁶ KfW Procurement Guidelines: https://www.kfw-entwicklungsbank.de/PDF/Download-Center/PDF-Dokumente-Richtlinien/Vergaberichtlinien-2019-Englisch-Internet_2.pdf.

2. Methods, Review and Procurement Plan

51. Except as the Asian Development Bank (ADB) may otherwise agree, the following methods shall apply to procurement of goods, works, nonconsulting services, and consulting services:

Procurement of Goods, Works and Nonconsulting Services	
Methods	Comments
Open competitive bidding with national advertising for goods	Embankment, Roads, buildings materials and equipment are available locally and domestic market is competitive
Open competitive bidding with national advertising for works	domestic contractors are experienced
Request for Quotations (RFQ)	Applied for small/simple contracts in procurement of Goods, Works and Non-consulting Services; and suitable for standard readily available goods with low quality risk to support efficiency in procurement especially for low value low risks packages
Community participation in procurement (CPP)	Community participation approach is considered as an appropriate modality to deliver the eco-farming demonstration subproject whilst engaging the local communities (i.e., farmers, village committees, farmer cooperatives, agricultural enterprises and forestry enterprises).
Consulting services	
Open competitive bidding with international advertising, using quality- and cost-based selection (QCBS) for consulting services with a quality-cost ratio of 90:10	1 consulting firm for supporting the project implementation and capacity building, and international advertising is warranted.
Open competitive bidding with national advertising, using Consultants' Qualifications Selection (CQS) for consulting firm	2 consulting firms for carrying out (1) external resettlement and social monitoring and evaluation; and (2) 3-year wetland biodiversity monitoring. International advertising is warranted.

ADB = Asian Development Bank.

3. Lists of Active Procurement Packages (Contracts)

52. The following table lists goods, works, nonconsulting, and consulting services contracts for which the procurement activity is either ongoing or expected to commence within the procurement plan's duration (18 months).

Goods, Works, and Nonconsulting Services							
Package No.	General Description	Estimated value (\$)	Procurement method	Review	Bidding procedure	Advertisement Date (quarter, year)	Comments
Output 1 - Subproject 1: Flood prevention and risk management in Miluo River							
MR-CW01	River channel harness and river embankment in Mijiang Bridge - Mishui Bridge (left bank)	23,337,961	OCB-AN	Prior	1S1E	Q2, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
MR-CW02	River channel harness and river embankment in Mijiang Bridge - Mishui Bridge (right bank)	20,539,253	OCB-AN	Post (sample)	1S1E	Q3, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
MR-CW03	River embankment in Yangzhishan (left bank of Xianjiang River)	10,557,485	OCB-AN	Post (sample)	1S1E	Q4, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works

Goods, Works, and Nonconsulting Services							
Package No.	General Description	Estimated value (\$)	Procurement method	Review	Bidding procedure	Advertisement Date (quarter, year)	Comments
MR-CW04	River embankment in Huaqiao Community	12,747,072	OCB-AN	Post (sample)	1S1E	Q3, 2022	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
MR-CW05	River embankment in Shiqian Town	14,502,421	OCB-AN	Post (sample)	1S1E	Q4, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
Output 1 - Subproject 2: Huangjin River National Wetland Park restoration and protection							
HW-CW01	Protection management station, habitat protection and restoration project civil works	2,298,216	OCB-AN	Prior	1S1E	Q2, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
HW-GS01	Office supplies	67,399	RFQ	Post (sample)		Q3, 2021	Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: RFQ Goods
HW-GS02	Patrol boats	62,905	RFQ	Post (sample)		Q4, 2021	Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: RFQ Goods
HW-GS03	Patrol cars, field tools and interphones	112,331	RFQ	Post (sample)		Q4, 2021	Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: RFQ Goods
HW-GS04	Forest fire protection equipment	59,161	RFQ	Post (sample)		Q4, 2021	Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: RFQ Goods
HW-GS05	Solid waste collection station and transportation vehicle	74,887	RFQ	Post (sample)		Q4, 2021	Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: RFQ Goods
HW-GS06	Wetland monitoring equipment	113,829	RFQ	Post (sample)		Q4, 2021	Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: RFQ Goods
HW-GS07	Wetland monitoring and management system	1,373,014	OCB-AN	Prior	1S1E	Q4, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Goods
Output 1 - Subproject 3: Integrated smart disaster risk management system							
DM-CW01	Renovation of Emergency Management Center	109,550	RFQ	Post (sample)		Q4, 2021	Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: RFQ Works
DM-GS01	Integrated Smart Disaster Risk Management System	8,125,726	OCB-AN	Prior	1S1E	Q2, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: IT SBD
Output 2 – Subproject 6: Rural domestic wastewater treatment and sanitary conditions improvement							
RT-CW01	1,087 HHs toilet reconstruction in Chengguan Town	517,720	OCB-AN	Post (sample)	1S1E	Q3, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works

Goods, Works, and Nonconsulting Services							
Package No.	General Description	Estimated value (\$)	Procurement method	Review	Bidding procedure	Advertisement Date (quarter, year)	Comments
RT-CW02	2,682 HHs toilet reconstruction in Sanyang Township	1,277,392	OCB	Post (sample)	1S1E	Q4, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW03	4,146 HHs toilet reconstruction in Anding Town	1,974,670	OCB	Prior	1S1E	Q2, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW04	1,528 HHs toilet reconstruction in Fushoushan Town	727,761	OCB	Post (sample)	1S1E	Q1, 2022	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW05	3,595 HHs toilet reconstruction in Sanshi Town	1,712,238	OCB	Post (sample)	1S1E	Q2, 2022	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW06	2,654 HHs toilet reconstruction in Jiayi Town	1,264,056	OCB	Post (sample)	1S1E	Q3, 2022	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
Output 3 – Subproject 8: Promotion of eco-farming technology and practices							
EF-CW01	Eco-farming for rice, vegetable and orchards production bases 187 ha	1,125,167	CPP	Prior Review for the 1st CPIA		Q2, 2021- Q2 2024	Number of contracts: 6* Prequalification of bidders: No Advance contracting: No Bidding document: CPIA
EF-CW02	Eco-farming for tea camellia production piloting 800 ha	8,656,508	CPP	Prior Review for the 1st CPIA		Q2, 2021- Q2 2024	Number of contracts: 70* Prequalification of bidders: No Advance contracting: No Bidding document: CPIA
EF-CW03	Eco-farming for tea production piloting 940 ha	9,511,274	CPP	Prior Review for the 1st CPIA		Q2, 2021- Q2 2024	Number of contracts: 30* Prequalification of bidders: No Advance contracting: No Bidding document: CPIA
Output 4 – Subproject 9: Green procurement practices and environmental education							
EE-GS01	Textbook printing	438,091	OCB-AN	Post (sample)	1S1E	Q2, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Goods
EE-GS02	Book storage cabinets, three color garbage sorting bins and smart garbage bins	413,378	OCB-AN	Prior	1S1E	Q2, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Goods
EE-CW01	Renovation of 36 green development centers	1,330,178	OCB-AN	Post (sample)	1S1E	Q2, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
EE-GS03	Air energy water heaters	328,004	OCB-AN	Post (sample)	1S1E	Q2, 2022	Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: NA
EE-GS04	Solar street lamps	313,928	OCB-AN	Post (sample)	1S1E	Q2, 2022	Number of contracts: 1 Prequalification of bidders: No Advance contracting: No

Goods, Works, and Nonconsulting Services							
Package No.	General Description	Estimated value (\$)	Procurement method	Review	Bidding procedure	Advertisement Date (quarter, year)	Comments
EE-NCS01	Disposal of waste chemical reagents	52,122	RFQ	Post (sample)		Q2, 2021	Non-consulting service Number of contracts: 1 Prequalification of bidders: No Advance contracting: No
EE-CW03	Design, build and equipment provisions of environmental protection Exhibition Center	629,053	OCB-AN	Prior	1S2E (point scoring system)	Q2, 2022	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works

* The No. of contracts are based on the first round of consultation that PMO and PIUs carried out due December 2019. The total No. of contracts should be confirmed before the first CPIA award.

Consulting Services							
Package No.	General Description	Estimated value (\$)	Selection method	Review	Type of Proposal	Advertisement Date (quarter, year)	Comments
CS-TA-01	Technical support, project management and capacity building (150 person-months)	1,125,000	QCBS	Prior	FTP	Q4, 2020	Advance contracting, quality-cost ratio of 90:10, time-based contract
CS-TA-02	External resettlement and social monitoring and evaluation	180,000	CQS	Prior	STP	Q2, 2021	26 person months, time-based contract
HW-CS01	3-year wetland monitoring program	224,662	CQS	Prior	STP	Q2, 2021	Lump-sum contract

4. Lists of Inactive Procurement Packages (Contracts) Required Under the Project

53. The following table lists goods, works, nonconsulting, and consulting services contracts for which the procurement activity is either ongoing or expected to commence beyond the current procurement plan's duration.

Goods, Works, and Nonconsulting Services							
Package No.	General Description	Estimated value (\$)	Procurement method	Review	Bidding procedure	Advertisement Date (quarter, year)	Comments
Output 1 - Subproject 1: Flood prevention and risk management in Miluo River							
MR-CW06	River embankment in Chengxi and Chengping sections	3,814,208	OCB	Post (sample)	1S1E	Q1, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
MR-CW07	River embankment in Chengteng and Sima sections	5,761,926	OCB	Post (sample)	1S1E	Q1, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
Output 2 - Subproject 6: Rural domestic wastewater treatment and sanitary conditions improvement							
RT-CW09	1,843 HHs toilet reconstruction in Mujin Township	877,790	OCB	Post (sample)	1S1E	Q2, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works

Goods, Works, and Nonconsulting Services							
Package No.	General Description	Estimated value (\$)	Procurement method	Review	Bidding procedure	Advertisement Date (quarter, year)	Comments
RT-CW010	2,272 HHs toilet reconstruction in Longmen Town	1,082,115	OCB	Post (sample)	1S1E	Q3, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW11	1,407 HHs toilet reconstruction in Shiniuzhen Town	670,130	OCB	Post (sample)	1S1E	Q4, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW12	3,638 HHs toilet reconstruction in Nanjiang Town	1,732,718	OCB	Post (sample)	1S1E	Q1, 2024	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW013	1,490 HHs toilet reconstruction in Shangtashi Town	709,662	OCB	Post (sample)	1S1E	Q2, 2024	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW14	1,240 HHs toilet reconstruction in Banjiang Township	590,591	OCB	Post (sample)	1S1E	Q3, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW015	2,315 HHs toilet reconstruction in Sandun Township	1,102,596	OCB	Post (sample)	1S1E	Q4, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW16	2,082 HHs toilet reconstruction in Tongshi Town	991,622	OCB	Post (sample)	1S1E	Q1, 2024	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW17	3,798 HHs toilet reconstruction in Meixian Town	1,808,924	OCB	Post (sample)	1S1E	Q3, 2024	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW18	1,539 HHs toilet reconstruction in Dazhou Township	733,000	OCB	Post (sample)	1S1E	Q4, 2024	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW19	1,756 HHs toilet reconstruction in Yuping Town	836,353	OCB	Post (sample)	1S1E	Q3, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW20	1,809 HHs toilet reconstruction in Cenchuan Town	861,596	OCB	Post (sample)	1S1E	Q4, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW22	2,929 HHs toilet reconstruction in Wukou Town	1,395,033	OCB	Post (sample)	1S1E	Q2, 2024	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW24	1,090 HHs toilet reconstruction in Xiangjia Town	519,149	OCB	Post (sample)	1S1E	Q4, 2024	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works

Goods, Works, and Nonconsulting Services							
Package No.	General Description	Estimated value (\$)	Procurement method	Review	Bidding procedure	Advertisement Date (quarter, year)	Comments
Output 4 – Subproject 9: Green procurement practices and environmental education							
EE-CW02	Support for environmental education piloting in 36 schools	269,594	CPP/FA*	Prior Review for the 1st CPIA/FAA		Q2, 2025	Number of contracts: 36 Prequalification of bidders: No Advance contracting: No Bidding document: CPIA/FAA

* The final procurement arrangement will be confirmed during the project implementation when the scope of these activities and selection criteria are finalized.

Consulting Services							
Package No.	General Description	Estimated value (\$)	Selection method	Review	Type of Proposal	Advertisement Date (quarter, year)	Comments
[None]							

5. Lists of Awarded and Completed Contracts

54. The following table lists the awarded and completed contracts for goods, works, nonconsulting services and consulting services.

Goods, Works, and Nonconsulting Services					
Package No.	General Description	Contract value	Date of ADB approval of Contract Award	Date of Completion	Comments
[None]					

ADB=Asian Development Bank.

Consulting Services					
Package No.	General Description	Contract value	Date of ADB approval of Contract Award	Date of Completion	Comments
[None]					

ADB=Asian Development Bank.

6. Non-ADB Financing

55. The following table list works, goods, and consulting services contracts over the life of the project, financed by non-ADB sources.

Goods, Works, and Nonconsulting Services				
General Description	Estimated Value (cumulative, \$)	Estimated No. of Contracts	Procurement Method	Comments
Output 2: Subproject 4: Integrated water supply in urban and rural Pingjiang				
New water supply plant capacity 2.5×10 ⁴ m ³ /d – equipment contract	2,580,616	1	ICB	KfW financed contract packages ¹⁷ Advertising planned: Q2, 2021 – Q2, 2023 Prequalification of bidders: No Domestic preference applicable: No Advance contracting: No Bidding document: Following ADB standard bidding document templates for Works and/or Goods E-procurement: No KfW Prior review
New water supply plant capacity 2.5×10 ⁴ m ³ /d – civil work contract	6,244,103	1	OCB-NA	
Drinking water supply and distribution pipelines 58.8 km	8,824,754	1	ICB	
Total pipeline to HHs 1,063.68 km	13,162,965	1	ICB	
Output 2: Subproject 5: Separating rainwater from sewers in urban and rural Pingjiang				

¹⁷ KfW Procurement Guidelines: https://www.kfw-entwicklungsbank.de/PDF/Download-Center/PDF-Dokumente-Richtlinien/Vergaberichtlinien-2019-Englisch-Internet_2.pdf.

Goods, Works, and Nonconsulting Services				
General Description	Estimated Value (cumulative, \$)	Estimated No. of Contracts	Procurement Method	Comments
Separating rainwater from sewers in 12 urban areas	12,415,804	1	ICB	KfW financed contract packages Advertising planned: Q2, 2021 – Q2, 2023
Separating rainwater from sewers in 22 towns	9,766,652	1	ICB	Advertising: international Prequalification of bidders: No Domestic preference applicable: No Advance contracting: No Bidding document: Following ADB standard bidding document templates for Works E-procurement: No KfW Prior review
Output 2: Subproject 6: Rural domestic wastewater treatment and sanitary conditions improvement				
Wastewater collection and treatment facilities for 136 schools	14,292,329	1	ICB	KfW financed contract packages Advertising planned: Q2, 2021 – Q2, 2023
Wastewater collection and treatment facilities for 26 hospitals	2,738,287	1	ICB	Advertising: international Prequalification of bidders: No Domestic preference applicable: No Advance contracting: No
Rural centralized domestic wastewater collection and treatment facilities for 21 communities	9,399,801	1	ICB	Bidding document: Following ADB standard bidding document templates for Works E-procurement: No KfW Prior review
Output 4: Subproject 10: Institutional, technical and management capacity improved				
Technical support and capacity building	945,760	1	ICB	KfW financed contract package Advertising planned: Q2, 2021 Advertising: international Prequalification of bidders: No Domestic preference applicable: No Advance contracting: No KfW Prior review
Output 1 - Subproject 1: Flood prevention and risk management in Miluo River				
River embankment in Yang'an Bridge	5,339,373	1	PRC domestic procedure	Financed by counterpart funds of PCG Advertising planned: Q2, 2021 – Q2 2025 Advertising: National Prequalification of bidders: No Domestic preference applicable: No Bidding document: following PRC domestic practices E-procurement: Yes
Jinshazhou ecological rehabilitation	3,261,175	1	PRC domestic procedure	
New built one pumping station and reconstruction 2 pumping stations	3,017,985	1	PRC domestic procedure	
River embankment in Longmen Town, Mujin Township, Changshou Town, Jiayi Town and Sanshi Town	3,378,417	1	PRC domestic procedure	
River embankment in Anding Town and Wengjiang Town	2,600,617	1	PRC domestic procedure	
River embankment in Wukou Town, Wushi Town and Yuanyi Center	2,835,164	1	PRC domestic procedure	
Protection of aquatic germplasm resources in Miluo River	74,887	1	PRC domestic procedure	
Output 2: Subproject 4: Integrated water supply in urban and rural Pingjiang				
Drinking water supply pipeline 2,500 m	1,975,627	1	PRC domestic procedure	Financed by counterpart funds of PCG Advertising planned: Q2 2021 Advertising: National Prequalification of bidders: No Domestic preference applicable: No Bidding document: following PRC domestic practices E-procurement: Yes
Water distribution station capacity 10,000 m³/d	1,094,218	1	PRC domestic procedure	
Drinking water supply and distribution pipelines 38,977 m	3,021,956	1	PRC domestic procedure	
Drinking water supply and distribution pipelines 19,791 m	531,879	1	PRC domestic procedure	
The northern area water supply pipeline to HHs 340.87 km	1,684,614	1	PRC domestic procedure	
The eastern area water supply pipeline to HHs 722.82 km	3,956,656	1	PRC domestic procedure	
Output 2 – Subproject 6: Rural domestic wastewater treatment and sanitary conditions improvement				

Goods, Works, and Nonconsulting Services				
General Description	Estimated Value (cumulative, \$)	Estimated No. of Contracts	Procurement Method	Comments
4,587 HHs toilet reconstruction in Changshou Town	2,184,711	1	PRC domestic procedure	Financed by counterpart funds of PCG Advertising planned: Q4 2022-Q3 2024 Advertising: National Prequalification of bidders: No Domestic preference applicable: No Bidding document: following PRC domestic practices E-procurement: Yes
2,536 HHs toilet reconstruction in Longmen Town	1,207,854	1	PRC domestic procedure	
3,597 HHs toilet reconstruction in Wengjiang Town	1,713,191	1	PRC domestic procedure	
4,112 HHs toilet reconstruction in Wushi Town	1,958,476	1	PRC domestic procedure	
Output 3 - Subproject 7: Sustainable livestock waste management				
Livestock wastewater treatment in 94 farms	4,875,941	Multiple contracts	PRC domestic procedure	Financed by counterpart funds of PCG Advertising planned: Q2, 2021 – Q2 2025 Bidding document: following PRC domestic practices E-procurement: Yes
Output 4 – Subproject 10: Institutional, technical and management capacity improved				
Agricultural products quality monitoring equipment	242,587	1	PRC domestic procedure	
Office supplies and IT equipment for PMO	74,833	Multiple	PRC domestic procedure	

Consulting Services				
General Description	Estimated Value (cumulative)	Estimated No. of Contracts	Procurement Method	Comments
Output 4 – Subproject 9: Green procurement practices and environmental education				
Environmental education textbook compilation and review	29,955	1	PRC domestic procedure	
Output 4 – Subproject 10: Institutional, technical and management capacity improved				
Project start-up Environment Specialist	15,000	1	PRC domestic procedure	TOR to be approved by ADB before the advertisement Advertising planned: Q4, 2020 -Q1 2021 Advertising: National PCG counterpart funds financed
Project start-up Financial Management Specialist	15,000	1	PRC domestic procedure	
Project start-up Procurement Specialist	15,000	1	PRC domestic procedure	
Project start-up Social and Resettlement Specialist	22,500	1	PRC domestic procedure	
Project start-up Fish Monitoring Specialist	7,500	1	PRC domestic procedure	
Green Procurement Specialist	60,000	1	PRC domestic procedure	
Environmental Education Specialist	45,000	1	PRC domestic procedure	
Green Development Policy Specialist	22,500	1	PRC domestic procedure	
Construction supervision services	3,838,579	Multiple	PRC domestic procedure	

E. Open Competitive Bidding (National Advertising)

1. Regulation and Reference Documents

56. The procedures to be followed for Open Competitive Bidding (National Advertising) shall be those set forth in the Government Procurement Law of People's Republic of China approved on 29 June 2002 (revised in August 2014) and Law of the People's Republic of China on Bid Invitation and Bidding of the People's Republic of China promulgated on 30 August 1999 (revised on 28 December 2017) with the clarifications and modifications described in the following paragraphs required for compliance with the provisions of the ADB Procurement Policy: Goods, works, Nonconsulting and Consulting Services (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers: Goods, works, Nonconsulting and Consulting Services (2017, as amended from time to time).

2. Procurement Procedures

a. Competitive Bidding Procedure (Procurement Law Art. 26 and Law on Bidding Art. 10).

57. Public tendering is the acceptable method of government procurement, and public invitation is the accepted bid invitation mode.

b. Eligibility

58. The eligibility of bidders shall be as defined under section I of the Procurement Regulations for ADB Borrowers; accordingly, no bidder or potential bidder should be declared ineligible for reasons other than those provided in section I of the Regulations, as amended from time to time.

c. Advertising

59. All invitations to prequalify or to bid shall be advertised in a free and open access website (www.chinabidding.com). Such advertisement shall be made in sufficient time for prospective bidders to obtain prequalification or bidding documents and prepare and submit their responses. In any event, a reasonable time shall be given to the bidders for preparation of their bid docs. The preparation period shall count (a) from the date of advertisement, or (b) when the bidding documents are available for issue, whichever date is later. The advertisement and the prequalification and bidding documents shall specify the deadline for such submission.

d. Bidding Period

60. The minimum bidding period should be reasonable enough for bidders to prepare their bids prior to the deadline for the submission of bids.

e. Participation by Government-Owned Enterprises

61. Government owned enterprises in the Borrower's country may be permitted to bid if they can establish that they (a) are legally and financially autonomous, (b) operate under commercial law and (c) are not a dependent agency of the Borrower/Project executing agency.

f. Rebidding

62. Re-bidding shall not be allowed solely because the number of bids is less than three (3).

3. Bidding Documents

a. Qualification requirements

63. Qualification requirements of bidders and the method of evaluating the qualification of each bidder shall be specified in detail in the bidding documents, and in the prequalification documents if the bidding is preceded by a prequalification process.

b. Bid Submission and Opening

64. Bidders shall be allowed to submit bids by mail or by hand.

65. All bids shall be opened in public; all bidders shall be afforded an opportunity to be present (either in person or through their representatives) at the time of bid opening, but bidders shall not be required to be present at the bid opening.

c. Bid Evaluation and Award

66. No bid may be rejected solely on the basis that the bid price falls outside any standard contract estimate, or margin or bracket of average bids established by the Borrower/Project Executing Agency.

67. Each contract shall be awarded to the lowest evaluated substantially responsive bidder, that is, the bidder who meets the appropriate standards of capability and resources and whose bid has been determined (a) to be substantially responsive to the bidding documents and (b) to offer the lowest evaluated cost. The winning bidder shall not be required, as a condition of award, to undertake responsibilities for work not stipulated in the bidding documents or otherwise to modify the bid as originally submitted.

d. ADB Policy Clauses

68. Each contract financed with the proceeds of the Loan shall provide that the suppliers and contractors shall permit ADB, at its request, to inspect their accounts and records relating to the performance of the contract and to have said accounts and records audited by auditors appointed by ADB.

69. A provision shall be included in all bidding documents for OCB (National Advertising) works and goods contracts financed by ADB stating that the Borrower shall reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question.

70. A provision shall be included in all bidding documents for OCB (National Advertising) works and goods contracts financed by ADB stating that ADB will declare a firm or individual ineligible, either indefinitely or for a stated period, to be awarded a contract financed by ADB, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices or any integrity violation in

competing for, or in executing, ADB-financed contract.

F. Consultant's Terms of Reference

71. The detailed terms of reference of consulting services are given under the descriptions of respective project advisory support summary and the summary on project management and capacity building in Appendices 1-3.

VII. SAFEGUARDS

72. **Prohibited investment activities.** Pursuant to ADB's Safeguard Policy Statement (2009), ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the Safeguard Policy Statement (2009).

A. Environment

73. **Institutional arrangements.** The project is classified by ADB as Category B for environment. The project environmental safeguard assessments and documents comprise an initial environmental examination (IEE) including an environmental management plan (EMP; Attachment 1 of the IEE). The EMP covers all project components. The IEE and EMP have been prepared in compliance with ADB's Safeguard Policy Statement (2009). For all project matters relating to environmental safeguards, the EMP forms the basis of the official loan agreement between ADB and the executing agency.

74. **Content of the EMP.** The EMP describes (i) the project environmental safeguard objectives, (ii) roles and responsibilities for EMP implementation, (iii) mitigation measures, (iv) inspection, monitoring, and reporting arrangements, (v) training and institutional strengthening, (vi) a project-specific grievance redress mechanism, (vii) public consultation during project implementation, and (viii) a feedback and adjustment mechanism. The EMP identifies specific roles and responsibilities for all agencies that will be involved in EMP implementation, including the PCG, implementing agencies, contractors, construction supervision companies, and operators of project facilities. The mitigation measures are tailored to the project-specific conditions and risks identified in the IEE. The scope and content of the EMP comply with ADB's Safeguard Policy Statement (2009) for environmental safeguards and the PRC's environmental laws and regulations. All project agencies are required to comply with the EMP.

75. **EMP implementation.** The EMP will be implemented in all phases of the project: design, pre-construction, construction, and operation. The PCG will be responsible for ensuring that the project will be designed, constructed, decommissioned, and operated in accordance with (i) the national and local government environmental, health, and safety laws, regulations, procedures, and guidelines; (ii) the ADB's Safeguard Policy Statement (2009), and (iii) the IEE including the EMP. The executing agency, through the PMO, holds final responsibility for implementation of and compliance with the EMP.

76. For finalization of the preliminary engineering designs, and preparation of the detailed engineering designs for the project, the PMO will forward the EMP to the engineering and environmental design institutes responsible for each subproject. The PMO and implementing agency environment officers will work with the design institutes to ensure that safeguard risks identified in the EMP are considered in the detailed designs and avoided, minimized, or mitigated. The EMP will be updated at the end of the detailed design, as needed. To ensure that bidders will respond to the EMPs provisions, the PMO and implementing agencies will prepare and provide the following specification clauses for incorporation into the bidding documents: (i) a list of environmental management requirements to be budgeted by the bidders in their proposals; (ii) environmental clauses for contractual terms and conditions; and (iii) the domestic environmental assessments, and the project IEE including the updated EMP for compliance. All tenders involving civil works will be required to include and fully address the EMP requirements, especially the mitigation and monitoring measures.

77. **Personnel.** The EMP will be coordinated by the following personnel: (i) at least one full-

time and qualified PMO environment officer, who will be appointed by the PCG. The officer will be responsible for overall coordination of the EMP; (ii) at least 12 full-time social-and-environmental safeguard officers within the project implementation units (PIUs), who will be appointed by the county and district implementing agencies. These officers will lead the daily coordination of the EMP at the site level and will coordinate closely with the PMO environment officer. The 12 positions will be assigned as follows: (i) for five PIUs, a minimum of two social-and-environmental safeguard officers per PIU, reflecting the wide geographic spread and/or large number of work sites under subprojects: the Housing and Urban-Rural Development Bureau (PIU–Subproject 5), Ecology and Environment Bureau (PIU–Subproject 6), Livestock, Fisheries and Agricultural Machinery Affairs Center (PIU–Subproject 7), and, Forestry Bureau (PIU–Subproject 2; part of Subproject 8–eco-farming – oil tea component); (ii) for two PIUs, a minimum of one social-and-environmental safeguard officer per PIU will be assigned, reflecting the lower scope of civil works: the Agriculture and Rural Affairs Bureau (PIU–Subproject 8) and Pingjiang County Water Supply Co., Ltd (PIU–Subproject 4). For three PIUs (Education Bureau, PIU–Subproject 9; Emergency Management Bureau, PIU–Subproject 3; and Natural Resources Bureau, PIU–Subproject 3) no social-and-environmental safeguard officers are required, due to a lack of civil works under these PIUs.

78. The PMO environment officer and PIU social-and-environmental safeguard officers will be supported in their roles by: (i) a loan implementation start-up consultant (environment). The consultant will assist the PMO to establish the EMP in the early phases of implementation, before a full suite of loan implementation consulting services are engaged (see next point); (ii) a loan implementation environment consultant (LIEC), as part of the loan consulting services. The consultant will support the PMO and implementing agency staff to establish and implement the EMP, including to: assess whether the detailed engineering designs are consistent with the scope of the preliminary designs and EMP or whether new safeguard assessments are required; integrate the EMP within the project bidding documents; visit work sites and liaise with contractors and construction supervision companies; and, support the preparation of safeguard progress reports; and (iii) a fish ecologist, to conduct a rapid assessment of fish conservation values in the river sections of the National Pingjiang Section of the Miluo River Germplasm Resources Protection Zone to be dredged. The consultant's inputs will help inform the detailed engineering designs for the dredging, to avoid, minimize and/or mitigate impacts to fish resources. All consulting positions are national positions. Terms of reference for the positions are provided in Appendix 1 for start-up consultants and Appendix 2 for technical support and project management in the PAM and Appendix 2 of the EMP.

79. **Capacity building.** The PMO and implementing agencies have no previous experience with ADB-funded projects or safeguard requirements. To ensure effective implementation of the EMP, a capacity building program is included in the EMP for training of project agencies in EMP implementation, mitigation measures, supervision, monitoring, reporting, and the grievance redress mechanism. Training will be provided by the loan consultants for safeguards and other specialists in the loan consulting teams. Trainees will include the staff of the PMO, implementing agencies, contractors, and construction supervision companies.

80. **Procedures for feedback and adjustment of the EMP, including in the event of non-compliance.** Based on site inspections and monitoring reports, the PMO shall decide, in consultation with the LIEC, whether (i) further mitigation measures are required as corrective actions, or (ii) improvements are required for environmental management practices. The effectiveness of mitigation measures and monitoring plans will be evaluated by a feedback reporting system. Adjustment to the EMP will be made, if necessary. The PMO environment officer, PIU social-and-environmental safeguard officers, and LIEC will play critical roles in the

feedback and adjustment mechanism. If during inspection and monitoring, substantial deviation from the EMP is observed, or any changes are made to the project that may cause substantial adverse environmental impacts or increase the number of affected people, then the PMO will immediately consult with ADB and form an environmental assessment team to conduct additional environmental assessment. If necessary, further public consultation will be undertaken. A new or updated domestic environmental assessment(s), and IEE (including an EMP) will be prepared and submitted to ADB for review, appraisal, and public disclosure. The revised EMP will be passed to the contractors, construction supervision consultants (CSC) and operators of the project facilities, for implementation.

81. **Monitoring and reporting for environmental safeguard.** See Section IX of this PAM.

82. **Environmental assurances.** Project-specific environmental safeguard conditions are included in the loan and project agreements and include the need for all project agencies to comply with the EMP.

B. Involuntary Resettlement

83. **Category and impacts.** The project is classified as category “B” for involuntary resettlement. The project does not involve significant land acquisition and resettlement impacts. The project will involve a total land use of 698.09 *mu*, including state-owned land occupation (SLO) of 527.85 *mu*, permanent land acquisition (PLA) of 170.24 *mu*. In addition, 1,219.4 *mu* land will be used temporarily during construction. A total of 3 houses with 628.53 m² area will be demolished, involving 3 households with 16 persons. A total of 64 households with 269 persons will be affected by the project’s permanent land acquisition; and among them 20 households with 83 persons will be significantly affected.

84. **Resettlement plan (RP).** A draft RP in accordance with ADB’s Safeguard Policy Statement (2009) and relevant laws and regulations of the PRC has been prepared. The RP is based on feasibility study report, social surveys and consultations with affected people; and it includes (i) adequate measures for compensation, resettlement, and rehabilitation of affected people; (ii) consultations with the affected people during the updating and implementation of the plan; (iii) a grievance redress mechanism; (iv) implementation arrangements, funding and capacity building; and (v) monitoring and reporting requirements.

85. **Updating RP.** The RP will be (i) updated based on the final design, detailed measurement survey, and census of affected persons, (ii) disclosed to affected persons, and (iii) submitted to ADB for review and approval prior to the award of civil works contract and commencement of land acquisition and resettlement.

86. **Capacity building for implementation and monitoring of the resettlement plan.** The PCG and PMO have the capacity to implement domestically funded projects. Their capacity will be strengthened to implement the RP in compliance with ADB’s requirements through several measures, including (i) PCG and implementing agencies will each appoint a social officer or focal staff; (ii) the project management consultant team will include a resettlement specialist; (iii) relevant staff of PCG and implementing agencies will be trained on implementation and monitoring of RP; (iv) the initial project management support consultant will provide training on ADB’s resettlement policy requirements, and will assist the PCG and implementing agencies to update the RP; and (iv) an external resettlement and social monitoring and evaluation agency will be recruited.

C. Ethnic Minorities

87. There are no concentrated ethnic minority communities or villages in the project area. There are only 85 scattered ethnic minority population who moved to the project area because of marriage or work, and they will benefit from the project as residents. The project does not trigger indigenous peoples safeguards requirements set out in the ADB's Safeguard Policy Statement (2009); and there is no need to prepare an ethnic minority development plan. PCG and implementing agencies will ensure that the project does not impact any ethnic minority communities that would trigger ADB's Safeguard Policy Statement (2009) requirements on indigenous peoples.

D. Grievance Redress Mechanism

88. Two project-specific grievance redress mechanisms (GRM), one for environmental safeguards and one for social safeguards, have been developed in compliance with ADB's Safeguard Policy Statement (2009) to address concerns on environment, health, safety, and social matters associated with ADB-funded projects. The GRMs complement and build upon existing PRC mechanisms for environmental and social complaints, respectively, including existing national environmental complaint hotlines for environmental safeguards. The GRMs have been designed to achieve the following objectives: (i) provide channels of communication for communities to raise concerns about environmental and social grievances which might result from the project; (ii) help prevent and mitigate adverse environmental and social impacts to communities that might be caused by construction works and/or operation of the project; and (iii) build trust and respect and promote productive relationships between the PCG, PMO, PIUs and communities. The GRMs are accessible to all residents of the project communities, including women, youth, minorities, and poor households. Multiple points of entry are available, including face-to-face meetings, written complaints, telephone conversations, e-mail, and social media. Details of the GRMs, including time-bound flow charts of procedures, are described in the EMP for the environment safeguards GRM, and resettlement plan for the social safeguards GRM. The complaint channels and redress procedures are slightly different for environmental and social issues, but the PMO will maintain an integrated reporting system to document, follow-up, and report all cases. With the support from PICs, all PMO and PIUs will train their staff in the GRMs and will take an active role in supporting the staff when necessary.

VIII. Poverty, Social and Gender

89. **Social and poverty dimensions.** The project is classified as general intervention for poverty reduction. The poverty and social analysis was undertaken based on extensive stakeholder consultations and social surveys during the project preparation. A total of 523,333 residents in 239 villages of 25 project towns and subdistricts in the Pingjiang County are identified as the project's direct beneficiaries, including 254,864 women (48.7%), and 21.5% low income people. The project will contribute to poverty reduction and social development in the project area by: (i) mitigating the potential impact of flooding and reducing flood disasters related losses; (ii) improving access to safe drinking water and sanitation services; (iii) increasing crop yields and agricultural incomes of farmers; (iv) enhancing residents' skills; and (v) increasing jobs and income-generating opportunities; and (vi) lowering health risks through better sanitation and environment. It is estimated that the project will provide a total of 2,884 skilled and 3,712 non-skilled jobs to residents. A social development action plan (SDAP) has been prepared, which include specific actions and targets for low income or poor people. The project will strengthen the capacity of the PCG, PMO and PIUs to implement and monitor the SDAP (Table 16).

90. **Gender dimension.** The project is classified as *effective gender mainstreaming*.¹⁸ A gender analysis showed that women in the project area (i) had low participation in community-level decision making; (ii) engaged more on household care works and wastewater and waste management; (iii) were adversely affected by floods and the poor water supply, sanitation and environmental conditions; and (iv) had low level of skills and income generation opportunities. The project provides opportunities for women to participate and benefit equitably from the project skills training, job opportunities, better access to water supply and sanitation services, livelihood and income generation opportunities, and improved living environment. A gender action plan (GAP) (Table 17) has been prepared with specific actions for women, including (i) increased participation in the village River Chief team; (ii) leadership training to promote more women in public life; (iii) quotas for women managers in eco-farming demonstration farms and farmer cooperatives (FCs); (iv) establishment women WeChat groups and women leadership groups in pilot villages to raise awareness raising and sharing experiences; (v) quotas for women jobs during project construction and operation, and (vi) training and capacity building for project staff to implement gender measures. Key gender targets have also been included in the design and monitoring framework (DMF).

¹⁸ ADB. 2012. *Guidelines for Gender Mainstreaming Categories of ADB Projects*. Manila.

Table 16: Social Development Action Plan

Actions	Targets and Indicators	Timeframe	Responsible Agencies	Budget Sources
A. Output 1: Water-related disaster risk management strengthened				
A.1. Communities participate in the detailed design of water-related disaster risk management component	A.1. 20 representatives from each of 27 villages in 12 towns along Miluo River participated, including 20% poor and low-income people	2021-2027	PMO, PIUs, contractors (supported by TGs and VCs, PAO, DI, and social consultants)	Government counterpart fund and loan funds
A.2. Communities participate in public awareness-raising and wetland park protection education programs, and flood risks emergency response procedures for the communities	A.2. 100 representatives of beneficiaries from each of 12 towns in the flooding/wetland park areas, including 20% poor and low-income people participated			
A.3. Strengthen and involve the existing River Chief system of villages/communities along the river in the monitoring of environmental protection and green development activities in five pilot villages	A.3. The River Chief system in each of 5 villages along the Miluo river is improved and involved in relevant activities			
A.4. Provide skilled and unskilled jobs to residents, including quotas for poor and low income people	A.4.1. 153 skilled jobs generated, of which 20% provided to poor or low-income with priority A.4.2. 122 unskilled jobs generated, of which 20% provided to poor or low-income with priority 2020 baseline: 0			
B. Output 2: Access to safe drinking water and sanitation services enhanced				
B.1. Communities participate in the detailed design and awareness education on water saving program	B.1. 10 representatives from each of 107 villages in 14 towns participated, including 20% poor and low-income people	2021-2027	PMO, PIUs, contractors (supported by TGs and VCs, BOE, HB, BEE, PAO, DI, and social consultants)	Government counterpart fund and loan funds
B.2. Communities participate in detailed design, implementation and O&M of rural toilets	B.2. 10 representatives from each of 464 villages in 24 towns participated, including 20% poor and low-income people			
B.3. Communities attend public hearings for sewage treatment tariff and water supply tariff proposals	B.3. 50 representatives from each town participated, including 20% from poor and low-income households			
B.4. Poor households are provided public assistance program, such as giving exemption partly from water pipe connection, water tariff and sewage treatment tariff increase	B.4. 100% of registered poor received relevant public assistance			
B.5. Provide skilled and unskilled jobs for residents during construction stage and operation stage, including quotas for poor and low income people	B.5.1. 2,008 skilled jobs generated, of which 20% provided to poor and low-income with priority B.5.2. 2,574 unskilled part-time jobs generated, of which 20% provided and poor or low-income with priority 2020 baseline: 0			
C. Output 3: Circular agriculture for sustainable livestock waste management and eco-farming demonstrated				
C.1. Communities participate in design and O&M activities of relevant project facilities for livestock waste treatment	C.1. 20 representatives from each of 62 villages in 19 towns participated, including 20% poor and low-income people	2021-2027	PMO, PIUs, contractors (supported by TGs and VCs, PAO, DI, and social consultants)	Government counterpart fund and loan funds
C.2. Communities participate in demonstration farms and training program of eco-farming techniques	C.2. 20 representatives from each of 41 villages in 17 towns participated, including 20% poor and low-income people			
C.3. Provide skilled and unskilled jobs for residents during construction stage and operation stage, including quotas for poor and low income people	C.3.1. 723 skilled jobs generated, of which 25% provided to poor and low-income with priority			
	C.3.2. 1,016 unskilled part-time jobs generated, of which 35% provided to poor and low-income with priority 2020 baseline: 0			
D. Output 4: Green procurement practices piloted and environmental education mainstreamed				
D.1 Teaching skills on environmental education are developed for teachers.	D.1. 800 teachers will be reported on teaching skills development on environmental education	2021-2027	PMO, PIUs, contractors (supported by	Government counterpart

Actions	Targets and Indicators	Timeframe	Responsible Agencies	Budget Sources
	2020 baseline: 0		TGs and VCs, PAO, DI, social consultants)	fund and loan funds
E. Institutional, technical and management capacity improved				
E.1 Include Resettlement, Social and Gender Specialist in project implementation support team to guide the implementation of SDAP, and provide training to the PMO, PIUs and TGs E.2 Assign social and gender focal staff in PMO, PIUs and project TGs to ensure the effective implementation of d SDAP E.3 Provide training for PMO and PIUs on: (i) ADB social development policies; (ii) how to implement and monitor SDAP; and (iii) project-related social issues and the importance of social inclusion in all project components E.4 Employ external monitoring expert to monitor social issues E.5 Collect data disaggregated by poor and low income people	E.1. At least one Resettlement, Social and Gender Specialist included in the implementation consultant team to guide and assist in implementing SDAP activities E.2. At least one social focal person in each of the PMO, PIUs, and project TGs is appointed to undertake the SDAP activities E.3. All staff in the PMO and PIUs received training on SDAP, relevant social issues, and how to implement and monitor SDAP E.4. External monitor recruited and social monitoring reports submitted to ADB semi-annually E.5. Disaggregated data of the poor and low income collected during project implementation 2020 baseline: 0	2021-2027	PMO, PIUs, TGs (supported by PAO, NRB, and social consultants)	Government counterpart fund and loan funds
F. Comply with labor laws and core labor standards (All outputs)				
F.1 Contractors comply with labour laws and core labour standards, including no child labour, minimum wages, equal pay to equal work, and occupational health and safety F.2 Participation of residents in public health knowledge promotion and trainings regarding prevention and control of HIV/AIDS, STI, COVID-19 and other infectious disease F.3 Contractors' construction personnel involved in HIV/AIDS, COVID-19, STI and COVID-19 publicity activities F.4 Distribute locally the information and publicity materials (e.g. posters and brochures) regarding the prevention and treatment of HIV/AIDS, STI and COVID-19	F.1. 100% contractors comply with relevant requirements on labour standards F.2. Relevant health training and awareness conducted in all project villages and towns F.3. 100% of workers receive training and information F.4. Publicity materials are disseminated to all project villages 2020 baseline: 0	2021-2027	PMO, PIUs, contractors (supported by LSSB, contractors, and social consultants)	Government counterpart fund and loan funds

AIDS = acquired immune deficiency syndrome, BEE = Bureau of Ecology and Environment, BOE = Bureau of Education, DI = design institute, HB = Health Bureau, HIV = human immunodeficiency virus, LSSB = Labor and Social Security Bureau, NRB=Natural Resource Bureau, O&M = operation and maintenance, PAO = Poverty Alleviation Office, PIU = project implementation unit, PMO = project management office, SDAP = social development action plan, STIs = sexually-transmitted infections, TG = township government, VC = village committee.

Source: Asian Development Bank estimates.

Table 17: Gender Action Plan

Actions	Targets and Indicators	Timeframe	Responsible Agencies	Budget Sources
A. Output 1: Water-related disaster risk management strengthened				
<p>A.1. Emergency response and safety training on water-related disasters is organized for local communities.</p> <p>A.2. Quotas for women are set for skilled and unskilled jobs created during construction and operation stages.</p> <p>A.3. Project will conduct consultations on detailed design that include the needs and views from women and men.</p> <p>A.4. Conduct capacity building training for staff of Huangjin River National Wetland Park on community, environmental education activities</p>	<p>A.1. At least 150 people trained, with 40% participants women and girls (2020 baseline: 0).</p> <p>A.2.1. 153 skilled jobs^a generated during construction, of which 25% provided to women (2020 baseline: other projects 10%)</p> <p>A.2.2. 122 unskilled jobs^b generated during construction, of which 35% provided to women (2020 baseline: other projects 20%)</p> <p>A.3. 40% women representatives participated in consultations on detailed design (2020 baseline: NA)</p> <p>A.4. At least 30 staff, including 40% women (2020 baseline: 0)</p>	2021–2027	PMO, PIUs, DI, contractors	Government counterpart fund and loan funds
B. Output 2: Accessibility to safe drinking water and sanitation services enhanced				
<p>B.1. Quotas for women are set for skilled and unskilled jobs created during construction stage and operation stage.</p> <p>B.2. Project will organize consultations on detailed design, implementation, and O&M of upgrading rural toilets with women's participation to ensure gender-sensitive and disabled-friendly design features in all villages under Output 2.</p>	<p>B.1.1. 2,008 skilled jobs created during construction, of which 25% provided to women (2020 baseline: other projects 10%)</p> <p>B.1.2. 2,574 unskilled part-time jobs^c created during construction, of which 35% provided to women (2020 baseline: other projects 20%)</p> <p>B.2. 40% women representatives participated in detailed design (2020 baseline: other projects 10%)</p>	2021–2027	PMO, PIUs, DI, contractors	Government counterpart fund and loan funds
C. Output 3: Circular agriculture for sustainable livestock waste management and eco-farming demonstrated				
<p>C.1. Women participation and leadership is promoted in eco-farming and farmer cooperatives through quotas for management positions.</p> <p>C.2. The project will provide leadership training to female managers and cooperative members to strengthen women's leadership role in eco-farming development.</p> <p>C.3. Promote the participation of women in the detailed design, implementation, and O&M for livestock waste treatment (1,830 hectares, 41 villages of 17 townships).</p> <p>C.4. Quotas for women are set for skilled and unskilled jobs created during construction stage and operation stage.</p> <p>C.5. The project organizes women's networks through a WeChat group that will be used to share environmental information and awareness regarding improved environmental practices in six pilot villages.</p> <p>C.6. Provide training to farmers on livestock waste management and sustainable farming technologies</p>	<p>C.1. 20% of the farmer cooperatives have female managers (2020 baseline: NA)</p> <p>C.2. At least 20% of the members of the demonstration farms or farmer cooperatives are women and participated in trainings (2020 baseline: NA)</p> <p>C.3. Consultations on detailed design with beneficiaries conducted, of which 50% are women representatives (2020 baseline: 10%)</p> <p>C.4.1. 723 skilled jobs created during construction, of which 25% provided to women (2020 baseline: other projects 10%)</p> <p>C.4.2. 1,016 unskilled part-time jobs created during construction, of which 35% provided to women (2020 baseline: other projects 20%)</p> <p>C.5. One Wechat group organized in each village (2020 baseline: N/A)</p> <p>C.6. At least 5,000 farmers trained, including 40% women (2020 baseline: 0)</p>	2021–2027	PMO, PIUs, TGs and VCs, PAO	Government counterpart fund and loan funds
D. Output 4: Green procurement practices piloted and environmental education mainstreamed				

Actions	Targets and Indicators	Timeframe	Responsible Agencies	Budget Sources
D.1. Teaching skills on environmental education are developed for teachers.	D.1. 800 teachers will be reported on teaching skills development on environmental education, including 65% female teachers.	2021–2027	PMO, PIUs, TGs and VCs, PAO, DI	Government counterpart fund and loan funds
E. Institutional, technical, and management capacity improved				
E.1. Ensure implementation, monitoring, and reporting on GAP and collection of sex-disaggregated data on project beneficiaries across project outputs.	E.1.1 Resettlement, social, and gender specialist recruited for 3.0 person-months for project start-up; one social and gender specialist included in external resettlement and social monitoring agency; and one resettlement, social, and gender specialist recruited for 14.0 person-months for project implementation period (2020 baseline: NA) E.1.2. One social and gender focal person in PMO and PIUs to undertake GAP implementation (2020 baseline: NA) E.1.3. At least 80% staff in the PMO and PIUs trained on GAP implementation and monitoring (2020 baseline: NA)	2021–2027	PMO, PIUs, TGs (supported by PAO, NRB, Resettlement, social and gender specialists)	Government counterpart fund and loan funds
E.2. Provide training to project staff of PCG to increase knowledge in disaster management, agricultural technology, safeguards, and gender issues	E.2. At least 350 project staff of PCG, including 40% women, trained on disaster management, agriculture technology and safeguard and gender issues (2020 baseline: 0, 0%)			

DI = design institute, GAP = gender action plan, NA = not applicable, NRB = Natural Resources Bureau, O&M = operation and maintenance, PAO = Poverty Alleviation Office, PIU = project implementation unit, PMO = project management office, TG = township government, VC = village committee.

^a Skilled jobs refer to workers who are engaged in jobs with slight or higher technical ability, such as masons, carpenters, scaffolding work crews, layout men, welders, construction site chefs, freight drivers (including tractor drivers, etc.), tea pickers, tea camellia pickers, tea makers, camellia oil makers, pesticide spray workers, fertilizer application works, rice plantation workers, etc.

^b Unskilled jobs refer to workers who are engaged in pure labor input without technical ability requirements, such as stevedore, porters (for cement, lime, steel bars, steel pipes, etc.), people who help in the kitchen, cleaners, etc.

^c Non-skilled part-time jobs refer to workers who are engaged in pure labor input without technical ability requirements. Most of them belong to local farmers and are workers who engage in relevant manual labor during the slack farming time. For example, under output 2 and output 3, the dredgers who excavated trenches and pipes in output 2 and output 3, stevedore (for cement, lime, steel bars, steel pipes, pesticides, fertilizers, organic fertilizers, etc.), people who help in the kitchen, cleaners; porters (for tea, tea camellia, vegetables, ecological food, wood, etc.), water delivery men, brick porters, etc.

Source: Asian Development Bank.

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING, AND COMMUNICATION

A. Project Design and Monitoring Framework

Impacts the Project is Aligned with Rural vitalization and ecological protection in the Yangtze River Economic Belt realized (Rural Vitalization Plan, 2018–2022; and Yangtze River Economic Belt Development Plan, 2016–2030) ^a			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
Outcome Rural living environment in Pingjiang County improved	By 2028: a. At least 500,000 people in Pingjiang County benefit from strengthened climate and disaster resilience (2020 baseline: 0) (OP 1.3, OP 3.2) b. Drinking water supply coverage in rural Pingjiang County increased to 70% (2020 baseline: 46%) c. Wastewater collection and treatment coverage in Pingjiang County increased to 60% (2020 baseline: 27%) d. At least 75% of the livestock waste in Pingjiang County treated for use in farming (2020 baseline: 50%) e. At least 136 schools and 26 health clinics have access to wastewater collection and treatment services (2020 baseline: 0)	a–e. PCG reports and/or records, annual monitoring and reporting statistics, and periodic surveys	Natural hazards and climate variability affect expected outcomes.
Outputs 1. Water-related disaster risk management strengthened	By 2027: 1a. 39 km of ecological embankments and/or riverbank reinforcements constructed along the Miluo River in Pingjiang (2020 baseline: 0 km) 1b. 242 ha of habitat for bird conservation and 0.80 ha of wetland restored in Huangjin River National Wetland Park (2020 baseline: 0 ha, 0 ha) 1c. One integrated smart disaster risk management information system established and in operation (2020 baseline: 0) 1d. At least 150 people (40% women and girls) trained and report improved skills in safety and emergency response to water-related disasters (2020 baseline: 0) (OP 2.5.1) 1e. 153 skilled jobs (25% for women) and 122 unskilled jobs (35% for women) created during construction (2020 baseline: 0) (OP 1.2, OP 2.1)	1a–e. Quarterly project progress reports, project completion report, and survey results	The PCG fails to adopt an integrated approach to disaster risk management in the Miluo River.
2. Access to safe drinking water and sanitation services enhanced	2a. A new drinking water supply plant with a daily supply capacity of 25,000 cubic meters per day established and operating in Nanjiang Town (2020 baseline: 0) 2b. At least 1,000 km of water supply pipelines connected to rural households (2020 baseline: 0) 2c. 26 km of stormwater and wastewater drainage in urban areas, and 52 km in rural areas	2a–f. Quarterly project progress reports and project completion report	Communities and villagers' willingness to change or interest in changing their lifestyle or traditional

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
	<p>reconstructed and/or upgraded (2020 baseline: 0 km, 0 km)</p> <p>2d. Rural centralized domestic wastewater collection and treatment facilities in 21 villages constructed and operating (2020 baseline: 0)</p> <p>2e. At least 59,000 rural household toilets reconstructed (2020 baseline: 0) (OP 3.2)</p> <p>2f. 2,008 skilled part-time jobs (25% for women) and 2,574 unskilled part-time jobs (35% for women) created during construction (2020 baseline: 0) (OP 1.2, OP 2.1)</p>		practices reduced
3. Circular agriculture for sustainable livestock waste management and eco-farming demonstrated	<p>3a. Livestock waste treatment facilities established and operating in about 90 livestock farms, and fertilizer supplied for agricultural farming (2020 baseline: 0) (OP 3.1)</p> <p>3b. 1,900 ha of demonstration farms established to pilot eco-farming techniques, with 20% of the members of the demonstration farms or farmer cooperatives being women (2020 baseline: 0 ha) (OP 5.3)</p> <p>3c. At least 5,000 farmers (40% women) trained on livestock waste management and sustainable farming technologies (2020 baseline: 0)</p> <p>3d. Women's networks established in six pilot villages to share environment-friendly farming knowledge and skills via WeChat groups (2020 baseline: 0)</p> <p>3e. 723 skilled part-time jobs (25% for women) and 1,016 unskilled part-time jobs (35% for women) created during construction (2020 baseline: 0) (OP 1.2, OP 2.1)</p>	3a–e. Quarterly project progress reports and project completion report	Changes in farmers' attitudes and behaviour in adopting new and unfamiliar farming technologies and practices
4. Green procurement practices piloted and environmental education mainstreamed	<p>4a. Green procurement piloted in project activities (2020 baseline: no green procurement)</p> <p>4b. Green procurement guidelines drafted and submitted to the PCG (2020 baseline: not applicable)</p> <p>4c. Environmental education program provided to 160,000 students in Pingjiang (2020 baseline: 0)</p> <p>4d. At least 800 teachers (65% women) report improved teaching skills on environmental education (2020 baseline: 0) (OP 2.1.1)</p> <p>4e. Project best practices and innovation presented in at least 1 national and 1 international fora (2020 baseline: 0)</p>	4a–e. Quarterly project progress reports and project completion report	

Key Activities with Milestones

1. Water-related disaster risk management strengthened

- 1.1. Complete flood prevention and risk management in Miluo River subproject by Q4 2026.
- 1.2. Conduct Huangjin River National Wetland Park restoration and protection subproject by Q4 2026.
- 1.3. Establish and operate integrated smart disaster risk management system by Q4 2023.

2. Access to safe drinking water and sanitation services enhanced

- 2.1. Complete integrated water supply in urban and rural Pingjiang subproject by Q4 2025.
- 2.2. Complete separating rainwater from sewers in urban and rural Pingjiang subproject by Q4 2025.
- 2.3. Conduct rural wastewater treatment and sanitary conditions improvement subproject by Q4 2026.

3. Circular agriculture for sustainable livestock waste management and eco-farming demonstrated

- 3.1. Establish facilities for sustainable livestock waste management in 19 towns by Q4 2022.
- 3.2. Establish 1,900 ha of demonstration farms by Q4 2026.
- 3.3. Train farmers, cooperatives, and enterprises in eco-farming practices by Q2 2027.

4. Green procurement practices piloted and environmental education mainstreamed

- 4.1. Pilot green procurement activities for ADB-financed subproject facilities by Q2 2027.
 - 4.2. Undertake public awareness in environmental protection for schools and communities by Q2 2027.
- Develop green procurement guidelines to inform policy recommendations by Q2 2024.

Project Management Activities

1. Recruit project start-up consultants by Q1 2021.
2. Recruit an external resettlement and social monitoring and evaluation agency by Q2 2021.
3. Recruit an external environmental monitoring agency by Q3 2021.
4. Recruit a consultant team for project management support by Q3 2021.
5. Establish a project performance monitoring system; implement a social development action plan, gender action plan, resettlement plan, and environmental management plan; monitor project implementation progress; and submit quarterly project progress reports to ADB by Q2 2027.
6. Submit the semiannual social and environmental monitoring reports to ADB by Q2 2027.
7. Submit the semiannual external resettlement and social monitoring and evaluation reports to ADB by Q2 2027.
8. Submit project audit reports by Q2 2027.
9. Submit the project completion report to ADB on Q4 2027.

Inputs

ADB: €126,882,000 (loan)

Government: €112.19 million

Assumptions for Partner Financing

Output 2 (KfW): €60 million

ADB = Asian Development Bank, ha = hectare, km = kilometer, OP = operational priority, PCG = Pingjiang County Government, Q = quarter.

^a Government of the People's Republic of China. 2018. *Outline of the Rural Vitalization Plan, 2018–2022*. Beijing; and Government of the People's Republic of China. 2016. *Outline of the Yangtze River Economic Belt Development Plan, 2016–2030*. Beijing.

Contribution to Strategy 2030 Operational Priorities:

OP 1.2 Jobs generated (number). Expected: 6,596.

OP 1.3 Poor and vulnerable people with improved standards of living (number). Expected: 500,000.

OP 2.1 Skilled jobs for women (number). Expected: 721.

OP 2.1.1 Women enrolled in technical and vocational education and training and other job training (number). Expected: 800.

OP 2.5.1 Community-based initiatives to build resilience of women and girls to external shocks implemented (number). Expected: to be determined.

OP 3.1 Total annual greenhouse gas emission reduction (tons of carbon dioxide equivalent/year). Expected: 5,261 tons of carbon dioxide equivalent/year.

OP 3.2 People with strengthened climate and disaster resilience (number). Expected: 500,000 (48.7% female).

OP 5.3 Land with higher productivity (ha). Expected: 1,900 ha.

Source: Asian Development Bank.

B. Monitoring

1. Project performance monitoring

91. To monitor the progress of the project in achieving the planned outcome and outputs, the PMO will establish a project performance monitoring system (PPMS) before the project implementation starts (before the loan effectiveness) and will maintain accordingly. The basis for project performance monitoring and reporting will be the DMF, which identifies performance targets for the outcomes and outputs of the project. It will be designed to permit adequate flexibility to adopt remedial action regarding project design, schedules, activities, and development impacts. The PPMS will cover the following aspects of the project implementation: (i) project physical and financial progress; (ii) progress and results of capacity development; (iii) farmer institutions establishment; (iv) implementation of EMP; (v) implementation of GAP, SDAP and RP; and (vi) compliance with loan covenants (policy, financial, economic, sector, and others). The PMO agreed and confirmed that they will (i) recruit the individual consultants before the loan effectiveness to facilitate the project start-up and provide consulting service as described in Appendix 1; (ii) recruit the PICs to provide consulting service as described in Appendix 2; (iii) establish the PPMS before the first reporting period, in a format acceptable to ADB and confirm that targets are achievable; and (v) develop recording, monitoring and reporting arrangements.

2. Compliance monitoring

92. During project implementation, ADB and the PMO will closely monitor the compliance of all the covenants under the project and will take necessary remedy actions for any noncompliance. The compliance status will be reported in the quarterly progress reports by the PMO and will be reviewed during project review missions. Compliance monitoring will also be undertaken by (i) the environment officer, supported by the PMO to ensure overall compliance of all relevant agencies with the EMP, and (ii) the PMO's social officer to ensure overall compliance with the relevant social, gender, and resettlement plans. Semiannual environmental monitoring reports and social monitoring reports will be prepared by the PMO, supported by the LICs, and will be submitted by the PMO to ADB.

3. Environmental monitoring

93. **Environment.** The project monitoring program focuses on the environment in the project areas of influence. The environmental monitoring program is included in the project EMP, including parameters, time and frequency, implementing and supervising agencies, and estimated costs. Three types of monitoring will be conducted in accordance with the EMP: (i) internal monitoring, to be conducted by the implementing agencies and construction supervision consultants (CSCs); (ii) external monitoring of air, water, noise and soil standards, to be conducted by a certified monitoring agency contracted by the PMO; and (iii) compliance monitoring, to be conducted by the LIEC, to ensure the EMP is being implemented. Monitoring shall comply with the PRC standards for environmental monitoring. ADB will review project compliance with the EMP on the basis of semiannual environmental monitoring reports provided by the PMO and review missions.

94. **Internal environmental monitoring.** During construction, the PMO environment officer, PIU social-and-environment officers, and CSCs will be responsible for conducting internal environmental monitoring in accordance with the monitoring plan. Results will be reported through: (i) internal progress reports of the PMO and PIUs, based on their direct observations at work sites; and (ii) monthly reports by the CSCs, submitted to the implementing agencies and

PMO.

95. **External monitoring.** The PMO will contract at least one environmental monitoring agency (EMA) to conduct the external environmental monitoring described in Section D of the EMP. The EMA will have the relevant national certifications and capacity to undertake the external monitoring specified in the EMP. The external monitoring will be conducted during the entire construction phase and first full year of operation of the project facilities. The EMA will prepare semi-annual monitoring reports of the methods and results. The EMA will submit these to the PMO, local PMOs, and ADB at the same time, to ensure independence.

96. **EMP compliance monitoring.** The LIEC will review the project progress and compliance with the EMP based on field visits, discussions with project agencies, and review of the progress reports provided by the CSCs and external environmental monitoring firm. The findings of the LIEC will be reported to ADB through the semiannual EMP monitoring reports.

97. **Environment safeguard reporting and disclosure.** The PMO will submit semiannual environmental monitoring reports to ADB. The reports will include: (i) progress made for EMP implementation, (ii) overall effectiveness of the EMP implementation (including public and occupational health and safety), (iii) environmental monitoring and compliance, (iv) institutional strengthening and training, (v) public consultation (including GRM), and (vi) any problems encountered during construction and operation, and the relevant corrective actions undertaken. The LIEC will assist the PMO prepare the reports and submit them to ADB. ADB will review and disclose the reports on the ADB website.

98. **Environmental acceptance reporting.** Following the PRC Regulation on Project Completion Environmental Audit (Ministry of Environmental Protection, 2001), within three months after the completion of major subprojects, an environmental acceptance report for each subproject shall be (i) prepared by the implementing agencies or capable environmental monitoring institute in accordance with the PRC Guideline on Project Completion Environmental Audit (2017); and (ii) finally reported to ADB through the semiannual EMP monitoring and progress reporting process. The environmental acceptance reports of the subproject completions will indicate the timing, extent, effectiveness of completed mitigation and of maintenance, and the needs for additional mitigation measures and monitoring during operations.

4. Resettlement monitoring

99. Internal and external monitoring of the RP implementation will be conducted. The PMO will carry out internal supervision and monitoring to ensure compliance with the provisions of the RP (the RP also includes framework on LURT, etc), and submit internal resettlement monitoring reports semiannually during project implementation, to be submitted together with the semi-annual social monitoring reports. The PMO will also employ an external monitoring organization to conduct external monitoring. The external monitoring agency will prepare a baseline study, and implement external monitoring and evaluation of the RP implementation. Semiannual external monitoring reports will be prepared and submitted to ADB during the project implementation.

5. Gender and social dimensions monitoring

100. Project activities will be monitored for impacts on gender and social dimensions with the assistance of PICs. In particular, the activities laid out in the GAP and SDAP will be monitored, and sex-disaggregated data on project activities collected. Relevant social and gender targets and indicators are in the SDAP and GAP; and some indicators are also included in the DMF. GAP

and SDAP monitoring information will be included in the semi-annual social monitoring reports, which will describe the progress on GAP and SDAP implementation against the targets. The project will report on GAP implementation during mid-term review and in the project completion report. The format of social monitoring report will be finalized and agreed between ADB and the PMO during the project inception.

C. Evaluation

101. In addition to regular monitoring, project performance will be reviewed at least once a year jointly by ADB and PCG. The review will assess implementation performance and achievement of project outcomes and outputs, assess financial progress, identify issues and constraints affecting implementation, and work out a time-bound action plan for their solution. ADB will undertake annual project reviews during the project period. Additionally, ADB and HPG will undertake a midterm review of the project in 2024, covering all institutional, administrative, organizational, technical, environmental, social, poverty reduction, economic, financial, procurement, and other relevant aspects that may have an impact on the performance of the project and its continuing viability. The review will (i) examine the progress in implementing project outputs; (ii) evaluate environment, social, and poverty impact; (iii) ensure compliance with assurances in the loan agreement; and (iv) evaluate effectiveness of the procurement implementation activities of the executing agency and tendering company using procurement review for effective implementation evaluation. The review shall also undertake a comprehensive review of potential loan savings, identify areas for reallocation of loan proceeds, and change disbursement percentages, as appropriate. Within 6 months of physical completion of the project, the PCG will submit a project completion report to ADB.¹⁹

D. Reporting

102. The PCG, acting through the PMO, will provide ADB with (i) quarterly project progress reports in a format consistent with ADB's project performance reporting system, including (a) progress achieved by output as measured through the indicator's performance targets, (b) key implementation issues and solutions, (c) updated procurement plan, and (d) updated implementation plan for the next 12 months; and (ii) a project completion report within 6 months of physical completion of the project. To ensure that the project will continue to be both viable and sustainable, project accounts and the audited financial statement together with the associated auditor's report, should be adequately reviewed.

103. PCG has agreed on the following reporting commitments:

Table 18: Pingjiang County Government Reporting Commitments

No.	Report	Timing	Reference
1.	Quarterly project progress reports	Quarterly (January, April, July, October)	
2.	Semi-annual environmental monitoring reports		
	➢ During the construction	➢ Semi-annually (January, July)	
	➢ During the operation	➢ Annually (January)	
3.	Semi-annual social monitoring reports	Semi-annually (January, July)	Project agreement
4.	Semi-annual resettlement and social monitoring and evaluation reports	Semi-annually (January, July)	

¹⁹ Project completion report format is available at: <https://www.adb.org/sites/default/files/institutional-document/33431/pai-6-07a.pdf>

No.	Report	Timing	Reference
5.	Project audited financial statements	Not later than 6 months after the close of fiscal year	
6.	Project midterm report	Three years after the project implementation starts	
7.	Project completion reports	Not later than 6 months after the physical completion	

Source: Asian Development Bank.

E. Stakeholder Communication Strategy

104. Project information will be disclosed through ADB's and government's websites, meetings, interviews, focus group discussions, and community consultation meetings, in accordance with requirements of ADB's information disclosure policy. Main stakeholders are the different agencies of the PCG, PMO, PIUs, beneficiaries, affected persons, and participants in the project implementation. Stakeholder communication is also part of the IEE including the EMP, RP, SDAP, and GAP, and will be monitored accordingly.

105. The stakeholder consultations and participation are continuous processes that will be actively pursued during project implementation. The consultation and participation plan is presented in Table 19.

Table 19: Consultation and Participation Plan Summary Chart

Stakeholder Group	Type of Participation	Participation methods		Timeline		Budget source
		Method	Who will be responsible	Start date	End date	
Government agencies/ bureaus/local government units (PIUs, Human Resources and Social Security Bureau, Civil Affairs Bureau, Women's Federation, PAO, etc.).	Information sharing, regular meetings, consultation, shared decision making, and shared responsibility	Meeting Workshop	PCG/PMO, PICs	2021	2027	Budget included in the project
PMO and PIEs who are responsible for implementing the subprojects; PMO and PIUs who are responsible for implementing the RP, EMP, GAP, SDAP, etc.	Regular meetings, consultation and shared decision making/ responsibility	Meeting Workshop Public consultation	PCG/PMO, PICs Local govt. units' heads Other concerned agencies	2021	2027	Budget included in the project
Project beneficiaries/local people in the affected communities, including the affected persons/HHs, women, farmers, and other stakeholders.	Information generation/ sharing, consultation and shared decision making/ responsibility	Meeting FGD Public consultation	PCG/PMO, PIUs, PICs, Local govt. Heads/Village heads	2021	2027	Budget included in the project
Community-based organizations such as: - farmers groups, women associations, etc.;	Information sharing, Consultation, and shared decision making, and shared responsibility	Meeting FGD Public consultation	PCG/PMO, PIUs, PICs	2021	2027	Budget included in the project
Women	Information sharing/generation Consultation, and shared decision making, and shared responsibility	Meeting FGD Workshop Public consultation	PCG/PMO; PICs Local govt. Heads/Village heads LGU/agency heads, Other govt. Agencies: (Women Federation, PAO, etc.); NGOs	2021	2027	Budget included in the project

Stakeholder Group	Type of Participation	Participation methods		Timeline		Budget source
		Method	Who will be responsible	Start date	End date	
Consulting firms/agencies and organizations that will be selected by the PCG through the PMO to implement various project components as approved in the ADB project	Regular meetings, Information sharing, Consultation, and shared decision making, and shared responsibility	Meeting Workshop		2021	2027	Budget included in the project

ADB = Asian Development Bank, FGD = focus group discussion, GAP = gender action plan, NGO = non-governmental organization, PAO = poverty alleviation office, PCG = Pingjiang County Government, PIUs = project implementation units, PMO = project management office, PICs = project implementation consultants, SDAP = social development action plan.

Source: Asian Development Bank.

106. **Environment.** Meaningful consultation, participation and information disclosure was conducted during project preparation. Information disclosure and public consultation included newspaper disclosure; informal communication with key stakeholders, including residents, local authorities and sector specific institutions and authorities; questionnaire surveys; and wider stakeholder meetings attended by affected people and other concerned stakeholders. A GRM has been defined to address community concerns, reduce risks, and assist the project in maximizing environmental and social benefits. Meaningful consultation will continue throughout project implementation, especially prior to and during civil works. Planning for public consultations will ensure that environmental and social safeguard requirements are discussed.

X. ANTICORRUPTION POLICY

107. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project.²⁰ All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all project contractors, suppliers, consultants, and other service providers. Individuals and/or entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the project.²¹

108. To support these efforts, relevant provisions are included in the loan and project agreement and the bidding documents for the project. The project design and implementation arrangements provide for mitigating corruption risks. Risks associated with project management will be mitigated by (i) training of the executing and implementing agencies' staff in the procurement of civil works, goods, and services under the project; and (ii) periodic inspection of contractors' activities related to fund withdrawals and settlements by the executing agency's staff.

XI. ACCOUNTABILITY MECHANISM

109. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make an effort in good faith to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.²²

XII. RECORD OF CHANGES TO THE PROJECT ADMINISTRATION MANUAL

110. All revisions and/or updates during the course of implementation should be retained in this section to provide a chronological history of changes to implemented arrangements recorded in the PAM, including revision to contract awards and disbursement s-curves.

No.	Description of Revision	Date
1.	Initial draft for discussion prepared	June 2020
2.	Discussed during loan fact-finding mission	July 2020
3.	Discussed and agreed during loan negotiations	October 2020

Source: Asian Development Bank.

²⁰ Anticorruption Policy: <https://www.adb.org/documents/anticorruption-policy>.

²¹ ADB's Integrity Office web site: <https://www.adb.org/site/integrity/main>.

²² Accountability Mechanism: <https://www.adb.org/site/accountability-mechanism/main>.

Appendix 1: Indicative Terms of Reference for Project Start-up Consultants

A. Overview

1. The proposed Hunan Miluo River Disaster Risk Management and Comprehensive Environment Improvement Project will promote rural vitalization and ecological protection by (i) instituting and applying international best practices for flood and integrated disaster risk management; (ii) improving access to safe drinking water and sanitation services for urban and rural residents; (iii) promoting circular agricultural development by linking sustainable livestock waste management and eco-farming; (iv) piloting green procurement practices and mainstreaming environment education; and (v) enhancing institutional coordination capacity to maximize the project impact. The project is envisaged to serve as a model for counties facing climate change and ecological pressures in the Yangtze River Economic Belt (YREB), similar parts of the People's Republic of China (PRC) and other developing member countries.

B. Project Description

2. The project is aligned with the following impact: rural vitalization and ecological protection in the YREB realized.¹ The project will have the following outcome: rural living environment in Pingjiang County improved.

3. **Output 1: Water-related disaster risk management strengthened.** This output will mitigate the potential impact of flooding on people's livelihoods and property, and the socio-economic consequences resulting from flood events. The output includes the (i) construction of 38.9 km ecological embankment and/or riverbank reinforcement in 12 towns along Miluo River in the Pingjiang County to control flooding events; (ii) establishment of riparian buffers from the edge of riverbank by using nature-based solutions to control water and soil losses; (iii) restoration and protection of Huangjin River National Wetland Park to enhance biodiversity conservation, increase flood storage and water quality purification capacity as well as promote environmental education; and (iv) establishment of an integrated smart disaster risk management system for early warning to inform disaster-related decision making and improved institutional coordination.

4. **Output 2: Access to safe drinking water and sanitation services enhanced.** This output will improve the quality of life for both urban and rural communities in Pingjiang County. The output includes the (i) construction of a drinking water supply plant and supply of safe drinking water to 107 villages in 14 towns; (ii) separation of rainwater from sewers in urban and rural Pingjiang to prevent the overflow of sewer systems during rainy periods; (iii) establishment of concentrated rural wastewater treatment services for rural households in 21 villages of 12 towns and public facilities (in 136 schools and 26 health clinics); and (iv) upgrading of rural toilets for 59,732 households and connecting these to wastewater collection systems in 464 villages of 24 towns. Among which, items (i) – (iii) will be undertaken by KfW through parallel co-financing.

5. **Output 3: Circular agriculture for sustainable livestock waste management and eco-farming demonstrated.** This output will demonstrate circular agricultural practices in the management of livestock waste and produce organic fertilizer for eco-farming demonstration farms, to reduce greenhouse gas emissions, enhance soil fertility, increase crop yield and sustainability. The output includes (i) carrying out livestock waste treatment in livestock farms prior to soil application, to significantly reduce non-point source pollution into waterbody; and (ii) establishment of 1,930 ha demonstration farms to pilot eco-farming techniques, such as soil

¹ Government of the PRC. 2018. *Outline of Rural Vitalization Plan, 2018–2022*. Beijing.

conservation, soil testing and fertilizer recommendations (4R principles²), organic fertilizer application, integrated pest management and other climate-resilient farming practices, to promote sustainable agricultural development.

6. Output 4: Green procurement practices piloted and environmental education mainstreamed. This Output will include: (i) piloting green procurement practices under relevant project activities; (ii) developing green procurement guidelines for selected categories of goods and services to promote, implement, and monitor green procurement practices in two key sectors (agriculture/eco-farming and education); (iii) mainstreaming environmental education in local educational system; and (v) improving overall environmental literacy of Pingjiang residents by engaging students' families and local communities in environmental education and outreach activities.

C. Institutional Arrangement

7. The Pingjiang County Government will serve as the executing agency, and a project leading group (PLG) has been established to oversee and coordinate the project planning, management, and implementation. Under the PLG, a project management office (PMO) has been established to manage all implementation works during preparation and implementation. The detailed roles and responsibilities are defined in Table 5 of the PAM.

8. According to the capacity assessment of the PMO, project start-up support and project implementation support have been proposed to conduct project management and capacity building for the PMO and other stakeholders.

D. Tentative Consultants' Inputs

9. For the project start-up, the consulting services will be carried out by individual consultants and will be financed by PCG's counterpart funds under the domestic procurement procedures. The consulting services will be provided to PMO and 10 project implementation units (PIUs), including Livestock, Fisheries and Agricultural Machinery Affairs Center (LFAMAC), Bureau of Agriculture and Rural Affairs (BARA), Bureau of Ecology and Environment (BEE), Bureau of Education, (BOE), Bureau of Natural Resources (BNR), Bureau of Water Resources (BWR), Bureau of Forestry and Grassland (BFG), Emergency Management Bureau (EMB), Housing and Urban-Rural Development Bureau (HURDB), and Water Supply Co., Ltd (WSCL). The contract terms of each individual consultant are listed in Table 1.

10. The project will be coordinated by the PMO, whose overall responsibility includes implementation of the project. In the early stages of project implementation, the PMO and PIUs will be assisted by the start-up consultants, who will help establish the preparatory administrative and technical work required for efficient project implementation. After completion of this start-up phase, a team of loan implementation consultants will take over the work of the start-up consultants, to provide full support to the PMO and PIUs during the whole project implementation period.

Table 1: List of individual consultants for project start-up support

No.	Position	Input (person-month)	Budget (US\$)	Indicative contract duration
1.	Environmental Specialist	2	15,000	Jan 2021–Jan 2022

² Right amount, right type, right time, right place.

No.	Position	Input (person-month)	Budget (US\$)	Indicative contract duration
2.	Financial Management Specialist	2	15,000	Jan 2021–Jan 2022
3.	Procurement and Contract Management Specialist	2	15,000	Jan 2021–Jan 2022
4.	Resettlement, Social and Gender Specialist	3	22,500	Jan 2021–Jan 2022
5.	Fish Monitoring Specialist	1	7,500	Jan 2021–June 2021
6.	Green Procurement Specialist	8	60,000	Jan 2021–Jan 2028
7.	Green Promotion and Environmental Education Specialist	6	45,000	Jan 2021–Jan 2028
8.	Green Development Policy Specialist	3	22,500	Jan 2021–Jan 2024
	Total	27	202,500	

Source: PMO estimates.

D. Detailed Scope of Services and Consultants' Inputs

1. Environmental specialist (national, 2 person-months, intermittent)

11. **Scope and duration of work.** The consultant will help with early establishment of the project environmental management plan (EMP). This is a short-term position at the beginning of project implementation.

12. **Qualifications.** The specialist will have: (i) a master's degree or higher in environmental management or related field; (ii) at least 12 years of experience in environmental management, monitoring, and/or impact assessment, including specific experience on the management and monitoring of environmental projects; (iii) familiarity with ADB project management requirements and national environmental management procedures; (iv) ability to communicate and work effectively with local communities, contractors, and government agencies; (v) ability to analyze data and prepare technical reports; (vi) willingness and health to regularly visit the subproject sites; and (vii) proficiency in spoken and written English.

13. **Detailed tasks.** The environmental specialist will undertake the following tasks:

- (i) Work closely with the PMO, PIUs and design institutes to ensure that preparation of the detailed engineering designs (DEDs) fully incorporates the designs and mitigation measures described in the project initial environmental examination (IEE) and environmental management plan (EMP);
- (ii) Assess whether any of the DEDs are sufficiently different from the preliminary designs approved by the Government and ADB that updates to the IEE, EMP are required. This may include, but not be limited to: major changes in proposed alignments and/or locations of facilities; new subcomponents requiring infrastructure works and/or which may have environment; and/or cancellation of approved components;
- (iii) With the PMO and ADB, discuss any changes required for the IEE and EMP. Assist the PMO to prepare any new impact assessments and/or updates as required; and to submit these to ADB for review. No changes to any of the ADB-approved documents will be made without prior approval of the Government, ADB and KfW (if related to its financed subprojects);
- (iv) Assist the PMO and PIUs in establishing the project grievance redress mechanism (GRM), including procedures to ensure documentation and reporting of complaints, follow-up actions, and results;

- (v) Provide training to PMO and PIU staff so that they will understand ADB's Safeguard Policy Statement (2009), policies, and compliance requirements for environmental management; national and local regulations and standards for environmental protection, health, labor, and occupational safety; and the project IEE and EMP;
- (vi) Provide hands-on guidance in preparing the first environmental monitoring report to ADB;
- (vii) Work closely with the KfW consulting team; and
- (viii) Assist the PMO in handing over relevant documents and files to the project management and capacity development support consultant team engaged in package number CS-TA-01 and brief the team, particularly the environment specialist in the team, status and outstanding issues.

14. **Reporting requirements.** Upon completion of the consultancy, submit a written report describing the work accomplished, any key challenges encountered and/or technical concerns for further consideration, and lessons learned.

15. **Logistical support to be provided by the PMO. The PMO will support the specialist** for (1) Provision of hard and soft copies of the project EMP, domestic and project environmental reports, feasibility study reports, loan and project agreements, maps, and other supporting materials as necessary to ensure the officer can implement the tasks; and (2) Facilitation of site visits and meetings, as needed.

2. Financial management specialist (national, 2 person-months, intermittent)

16. The specialist will have (i) a relevant master degree; (ii) professional accountancy or finance qualification such as a CFA, CA, CPA or ACCA and (iii) proficient in English and shall have at least 10 years of experience in preparation or implementation of World Bank/ADB funded projects. Knowledge on ADB's financial management requirements and other ADB procedures are required. Tasks and responsibilities of the specialist include but are not limited to the following:

- (i) Provide consulting supports in financial management particularly ADB loan withdrawal application and disbursement procedures, funds following a sound accounting, budgeting, financial control, and audit procedures in line with ADB policies and guidelines and acceptable to the Pingjiang County Government and Hunan Provincial Government;
- (ii) provide the PMO with guidance on how to fill-in the format by assisting them in preparing the first loan withdrawal application and disbursement report;
- (iii) Assist the PMO to finalize the project financial management manual;
- (iv) Assist the PCG and PMO to develop or introduce financial management information system including recordkeeping and asset management system for this project. Recordkeeping will ensure that all documents, information, and supporting materials are kept in safe custody and are readily made available to ADB and the auditors;
- (v) Assist the PCG to set up the project account applying the government budgeting, financial planning and reporting and following the project categorization for ADB funded expenditures;
- (vi) Prepare quarterly contract awards and disbursement targets and monitor closely with the progress to ensure timely contract awards and disbursement;
- (vii) Financially manage the disbursement/withdrawal application on each contract package (e.g., contract variations);
- (viii) Provide training on effective project financial management, specially to prepare the regular financial reports and arrange timely financial information for external audit

- purposes;
- (ix) Assist the PMO in preparing financial parts of the progress reports;
- (x) Assist the PMO in handing over relevant documents and files to the project management and capacity development support consultant team engaged in package number CS-TA-01 and brief the team, particularly the financial specialist in the team, status and outstanding issues;
- (xi) Regularly review and update as necessary, the financial management action plan and provide financial risk mitigation for any identified risks; and
- (xii) Perform any other tasks for financial management during the start-up phase of the project.

3. Procurement and contract management specialist (national, 2 person-months, intermittent)

17. The specialist will have a university degree or above in management, accounting, or related field with demonstrated knowledge in procurement procedures and processes. S/he will have at least 10 years of experience in procurement of civil works, goods, and services in the PRC, including international competitive bidding, preferably on projects funded by the ADB or other international funding agencies. Knowledge of ADB or other international funding agency procurement guidelines and procedures will be required. This position requires English language proficiency. Tasks and responsibilities of the specialist include but are not limited to the following:

- (i) Organize and maintain a project filing system according to specifications by the PMO and ADB in both hard copy and electronic files and will be used by all startup consultants and PMO;
- (ii) Assist in the preparation of procurement packages;
- (iii) Assist PMO in updating the procurement plan as needed;
- (iv) Provide technical support in design review, bill of quantities and bidding document review, technical specification review, and other procurement documents review;
- (v) Support PMO during the procurement processes and prepare documents, including bidding documents, specifications, bid evaluation reports, etc., for preparation of procurement packages intended for advance contracting;
- (vi) Provide assistance to the PMO and PIUs, and to the bid evaluation committee during the bidding process in preparing the following in accordance with ADB procurement guidelines: (a) detailed terms of reference for relevant packages in consultation with relevant technical experts, (b) invitations to bid, (c) answers to bidders' queries, and (d) bid evaluation reports;
- (vii) Coordinate with ADB during bid evaluation;
- (viii) Assist the PMO in preparing necessary documents for contract signing and contractor/consultant mobilization;
- (ix) Prepare a report on the status of project startup and procurement; and
- (x) Handover documents and files to the project implementation support consulting firm and report on the status and outstanding issues.

4. Resettlement, social and gender specialist (national, 3 person-months, intermittent)

18. The specialist will have: (i) a graduate degree or higher in social science or related field; (ii) at least 10 years of experience in social development and social safeguards; (iii) familiarity with ADB projects and ADB's requirements on resettlement, social and gender issues, including evidence of managing physical and economic resettlements in at least three ADB projects in PRC; and (iv) proficiency in spoken and written English, including an ability to prepare reports meeting

ADB requirements. Tasks and responsibilities of the specialist include but are not limited to the following:

- (i) Assist the PMO, PIUs, and design institute in updating the RP approved by ADB, in ADB format and based on the detailed designs; disclose the updated RP to the affected persons prior to ADB's approval; and obtain ADB's approval of updated RP;
- (ii) Assist the PMO in implementing activities in accordance with the RP, SDAP and GAP;
- (iii) Ensure that the GRM is correctly established and functioning well;
- (iv) Assist the PMO in supervising contractors to ensure compliance with requirements of the RP, SDAP and GAP, applicable laws and regulations, and ADB's policies;
- (v) Assist the PMO to develop and prepare the first internal resettlement and social monitoring progress report, and review external M&E reports prepared by the external resettlement and social monitor and ADB's comments on the reports, monitor compliance with the RP, SDAP and GAP, assess the degree of effectiveness and key implementation issues, explain key issues to the PMO and assist them in conducting follow-up actions to address the key issues;
- (vi) Deliver training to staff of the PMO and all relevant staff employed under the project to implement the project RP, SDAP and GAP and comply with ADB's relevant requirements;
- (vii) Handover documents and files to the project implementation support consulting firm and report on the status and outstanding issues;
- (viii) Perform any other tasks for resettlement, gender and social development during the start-up phase of the project; and
- (ix) Work closely with the KfW consulting team.

5. Fish Ecologist (national, 1 person-month, continuous)

19. The specialist will have: (i) a master's degree or higher in fish ecology or related field; (ii) at least 10 years of experience in ecological surveys, studies, and conservation of fish species of the PRC; (iii) ability to conduct environmental impact assessment for fish, and to design simple yet effective measures to avoid, minimize, and/or mitigate potential impacts of project activities, especially dredging; (iv) ability to communicate and work effectively with local communities, contractors, government agencies, and other agencies as needed; (v) ability to analyze data and prepare technical reports; (vi) willingness and health to conduct field assessments; and (vii) ideally, working level of spoken and written English (not essential).

20. The specialist will work closely with the PMO environment officer and PIU social and environmental focal staff, loan implementation environment consultant, and other personnel. Tasks and responsibilities of the specialist include but are not limited to the following:

- (i) Review available information and studies on the fish species that occur within the National Pingjiang Section of the Miluo River Germplasm Resources Protection Zone (the Zone). Especially, focus on a review of three key species: golden mandarin fish *Siniperca scherzeri* and yellow catfish *Pelteobagrus fulvidraco* (protected for their high economic value and short supply to the market) and Japanese eel (*Anguilla japonica*; listed as Endangered on the IUCN Red List of Threatened Species);
- (ii) For these three species, summarize the past records of the species, previous and current status, usage by people, and the extent and quality of breeding and foraging habitat in the Zone;
- (iii) Conduct a rapid field survey to assess the current presence of these three species in the Zone. Focus field work on the river sections planned for dredging and

embankment under the project. The survey should include field sampling as well as brief visits to local markets and interviews with fishermen;

- (iv) Prepare a map showing: the locations of suitable breeding and foraging habitat, locations of past and present records, and locations of the project dredging and embankment sites.
- (v) Assess the potential impacts of the planned project dredging and embankment sites to the local populations – if any – of these three species;
- (vi) Develop simple and effective measures to mitigate these potential impacts;
- (vii) Provide specific, time-based measures for: (a) the re-establishment of natural wood debris and rocks in the river channel after dredging (to provide shelter for fish) and (b) native plant species to be planted in and along the river channel (to provide food and egg spawning sites);
- (viii) Work with the PMO and engineers to refine the detailed engineering designs to avoid, minimize, and mitigate the potential impacts, by incorporating the consultant's recommendations in the designs for the dredging, embankments, and post-construction site rehabilitation; and
- (ix) Prepare a draft consultant report. This will be reviewed by the PMO and ADB and comments will be provided to the consultant. The consultant will then submit a final report. The report will be in Chinese-language and English-language.

6. Green Procurement Specialist (national, 8 person-months, intermittent)

21. The specialist will have: (i) a bachelor's degree or higher in environmental economics, green production or related field; (ii) at least 5 years of experience in green procurement; (iii) ability to conduct technical review of the specifications of goods and materials; (iv) ability to communicate and work effectively with local communities, contractors, government agencies, and other agencies as needed; (v) willingness and health to conduct field work; and (vii) ideally, working level of spoken and written English. The specialist should have a good understanding of the energy-saving design and green procurement principles will be followed, i.e., Outline of Green Construction in Hunan (issued in 2012); government guidelines for the selection of low carbon emissions and energy saving equipment, i.e., National Key Energy-saving and Low-carbon Technology Promotion Catalog (2017 energy-saving section), National Key Energy-saving and Low-carbon Technology Promotion Catalog (2017 low-carbon section), Recommended Catalog of Energy-saving Electromechanical Equipment (Products), Elimination Catalog for High Energy Consumption Backward Mechanical and Electrical Equipment (product) and "Measures for the first purchase of two types of (green) products by the government of Hunan Province" and "the Catalogue of the first products purchased by the government of Hunan Province (the first batch)".

Tasks and responsibilities of the specialist include but are not limited to the following:

- (i) Work in collaboration with the Procurement and Contract Management Specialist to provide technical support in design review, bill of quantities and bidding document review, technical specification review, and other procurement documents review, to make sure the green procurement principles are applied in the bidding documents;
- (ii) Work closely with the PMO to develop green procurement guidelines and pilot in the agricultural and education sectors;
- (iii) Work closely with the Green Development Policy Specialist to transfer the piloted green procurement guidelines into policy recommendation documents and submit it to PCG for consideration;
- (iv) Work closely with the environmental education specialist to conduct public awareness raising activities;
- (v) Provide inputs to the project quarterly progress reports and other reports for the green procurement aspect;

- (vi) Assist the PMO in monitoring compliance with the loan covenants, assess key implementation issues, and make recommendations for improvement, from green procurement viewpoint;
- (vii) Perform any other tasks in related to green procurement; and
- (viii) Work closely with the project management and capacity development support consultant team engaged in package number CS-TA-01 and brief the team, particularly the Team Leader, status and outstanding issues.

7. Green Promotion and Environmental Education Specialist (national, 6 person-months, intermittent)

22. The specialist will have: (i) a master's degree or higher in environmental economics, environmental protection, education or related field; (ii) at least 10 years of experience in environmental education; (iii) at least 5 years of experience in international financed projects in environmental education ; (iv) ability to communicate and work effectively with local schools, communities, government agencies, and other agencies as needed; (v) willingness and health to conduct field work; and (vi) ideally, working level of spoken and written English. Tasks and responsibilities of the specialist include but are not limited to the following:

- (i) Assess the current status of environmental promotion and environmental education; assess the environmental awareness status of students and the general public; identify areas for improvements at Pingjiang County;
- (ii) Provide technical support to the design and implementation of environmental education at Pingjiang County. In particular, the text book "Green home and harmonious Pingjiang" design, curriculum design, Environmental Protection Exhibition Hall design, and other promotional materials and activities;
- (iii) Provide technical support to Pingjiang Green School standard and certification scheme development;
- (iv) Develop a scheme to evaluate the effectiveness of green promotion and environmental education for Pingjiang County;
- (v) provide other necessary guidance to Pingjiang County Education Bureau for implementing the Environmental Education Subproject;
- (vi) Provide inputs to the project quarterly progress reports and other necessary reports for the green procurement aspect; and
- (vii) Evaluate the effectiveness of environmental education at Pingjiang County by project completion.

8. Green development policy specialist (national, 3 person-months, intermittent)

23. The specialist will have: (i) a master's degree or higher in green development, environmental protection policies, or related field; (ii) at least 10 years of experience in green development; (iii) at least 5 years of experience in international financed projects in green development; (iv) ability to communicate and work effectively with local government agencies, and other agencies as needed; and (v) ideally, working level of spoken and written English. Tasks and responsibilities of the specialist include but are not limited to the following:

- (i) Conduct detailed research on green development and green procurement policy at international, national and provincial level, identify national and provincial policy development trends and requirements in green development;
- (ii) Jointly with the green procurement specialist, assess the current status of the green development and green procurement policy at Pingjiang County;
- (iii) Conduct research on green policy needs of Pingjiang government and green policy preferences of the general public of Pingjiang County to support policy development;
- (iv) Provide technical support to the policy design and implementation of green

- procurement guidelines at Pingjiang County;
- (v) Provide inputs to the project quarterly progress reports and other necessary reports for the green procurement guideline aspect; and
- (vi) Develop a scheme to evaluate policy effectiveness and evaluate green procurement policy effectiveness at Pingjiang County by project completion.

APPENDIX 2: Indicative Terms of Reference for Technical Support and Project Management

A. Introduction

1. The proposed Hunan Miluo River Disaster Risk Management and Comprehensive Environment Improvement Project will promote rural vitalization and ecological protection by (i) instituting and applying international best practice for flood and integrated disaster risk management; (ii) improving access to safe drinking water and sanitation services for urban and rural residents; (iii) promoting circular agricultural development by linking sustainable livestock waste management and eco-farming; (iv) piloting green procurement practices and mainstreaming environment education; and (v) enhancing institutional coordination capacity to maximize the project impact. The project is envisaged to serve as a model for counties facing climate change and ecological pressures in the Yangtze River Economic Belt (YREB), similar parts of the People's Republic of China (PRC) and other developing member countries.

2. Consulting services will be provided for technical support and project management. The consulting services will be provided to PMO and 10 project implementation units (PIUs), including Livestock, Fisheries and Agricultural Machinery Affairs Center (LFAMAC), Bureau of Agriculture and Rural Affairs (BARA), Bureau of Ecology and Environment (BEE), Bureau of Education, (BOE), Bureau of Natural Resources (BNR), Bureau of Water Resources (BWR), Bureau of Forestry and Grassland (BFG), Emergency Management Bureau (EMB), Housing and Urban-Rural Development Bureau (HURDB), and Water Supply Co., Ltd (WSCL).

B. Implementation Arrangements

3. The consulting services will be carried out by a team of national consultants through a firm and will be financed through ADB loan proceeds, and the procurement will be conducted in accordance with ADB's Procurement Policy: Goods, works, nonconsulting and consulting services (2017, as amended from time to time).

4. A total of 150 person-months of national consultants will be required. The consulting firm will be selected by (i) inviting full technical proposals; and (ii) using the quality- and cost-based selection method, with a quality–cost ratio of 90:10. Various training sessions, workshops, and public engagement exercises will be conducted.

5. The consulting services of this package are expected to last for 6.5 years, starting in May 2021 until November 2027. List of consultants are provided in Table 1.

Table 1: List of consultants

Position	Field (person-month)	Home Office (person-month)	Total (person-month)
Senior Project Management Specialist/Team Leader	18	6	24
Project Management Specialist	28	6	34
Procurement and Contract Management Specialist	15	3	18
Financial Management Specialist	6	4	10
Economist	2	1	3
Environment Specialist	12	2	14
Resettlement, Social and Gender Specialist	12	2	14
Disaster Flood and Environmental Risk Management Specialist	6	3	9
GIS and Risk Mapping Specialist	3		3

Position	Field (person- month)	Home Office (person- month)	Total (person- month)
IT System Operation and Training Specialist	3		3
Wetland Monitoring Specialist	5	1	6
Eco-Farming and Livestock Waste Specialist	5	1	6
Rural Sanitation (Toilet Reconstruction) Specialist	5	1	6
Total	120	30	150

Source: PMO estimates.

C. Reporting Requirements

6. The consultant team will produce (i) an inception report within 4 weeks of the start of the consulting services, and (ii) a semiannual progress report by the end of each half year during 2021 – 2027. The inception and semiannual progress reports will be subject to reviews by ADB and PMO, and (iii) end of service completion report. All reports are to be written in English and translated into Chinese. One soft and three hard copies of each report are to be submitted to ADB (English version only) and the PMO (both Chinese and English versions).

D. Scope of Services and Consultants' Inputs

7. Unless otherwise stated, for each of the national consultant positions, s/he should have (i) possession of a related degree, qualification, memberships of related academic societies, and/or participation in related training courses, (ii) experience in similar positions for projects or technical assistances, and (iii) experience in working with international organizations and consultants, will be highly evaluated.

1. Senior Project Management Specialist/Team Leader

8. The specialist will (i) coordinate all project management support activities as Team Leader; (ii) finalize approaches for project management support and develop project performance monitoring system (PPMS), with the support from other team members; (iii) assist the PMO in preparing quarterly project progress reports, midterm review report and project completion report (PCR) in a format provided by ADB; (iv) assist the PMO in implementing, monitoring, and valuating the overall project and subprojects; (v) assess needs for capacity development for staff of the PMO, PIUs, and others, and plan, design, organize, and implement seminars, workshops, and/or training for project management; financial management; disbursement arrangements, implementation, monitoring; and evaluation of resettlement, gender development, and environmental management, and project monitoring and evaluation (M&E), if necessary; (vi) monitor compliance with the loan covenants, assess key implementation issues, and make recommendations for improvement; (vii) prepare the consulting service inception report, interim report, semiannual reports, draft final report, and final report in a format provided by ADB; and (viii) conduct any other necessary work for smooth and appropriate implementation of the project.

2. Project Management Specialist

9. The specialist will (i) jointly with the Team Leader, develop a comprehensive project management workplan including operational procedure, document control, project management system and all supporting activities for the project to guide and facilitate the project implementation; (ii) jointly with the Team Leader, establish a PPMS in accordance with ADB requirements, including establishing baseline and operation mechanism for data collection, analysis and reporting; (iii) develop comprehensive project implementation plans and procedures

for monitoring and controlling overall project activities; (iv) establish an efficient and effective financial management system for the project implementation in accordance with ADB policy and procedural requirements and implementing such financial management system; (v) identify areas for improvement and training needed on the skills necessary for effective project management and capacity development for staff of the PMO, PIUs, and others for project management; (vi) facilitate the communication between ADB, PCG and PMO as needed; and (vii) assist the Team Leader and PMO to prepare quarterly project progress reports for submission to ADB; (viii) conduct any other necessary work for effective management and execution of the project assigned by the Team Leader.

3. Procurement and Contract Management Specialist

10. The specialist will (i) monitor procurement activities under the project and assist the PMO in updating and implementing the strategic procurement and procurement plans; (ii) assist the PMO in conducting management of contracts for civil works, goods, and consulting services, including, but not limited to, supervision and inspection of activities under contracts; payments to contractors, suppliers, and consultants; preparation of withdrawal applications; improvement of fund flow efficiency by streamlining the preparation of withdrawal applications; and contract variations; (iii) assist the Team Leader in monitoring compliance with the loan covenants, assess key implementation issues, and make recommendations for improvement, from procurement and contract management viewpoint; (iv) provide the PMO with support for the preparation of procurement and contract management aspects of quarterly progress reports, midterm review report and PCR; (v) provide support to the Team Leader for assessing needs for capacity development, and planning, designing, organizing, and implementing seminars, workshops, and/or training for procurement and contract management; (vi) provide support to the Team Leader for preparing the inception report, semiannual reports, draft PCR, and final PCR; and (vii) conduct any other necessary work for procurement and contract management assigned by the Team Leader.

4. Financial Management Specialist

11. The specialist will (i) review background documents, including the financial analysis of the project undertaken during project preparation; (ii) conduct financial analysis at the midterm of project implementation, and at physical completion of the project, including (a) financial sustainability analysis to assess the fiscal sustainability debt repayment capacity; and (b) an assessment of the financial viability of the revenue-generating components; (iii) assist PMO and PIUs in establishing and implementing a financial management system; (iv) assist the Pingjiang County Government, PMO and PIUs in preparing withdrawal applications and streamlining the preparation of withdrawal applications; (v) assist the Pingjiang Finance Bureau, PMO and PIUs in meeting requirements of the financial management action plan; (vi) provide support to the Team Leader for assessing needs for capacity development; and planning, designing, organizing, and implementing seminars, workshops, and/or training for financial analysis, as necessary; (vii) provide support to the Team Leader for preparing the inception report, semiannual reports, draft PCR, and final PCR; and (ix) undertake any other necessary work assigned by the Team Leader.

5. Economist

12. The specialist will (i) review background documents, including the economic analysis of the project undertaken during project preparation; (ii) conduct economic analyses of the overall project and each subproject to determine economic internal rate of return of the overall project and each subproject at the midterm of project implementation, and at physical completion of the

project; (iii) provide support to the Team Leader for assessing needs for capacity development; and planning, designing, organizing, and implementing seminars, workshops, and/or training for economic analysis, as necessary; (iv) provide support to the Team Leader for preparing the inception report, semiannual reports, draft PCR, and final PCR; and (v) undertake any other necessary work assigned by the Team Leader.

6. Environmental Specialist

13. The specialist will have: (i) a master's degree or higher in environmental management or related field; (ii) at least 10 years of experience in environmental management, monitoring, and/or impact assessment; (iii) familiarity with ADB project management requirements and national environmental management procedures; (iv) ability to communicate and work effectively with local communities, contractors, and government agencies; (v) ability to analyze data and prepare technical reports; (vi) willingness and health to regularly visit the subproject sites; and (vii) proficiency in spoken and written English.

14. The specialist will work closely with the PMO environment officer and PIU social and environmental focal staff, and other staff and agencies. Tasks and responsibilities of the specialist include but are not limited to the following:

a. Before construction:

- (i) Ensure project environmental readiness, including: (i) all contractor contracts include, and will comply with, the EMP; and (iii) relevant sections of the EMP are incorporated in construction plans and contracts.
- (ii) Assist the PMO and PIUs to implement the grievance redress mechanism (GRM), including: (i) establish and publicize the GRM; and (ii) collate and evaluate grievances received.
- (iii) Develop procedures to: (i) monitor EMP implementation progress; (ii) collate and evaluate data collected in the EMP environmental monitoring program; and (iii) prepare and submit the semiannual environmental monitoring reports to ADB (to continue until project completion report).
- (iv) Undertake training of project agencies as required by the EMP training plan.
- (v) Provide hands-on support and on-the-job training to the PMO, PIUs, and contractors on the specific requirements of the EMP as required.
- (vi) Work closely with the KfW consulting team.

b. During project implementation:

- (i) Undertake site visits to all PIUs during subproject construction and operating phase.
- (ii) Assist in the ongoing public consultation process as described in the project IEE.
- (iii) Conduct and monitor project compliance with the EMP and all relevant assurances and covenants in the loan and project agreements for environmental safeguards; identify any environment-related implementation issues; and, propose necessary responses in corrective action plans.
- (iv) Assist the PMO and PIUs in managing the accredited environmental external monitoring agencies for conducting periodic environmental impact monitoring in compliance with the approved monitoring plan defined in the EMP;
- (v) Undertake training of project agencies as required by the EMP training plan, and provide hands-on support and on-the-job training to the PMO and/or PIUs and contractors on the specific requirements of the EMP, as required.

- (vi) Undertake simple and cost-effective on-site quantitative measurements to regularly check that the construction complies with the environmental monitoring standards and targets, especially for noise, and water turbidity (during the dredging and embankments), using a basic hand-held meter.
- (vii) Design a simple and cost-effective water monitoring program for the subprojects involving crop production. The objective of the program is to assist the PMO and PIUs in measuring and reporting monthly and annual water use for agriculture in each subproject. This will enable: (a) the PMO, PIUs, and county water bureaus to monitor water use in relation to allocation quotas and overall sustainability; (b) the PMO, PIUs, and ADB to assess whether the project is achieving improvements in water use (compared with existing crop production). Prepare and finalize the program methodology in consultation with the PMO and PIUs. The program should include the data collected through the soil moisture sensors to be installed by the project; and, be integrated with the data collection and storage system to be prepared by the PIUs, so that the water monitoring data is incorporated as part of the overall project computer systems and can be easily viewed as needed by the PMO and PIUs.
- (viii) Assist PMO to prepare semiannual environmental monitoring progress reports for submission to ADB. The reports will focus on progress with implementation of the EMP, compliance with environment-related project assurances, and results of the water monitoring.
- (ix) Work closely with the KfW consulting team.

7. Resettlement, social and gender specialist

15. The specialist will have: (i) a graduate degree or higher in social science or related field; (ii) at least ten years of experience in social development and social safeguards; (iii) familiarity with ADB projects and ADB's requirements on resettlement and social issues; and (iv) proficiency in spoken and written English, including an ability to prepare reports meeting ADB requirements.

16. The specialist will (i) assist the PMO, PIUs, and design institutes in updating the resettlement plan approved by ADB, in ADB format and based on the detailed designs; disclose it to the affected persons prior to ADB's approval; and obtain ADB's approval of it; (ii) assist the PMO and PIUs in implementing land acquisition and resettlement in accordance with the resettlement plan, (iii) assist the PIUs in supervising contractors to ensure compliance with requirements of the resettlement plan, applicable laws and regulations, and ADB's Safeguard Policy Statement; (iv) assist the PMO and PIUs in supervising the processes of land acquisition and resettlement by collecting and updating basic data, and closely coordinating between the PMO and PIUs, and an external resettlement and social monitor; (v) follow up with relevant local government agencies for post resettlement subsidies to be provided to households displaced by the Project components; (vi) review external M&E reports prepared by the external resettlement and social monitor and ADB's comments on the reports, monitor compliance with the resettlement plan, assess the degree of impacts and key implementation issues, explain key issues to the PMO and PIUs and assist them in conducting follow-up actions to address the key issues; (vii) assist the PMO to monitor compliance with the resettlement plan, assess key implementation issues, formulate remedial measures, and assist them in conducting follow-up actions; (viii) provide the PMO with support for the preparation of resettlement aspects, including semiannual internal resettlement and social monitoring in project's progress reports; (ix) provide support to the Team Leader for assessing needs for capacity development, and planning, designing, organizing, and implementing seminars, workshops, and/or training for implementation and M&E of land acquisition and resettlement; (x) provide support to the Team Leader for preparing the inception report, progress reports, draft PCR, and final PCR; (xi) undertake any other necessary work

assigned by the Team Leader; and (xii) Work closely with the KfW consulting team.

17. The specialist will also do the followings, including (i) if there is a change in the project scope, assist the PMO, PIUs, and design institute in updating the SDAP and GAP approved by ADB, in ADB format and based on the change; and obtain ADB's approval of it; (ii) assist the PMO and PIUs in implementing the SDAP and GAP prepared during project preparation; (iii) assist the PMO and PIUs in supervising contractors to ensure compliance with requirements of the SDAP and GAP, and applicable laws and regulations; (iv) monitor compliance with the SDAP and GAP; assess the degree of effectiveness and key implementation issues; explain key issues to the PMO and PIUs; and assist them in conducting follow-up actions to address the key issues; (v) provide the PMO with support for the preparation of social aspects of the project progress reports, and semiannual internal social monitoring reports; (vi) provide support to the Team Leader for assessing needs for capacity development, and planning, designing, organizing, and implementing seminars, workshops, and/or training for implementation and M&E of the SDAP and GAP; (vii) provide support to the Team Leader for preparing the inception report, project reports, draft PCR, and final PCR; and (viii) undertake any other necessary work assigned by the Team Leader.

8. Disaster Flood and Environmental Risk Management (DFERM) Specialist

18. The specialist will (i) provide support in implementation of a comprehensive DFERM plan; (ii) review international best practices in flood prevention, flood and environmental risk management and integrated water resource management, and support the adoption of a nexus approach for flood-waste-ecosystem management to maximize the DFERM in the Miluo River Basin; (iii) monitor the implementation of the DFERM footprint/accountability system to address rural-urban integration, and upstream/ downstream linkages; (iv) support initiatives in mainstreaming DFERM to mitigate the flood and reduce the flood and environmental risks; (v) support in DFERM sensitive land-use planning to minimize the exposure (relocation) without adverse social impact, and introduction of discontinuous dike with provisions for flood protection in critical locations and flood retention in other locations, and other measures; (vi) provide guidance in taking non-structural measures including flash flood early warning and water quality monitoring system; (vii) support through community-based approach, the development of a localized flood early warning system; (viii) support in capacity development of PCG, local governments, and communities including training programs; and (ix) support the application of the river chief system including the development of real-time river observation system; (x) provide support to the Team Leader for preparing the inception report, semiannual reports, draft PCR, and final PCR; and (xi) conduct any other necessary work for DFERM assigned by the Team Leader.

E. Supporting Technical Specialists

19. A group of technical specialists will be engaged to conduct technical capacity building and training during the first two years of the project implementation. These technical specialists are:

- GIS and Risk Mapping Specialist
- IT System Operation and Training Specialist
- Wetland Monitoring Specialist
- Eco-farming and Livestock Waste Specialist
- Water Supply and Wastewater Management Specialist

20. Tasks and responsibilities of the technical specialists are described but not limited to the

following:

9. GIS and Risk Mapping Specialist

- (i) Assist the DFERM Expert to perform flood risk analysis and mapping (establish flood risk mapping model) in Miluo River Basin using GIS and hydrological observation information;
- (ii) Assist the DFERM Expert to conduct quantitative water quality analysis and support options to improve water quality (establish quantitative water quality model) in Miluo River Basin using GIS and water quality monitoring information;
- (iii) Review the equipment of the existing hydrological stations, water level observation stations, rainfall observation stations and water quality monitoring stations;
- (iv) Review the need for installing additional automatic monitoring points and monitoring stations for stormwater and water quality; and
- (v) Assist the DFERM Expert to provide training and capacity building exercise.

10. IT System Operation and Training Specialist

- (i) Review the proposed system software for forecast and warning systems according to hydraulic model calculation, and establish early warning and contingency plans at various levels;
- (ii) Review the proposed system software, and establish forecast and warning systems according to water quality model calculation, and establish early warning and contingency plans at various levels;
- (iii) Review the proposed forecast and early warning plan, including the system resource sharing of upstream and downstream of the river, automatic real-time warning, automatic issuance early warning information (SMS, radio, proclamation, etc.), and automatically activate emergency plans under the river chief system;
- (iv) Ensure the proposed system to incorporate automatically the early warning system into the designated monitoring center; install video system for uniformly dispatching and command;
- (v) Evaluate computer demonstration system provided by the system developer for simulation and observation results and assess warning information release system for flood risk and water pollution, based on forecasting model and observation data of hydrological, hydraulic and water quality data;
- (vi) Provide trainings to staff of EMB on the system operation and data collection; and
- (vii) Jointly with the DFERM Specialist, guide the EMB to conduct data analysis.

11. Wetland Monitoring Specialist

- (i) Provide supports to PMO in implementation of wetland monitoring plan;
- (ii) Provide technical supports to carry out assessments, studies and surveys related to wetland ecosystem management, including wetlands biodiversity indicator development and assessment methodology, ecological function assessment methodology development, wetland monitoring, wetland ecosystem service valuation;
- (iii) Develop up-to-date and scientific-based methodologies, tools and frameworks for monitoring wetland ecological health and functions;
- (iv) Review and update the wetland database, information and maps, as well as updating of the wetland inventories and databases for the other functions;
- (v) Prepare technical reports with regard to wetland ecosystems and biodiversity

- issues and other reports as required;
- (vi) Provide necessary inputs to the progress reports; and
- (vii) Perform other relevant tasks as required by the Team Leader.

12. Eco-farming and Livestock Waste Specialist

- (i) Provide support in implementation of the eco-farming and livestock waste management subprojects;
- (ii) Review the target accessibility of the livestock waste design scheme according to the feasibility study objectives;
- (iii) Review the proposed monitoring scheme, including the emission reduction of COD and ammonia nitrogen in wastewater, and assist relevant experts to establish pollution reduction effect model;
- (iv) Review the effect evaluation of capacity and output in the process of project implementation through on-site verification and data review;
- (v) Carry out technical assessment of the application of livestock waste products in farmland;
- (vi) Support the adoption rice-fish and rice-crayfish farming activities which recycle the rice production with fishing in Pingjiang;
- (vii) Support the adoption of Soil Test and Formulated Fertilization and other optimized fertilization technologies to reduce the fertilization to an appropriate level which maintain the crop yield in Pingjiang;
- (viii) Support the adoption of integrated pest control technologies for crop production in Pingjiang;
- (ix) Support in the monitoring system designing for non-point source pollution control, including monitoring sites and methodologies, calculation method and etc.;
- (x) Provide training for trainers on ecological and organic farming;
- (xi) Support the establishment of traceability system which help to increase the integrity and trust of agricultural products produced in Pingjiang;
- (xii) Support in capacity development of PCG, local governments, and communities including training programs;
- (xiii) Provide support on access to market via introducing ecological and organic food exhibition, e-commerce platform and any marketing channels to agro-enterprises, farmer cooperatives and farmers;
- (xiv) Provide support to the Team Leader for preparing the progress reports as needed; and
- (xv) Perform any other necessary work assigned by the Team Leader.

13. Rural Sanitation (Toilet Reconstruction) Specialist

- (i) Review international best practices and related policies, lessons learned for rural sanitation practices with particular reference to changing existing toilets to modern flush water toilets;
- (ii) Review the current situation of the rural toilets in Pingjiang County and develop a work plan for reconstruction of the existing toilets to flush water toilets;
- (iii) Through the PMO and PIUs, help agencies and entities responsible for operations and maintenance (O&M) of the reconstructed flush water toilets;
- (iv) Provide any recommendations to improve the reconstructed flush water toilets from institutional aspects;
- (v) Work with the design institutes on the final detail design for reconstructed flush water toilets and associated facilities;

- (vi) Help the PMO and PIUs ensure that the Housing and Urban-Rural Development Bureau of the PCG timely plan and construct all necessary connections to water supply for the flushing toilets;
- (vii) Provide technical support for bid documents review, bid evaluations, clarifying of bidders' questions, and finalization of contracts;
- (viii) Help the Team Leader assess needs for capacity development, and plan, design, organize, and implement seminars, workshops, training, and/or study tours, for O&M of flush water toilets and associated facilities;
- (ix) Conduct technical training for the proper use, operation and maintenance of the reconstructed flush water toilets, paying particular attention to water saving and maintaining hygienic good conditions;
- (x) Provide support to the Team Leader for preparing the progress reports as needed; and
- (xi) Perform any other necessary work assigned by the Team Leader.

F. Cost Estimate

Table 2: Cost Estimate

No.	Description	Total Cost (US\$'000)
1	Consultants	
	a. Remuneration and per diem	1,000.00
	b. Travel	75.00
2	Contingencies	50.00
	Total	1,125.00

Source: PMO estimates.

APPENDIX 3: Indicative Terms of Reference for External Resettlement and Social Monitoring and Evaluation

A. Introduction

1. The proposed Hunan Miluo River Disaster Risk Management and Comprehensive Environment Improvement Project will promote rural vitalization and ecological protection by (i) instituting and applying international best practice for flood and integrated disaster risk management; (ii) improving access to safe drinking water and sanitation services for urban and rural residents; (iii) promoting circular agricultural development by linking sustainable livestock waste management and eco-farming; (iv) piloting green procurement practices and mainstreaming environment education; and (v) enhancing institutional coordination capacity to maximize the project impact. The project is envisaged to serve as a model for counties facing climate change and ecological pressures in the Yangtze River Economic Belt (YREB), similar parts of the People's Republic of China (PRC) and other developing member countries.

2. Consulting services will be provided for external resettlement and social monitoring and evaluation (M&E) needed to ensure that the project will be implemented in conformity with the PRC laws and regulations and the ADB's Safeguard Policy Statement (2009).

3. The consulting services will be provided to PMO and 10 project implementation units (PIUs), including Livestock, Fisheries and Agricultural Machinery Affairs Center (LFAMAC), Bureau of Agriculture and Rural Affairs (BARA), Bureau of Ecology and Environment (BEE), Bureau of Education, (BOE), Bureau of Natural Resources (BNR), Bureau of Water Resources (BWR), Bureau of Forestry and Grassland (BFG), Emergency Management Bureau (EMB), Housing and Urban-Rural Development Bureau (HURDB), and Water Supply Co., Ltd (WSCL).

B. Implementation Arrangements

4. The external resettlement and social M&E will be carried out by a team of national specialists through a competent external monitoring agency (EMA). The M&E will be financed by ADB loan proceeds, and the procurement will be conducted in accordance with ADB's Procurement Policy: Goods, works, nonconsulting and consulting services (2017, as amended from time to time). The PMO and PIUs will provide assistance to the EMA, particularly in the aspects of field survey, staffing, and logistics.

D. Reporting Requirements

5. The EMA will submit to ADB and PMO semiannual external resettlement and social M&E reports during the implementation of LAR for the project (including all ADB and KfW financed subprojects), and annual external social and resettlement M&E reports for 2 years after the completion of the LAR for the whole project (for each report, a soft copy of the English version to ADB and KfW, and soft copies of the English and Chinese versions to each of the PMO and PIUs), not later than 30 days after the completion of the field investigations.

6. The EMA will take full responsibility on the content and quality of the reports; and if necessary, must revise reports based on the comments of ADB and KfW. Format of the reports will be proposed by the EMA in the technical proposal. The EMA may seek guidance from ADB's Involuntary Resettlement Safeguards: A Planning and Implementation Good Practice Sourcebook (Draft Working Document) and from examples of reports on ADB website.

E. Scope of Services and Consultants' Inputs

7. According to ADB's requirements, the implementation of the resettlement and social plans should -besides internal monitoring undertaken by the PMO and PIUs—be monitored by the EMA.¹ The EMA to be selected will monitor the implementation of the project's resettlement and social plans; and report progress semiannually during the implementation of LAR for the project, and annually for two years after the completion of the LAR for the whole project. The EMA will establish an M&E team. The main duties of the team are to (i) carry out the M&E on the implementation of the resettlement and social plans to ensure it is in compliance with the resettlement and social plans; (ii) advise PMO and PIUs on the implementation of the resettlement plan to ensure policies and procedures are complied with; and (iii) provide information and data, monitoring results, and observations that the Team Leader will aggregate into the external M&E reports.

8. The general objective of the external resettlement and social M&E is to assess the compliance with principles, policies, and requirements mentioned in the resettlement and social plans. For M&E of the resettlement plan, this includes (i) determining and assessing whether or not the compensation payment, support, and resettlement for the affected persons, as well as the process of consultation, information disclosure, and resolution of complaints and grievances are being carried out in compliance with principles, requirements, and procedures according to the resettlement plan; (ii) reviewing whether or not the resettlement plan's objectives, especially those that improve or at least restore affected persons' living standards are adequately implemented and achieved; and (iii) reviewing shortcomings in the implementation of the resettlement plan and developing recommended solutions for discussion with the PMO and PIUs. For M&E of social development and gender action plans, assessing if actions and targets in relevant plans have been achieved.

9. To carry out the M&E, the EMA will address the following tasks.

- (i) **Semi-annual M&E.** During the implementation of LAR, the EMA will semiannually monitor and evaluate the implementation of the resettlement and social plans.
- (ii) **Annual M&E.** For two years after the completion of the LAR, the EMA will carry out annual M&E to evaluate the results of the implementation of resettlement and social plans.
- (iii) Participate with the PMO in ADB's review missions, as required.

10. **Monitoring indicators.** There are various monitoring indicators on the implementation of the resettlement and social plans. Once selected, the EMA will have to present in detail the monitoring indicators to the PMO and ADB and KfW for approval. Below are main monitoring indicators for M&E of the resettlement plan:

A. Resettlement M&E

- (i) For compliance of compensation payment and support provision
 - (a) In case of land-for-land compensation, whether the replaced land is equal in area and location as well as production, living conditions compared with the affected land; in case of cash-for-affected land, whether the replacement cost principle is ensured.
 - (b) Whether compensation for affected structures is equal to materials and labor replacement cost according to standards and specification of the

¹ These plans include the resettlement plan, social development action plan and gender action plan.

- work; whether reused materials are not deducted or discounted; and whether assets are depreciated based on age.
 - (c) Whether compensation for trees and/or crops takes into account market rates.
 - (d) Whether compensation is fully paid to affected persons; either through single installment or multiple installments.
 - (e) Whether other assistance as specified in the resettlement plan is provided to affected persons, as required.
- (ii) For compliance of information disclosure and community consultation
- (a) Whether project documents (resettlement information booklet and relevant documents) are disseminated to communities.
 - (b) Whether information (results of detailed measurement survey, prices application, disbursement of payment) is promulgated at public places, and whether the process was effective.
 - (c) Whether the affected persons are fully consulted about issues of land recovery, policies on compensation, resettlement, livelihood restoration, and access to a grievance redress mechanism.
 - (d) Whether the concerns and recommendations of the affected persons are resolved during the implementation of the resettlement plan; as well as the manner by which they have been addressed.
- (iii) For relocation plan and implementation
- (a) Resettlement methods, participation in relocation planning, announcement of relocation plan, and support to relocated households.
- (iv) For compliance of LAR implementation for the relocated affected persons
- (a) Housing and living conditions in resettlement sites (such as road, domestic power, water distribution and/or drainage system); and restoration of community, education, and health services.
 - (b) Whether replacement housing was provided in a complete and timely manner.
 - (c) Any issues related to transitional housing and/or period.
 - (d) Whether the new location has had any impact on the affected persons' livelihoods.
- (v) For compliance of income restoration and support to livelihood stabilization
- (a) Whether support to income restoration is adequately provided, and efficiency of the income restoration support (e.g., training, credit assistance).
 - (b) Post resettlement life and production stabilization. How affected persons stabilize their life and production.
 - (c) Problems that affected persons are facing during the income restoration and life stabilization.
 - (d) Compensation and restoration of temporary land occupation.
- (vi) For compliance of the satisfaction of the affected persons
- (a) Satisfaction of the determination of losses and compensation valuation.
 - (b) Satisfaction of compensation payment and other assistance.
 - (c) Satisfaction of information disclosure and consultation.
 - (d) Satisfaction on life stabilization and income restoration support activities.

- (e) Satisfaction of resettlement site, relocation site, and completeness of facilities.
- (vii) For compliance of grievance redress mechanism of the affected persons
 - (a) Degree of efficiency of the grievance redress mechanism (time, efficiency of resolution).
 - (b) Results of complaint resolution at various levels.
 - (c) Satisfaction of the grievance redress mechanism.

11. Monitoring indicators for M&E of the social development and gender action plans are included in respective plans. These include participation of women and the low income people in the project activities, such as skills training, jobs and decision making.

12. **Methodology of M&E.** The EMA will apply both qualitative and quantitative methods during monitoring. For the M&E of resettlement, methods included the following.

- (i) Quantitative methods
 - (a) Conduct baseline survey (prior to start of LAR) covering a representative sample of affected persons, focusing more on those seriously affected and vulnerable affected persons.
 - (b) Conduct questionnaire survey during project implementation for 100% of severely affected households and 20% of all other affected households.
 - (c) Use the existing statistical data at local levels, and data from district and/or county resettlement bureaus.
 - (d) Survey affected businesses and workers.
 - (e) Conduct final M&E of LAR implementation (prior to project completion) by conducting a sample survey on 100% of severely affected households and 20% of all other affected households.
- (ii) Qualitative methods
 - (a) Review project documents (feasibility study reports and resettlement plan), ADB relevant policies, laws and regulations of the PRC and Pingjiang County.
 - (b) Consult and discuss with different stakeholders, including Pingjiang County Government and social organizations through consultation meetings, in-depth interviews, and group discussions.
 - (c) Undertake focused group discussions, in-depth interviews with the target affected persons; and/or groups such as severely affected households, relocated households, vulnerable households, and women's groups.
- (iii) Site visits
 - (a) Conduct site visits to original housing areas and resettlement sites, as well as project construction sites to check whether resettlement sites are constructed with complete infrastructure and identify potential impacts on local people during civil works construction.

13. All information and data collected will be processed, analyzed, and included in the baseline or subsequent M&E reports. The EMA must store the processed data to be used for the next M&E. These data will belong to (and will be the asset of) the PMO and will be made available to ADB and the PMO on request. All documentation will be transferred to the PMO at the completion of the contract.

14. **Qualification.** The EMA should be a registered social organization (research institution, design institute, consulting institution and/or firm, university, or nongovernment organizations) without direct administrative subordination relations with the Pingjiang County Government. The EMA should have 5 or more qualified technical staff members. Professional staff members of the EMA should have degree in economics, sociology and/or anthropology, or relevant field of social sciences; are familiar with ADB's or World Bank's resettlement and social policies and procedures; and have previous experience in resettlement and social M&E of LAR for projects funded by ADB or World Bank. The EMA should also have experience in undertaking similar projects in the PRC. Three (3) national specialist positions will provide a total of **26** person-months of consulting services to support external resettlement and social M&E. The key responsibilities are proposed but not limited to the following:

1. Resettlement Specialist and Team Leader (10 person-month, intermittent)

15. The specialist will undertake the following tasks: (i) lead all the activities of the team; (ii) lead and set up the monitoring methodology, including design of baseline and tracer surveys; (iii) work and coordinate with relevant agencies and/or bodies within the project to implement the task of M&E activities; (iv) lead and conduct the M&E activities and required surveys to collect data and information at office and project sites, and then analyze the findings; (v) prepare external resettlement and social M&E reports which include conclusions and recommendations; (vi) discuss findings with the PMO and PIUs to reach agreement on follow-up actions; and (vii) participate in ADB review missions.

2. Social and Gender Specialist (8 person-month, intermittent)

16. The specialist will undertake the following tasks: (i) monitor the activities are being carried out according to relevant social and gender plans; and (ii) provide inputs to the external resettlement and social M&E reports, which would include progress, challenges and/or bottlenecks during implementation; and propose solutions and/or recommendations to address these issues; (iii) participate in ADB review missions, if required; and (iv) conduct any other duties assigned by the Team Leader.

3. Field Surveyors (8 person-month, intermittent)

17. The surveyors will (i) assist the resettlement and social specialists in carrying out the monitoring on the implementation of the resettlement and social plans to ensure that the implementation is in compliance with the resettlement and social plans; (ii) under the guidance of the resettlement and social specialists, carry out field surveys; (iii) analyze the data collected from the field surveys; (iv) provide assistance to the resettlement and social specialists for the preparation of the external resettlement and social M&E reports; and (v) conduct any other duties assigned by the Team Leader.

Table 1: Tentative Consultants' Inputs

Position	National (person-month)
Resettlement specialist/Team Leader	10
Social and gender specialists	8
Field surveyors	8
Total	26

Source: PMO estimates.

F. Cost Estimate

Table 2: Cost Estimate

No.	Description	Total Cost (US\$'000)
1	Consultants	
	a. Remuneration and per diem	125.00
	b. Local travel	13.00
2	Reports and communications	15.00
3	Surveys	15.00
4	Contingencies	12.00
	Total	180.00

Source: PMO estimates.

Appendix 4: Strategic Procurement Planning Report

Section 1: Project Concept

Project Title	Hunan Miluo River Disaster Risk Management and Comprehensive Environmental Improvement Project
Country	People's Republic of China (PRC)
Executing agency	Pingjiang County Government (PCG)
Implementing agency	Project Management Office (PMO) (which was established under the PCG Project Leading Group)
Project development objectives	<p>Impact: The project is aligned with the following impact: rural vitalization and ecological protection in the Yangtze River Economic Belt (YREB) realized.</p> <p>Outcome: The project will have the following outcome: rural living environment in Pingjiang County improved.</p> <p>This project aims to demonstrate rural vitalization and environmental improvement in Pingjiang County, Hunan Province, and contribute to the PRC's development goals of inclusive and sustainable growth. Through the implementation of the project, disaster risk prevention infrastructure and sanitation services at 24 town/ships in Pingjiang County will be strengthened to improve living conditions and quality of local residents.</p>
Project description	<p>The project includes four outputs:</p> <ul style="list-style-type: none"> ➤ Output 1: Water-related disaster risk management strengthened. This output will mitigate the potential impact of flooding on people's livelihoods and property, and the socio-economic consequences resulting from flood events. The output includes the (i) construction of 38.9 km of ecological embankment and/or riverbank reinforcement in 12 towns along Miluo River in the Pingjiang County to control flooding events; (ii) establishment of riparian buffers from the edge of riverbank by using nature-based solutions to control water and soil losses; (iii) restoration and protection of Huangjin River National Wetland Park to enhance biodiversity conservation, increase flood storage and water quality purification capacity as well as promote environmental education; and (iv) establishment of an integrated smart disaster risk management system for early warning to inform disaster-related decision making and improved institution coordination. ➤ Output 2: Access to safe drinking water and sanitation services enhanced. This output will improve the quality of life for both urban and rural communities in Pingjiang County. The output includes the (i) construction of a drinking water supply plant and supply of safe drinking water to 107 villages in 14 towns; (ii) separation of rainwater from sewers in urban and rural Pingjiang to prevent the overflow of sewer systems during rainy periods; (iii) establishment of concentrated rural wastewater treatment services for rural households in 21 villages of 12 towns and public facilities (136 schools and 26 health clinics); and (iv) upgrading of rural toilets for 59,732 households and connecting these to wastewater collection systems in

	<p>464 villages of 24 towns. Among which, items (i) – (iii) will be undertaken by KfW through parallel co-financing.</p> <p>➤ Output 3: Circular agriculture for sustainable livestock waste management and eco-farming demonstrated. This output will demonstrate circular agricultural practices in the management of livestock waste and produce organic fertilizer for eco-farming demonstration farms, to reduce greenhouse gas emissions, enhance soil fertility, increase crop yield and sustainability. The output includes (i) carrying out livestock waste treatment in livestock farms prior to soil application, to significantly reduce non-point source pollution into waterbody; and (ii) establishment of 1,930 ha demonstration farms to pilot eco-farming techniques, such as soil conservation, soil testing and fertilizer recommendations (4R principles),¹ organic fertilizer application, integrated pest management and other climate-resilient farming practices, to promote sustainable agricultural development.</p> <p>➤ Output 4: Green procurement practices piloted and environmental education mainstreamed. This output will include: (i) piloting green procurement practices under the project's activities; (ii) developing green procurement guidelines for selected categories of goods and services to promote, implement, and monitor green procurement practices in two key sectors (agriculture/eco-farming and education); (iii) mainstreaming environmental education in the local educational system; and (v) improving overall environmental literacy of Pingjiang residents by engaging students' families and local communities in environmental education and outreach activities.</p>
Description of indicative contract packages	<p>Output 1: Water-related disaster risk management strengthened includes Subproject 1: Flood prevention and risk management in Miluo River; Subproject 2: Huangjin River National Wetland Park restoration and protection; and Subproject 3: Integrated smart disaster risk management system.</p> <ul style="list-style-type: none"> • Construction of civil works • Design, supply and installation of disaster risk management system • Purchasing fire protection equipment, wetland monitoring equipment, wetland monitoring and data collection system <p>Output 2: Accessibility to safe drinking water and sanitation services enhanced includes Subproject 4: Integrated water supply in urban and rural Pingjiang; Subproject 5: Separating rainwater from sewers in urban and rural Pingjiang; and Subproject 6: Rural domestic wastewater treatment and sanitary conditions improvement.</p> <ul style="list-style-type: none"> • Construction of civil works • Supply of materials (water pipelines) <p>Output 3: Circular agriculture for sustainable livestock waste management and eco-farming demonstrated includes Subproject 7: Sustainable livestock waste management and Subproject 8: Promotion of eco-farming technology and practices.</p> <ul style="list-style-type: none"> • Construction of livestock waste management facilities

¹ Right amount, right type, right time, right place.

	<ul style="list-style-type: none"> • Construction of eco-farming demonstration bases (including land preparation, farm roads, irrigation facilities, tree tending, seedling plantation etc) <p>Output 4: Green procurement practices piloted and environmental education mainstreamed (Subproject 9).</p> <ul style="list-style-type: none"> • Studies in green procurement • Construction of civil works (green development centers in schools) • Design, build and equipment provisions of the exhibition center • Supply of equipment (multiple contracts) <p>Subproject 10: Institutional, technical and management capacity improved.</p> <ul style="list-style-type: none"> • Consultancy services (project start-up, project management, technical support, green procurement and environmental education support, external monitoring, etc) • Supply of office equipment for PMO and agricultural products quality monitoring equipment
Summary of the financing agreement	<p>The overall ADB financing ratio is tentatively set at 42.43% for the project. The total project is estimated at € 299.07 million, of which, ADB will finance € 126.88 million sourced from ADB's ordinary capital resources, KfW will finance € 60.00 million and the PCG will finance € 112.19 million.</p>

Section 2: Operating Environment

A. Capacity and Capability Assessment of the Borrower

Strengths	Weaknesses
<ul style="list-style-type: none"> ➤ PCG and PMO agreed that procurement activities will be undertaken in full conformity with ADB Procurement Policy and Procurement Regulations (2017, as amended from time to time); ➤ PMO has existing Procurement Division consisting of 5 full-time staff with adequate background and practical experiences; ➤ PMO has 9 staff, which were assigned by PIUs, with professional background to support the technical designs, as well as the technical related in the preparation of bidding documents; ➤ PMO has procurement regulations and procedures based on the Tendering and Bidding Law (TBL); ➤ Most of the bidding opportunities are published in a medium that is accessible to potential bidders. The Third-party observers are allowed to attend bid openings; 	<ul style="list-style-type: none"> ➤ PMO, who will be responsible for all procurement under the project, has sufficient domestic procurement experiences, but lacks prior experience in ADB procurement policies and regulations; ➤ PMO does not have staff with professional background in green procurement; ➤ Local technical staff who will be responsible for the operation the IT systems (disaster risk management system and wetland monitoring system) do not have sufficient experience in international financed project and reporting; ➤ The Procurement Manual, standard bidding documents (SBDs) for various types of procurement under national open competitive bidding, and procedures are still being revised to harmonize with the procurement framework of ADB; and ➤ PMO does not have specialized and structured procurement training program

<ul style="list-style-type: none"> ➤ Complaint management mechanism is in place, which addresses grievances related to procurements and contract administration; and ➤ PIUs have appointed in total nine staff with professional experience in each sector related to subprojects under the project. 	<p>for the staff involved in undertaking procurement.</p>
Opportunities	Threats
<ul style="list-style-type: none"> ➤ Reliable water supply system in rural area; ➤ Government strategies support the development of the project and offer people living in rural areas with more opportunities to get better public services; ➤ Integrated smart disaster risk management system will improve disaster early warning and disaster-related decision making; ➤ The water environment in the Miluo River Basin has been comprehensively controlled, providing a firm and reliable guarantee for the sustainable development of regional economy; ➤ Improve the ability of the personnel of the PMO and PIUs to create conditions for the continuous improvement of the water environment of Pingjiang County; ➤ The dedicated in-house team member of PMO will be assigned as the green procurement focal responsible for executing the green procurement outputs with the support of external consultants, to maximize institutional capacity building and ensure sustainability of the initiatives; ➤ With the support from procurement and contract management specialist and experienced procurement agency, the PCG and PMO staff would develop their experiences and skills in procurement and contract management to deliver project procurement more effectively and efficiently; ➤ With the support of technical specialists, the local technical staff (PMO and PIUs staff) will build up capacity and experiences in ADB-financed project; and ➤ Construction supervision companies will be recruited to conduct site supervision during the implementation of civil work contracts. 	<ul style="list-style-type: none"> ➤ Potential delays in fund reimbursements due to multiple sources of funding for the project; ➤ The ADB bidding document format is a general standard in the international market, but it is different from the domestic practices. PMO is not familiar with such contracts, so a process to adapt to this kind of contract management mode is needed; and ➤ The outbreak and subsequent global spread of COVID-19 since December 2019 poses new risks and management implications for most regions and projects. For the current project, the extent of COVID-19 in Hunan Province and the project area was reviewed and requirements for a COVID-19 health and safety plan are included in the EMP.

B. Support Requirements

Procurement capability and capacity	<p>Low. PMO has 5 full-time staff in its Procurement Division, they have abundant experience of procurement and construction management under government financed projects, but not under ADB procedures or in English.</p> <p>PMO needs to recruit experienced procurement agency to support the project procurement.</p> <p>PIUs have already assigned technical staff to PMO to support the technical designs, however, their experiences are more restricted to local-based knowledge. PMO will recruit consultants for project start-up, project management and capacity building to further strengthen their capacity for learning procurement regulations for an ADB-financed project, and other goods practices for sustainable project implementation and operation.</p> <p>PMO does not have staff with professional background in green procurement, therefore, to achieve the project objectives, a green procurement specialist is needed to support the implementation of green procurement related activities. Meanwhile, PMO will appoint green procurement focal to be responsible for executing the green procurement outputs with the support of external consultants, to maximize institutional capacity building and ensure sustainability of the initiatives.</p> <p>During the preparation, some procurement training was delivered by ADB procurement specialist and transaction technical assistant (TRTA) consultants. More procurement trainings need to be provided to the PMO staff during the project implementation to enhance capacity to procure and implement project using ADB procurement policies and regulations, as they are inexperienced regarding ADB procurement processes.</p>
Experience in implementing similar projects	<p>PMO staff have good knowledge and experiences in similar projects. However, those were domestic government financed and only domestic contractors used. Staff, to date, have been selected from PIUs to support the project preparation and implementation.</p> <p>Technical specialists will be recruited to conduct capacity building for PMO and PIUs staff to maximize institutional capacity building and ensure sustainability of the project.</p>
Contract management capability and experience	<p>Two PMO staff will be engaged to responsible for contract management, both of them have good experience in contract management, but only limited to government financed projects, and using domestic contractors. FIDIC based contract will be applied.</p> <p>Therefore, external expertise will be required for FIDIC contract administration, safety and risk management, procurement</p>

	management, quality management and site supervision as well as support in certain technical areas. PMO will recruit Procurement and Contract Management Specialist to guide and support the contract management and capacity building. Additional PMO staff will be assigned during the project implementation period based on the working load, as needed.
Level of reliance on external consultants	Very high reliance on external consultants for ADB financed projects. Draft TORs for Procurement and Contract Management Specialists during the start-up phase and implementation phase are listed in the project administration manure (PAM).
Existence and description of complaints management system	<ul style="list-style-type: none"> ➤ The current public resources trading centre (PRTC) has a complete complaint system, which PMO will coordinate with the centre and invite experts from the centre to assist PMO in handling complaints; ➤ Based on the complaint system of the PRTC, PMO will establish its own complaint mechanism in accordance with the complaint handling requirements of ADB; ➤ PMO is the centre of complaint handling; ➤ Each PIU will assign a focal point to handle complaints; and ➤ The procurement agency and the PRTC also have arrangements to accept complaints and participate in complaint handling coordination; and ➤ No additional support is required.

C. Key Procurement Conclusions

The PMO is authorized by the PCG to coordinate and handle project procurement and contract management matters on behalf of the PCG to ensure that all ADB procurement policies and regulations are fully complied with. The relevant PCG procurement supervision agencies, such as the Finance Bureau and the local PRTC, will support and assist the PMO in coordinating the procurement activities. The PMO will recruit a procurement agency with sufficient ADB procurement experience to support the entire procurement process. All PIUs are familiar with the technical practices of their respective sectors. However, PMO and PIUs were only involved in domestic government financed project and only domestic contractors used. None of them had ADB project procurement experience. Therefore, the PMO will arrange extra technical professionals from PIUs to support the preparation of bidding documents, and review construction drawings, bill of quantities and technical specifications, TOR of consulting services, etc. Furthermore, consultancy services will be recruited to support the project implementation and capacity building, to maximize institutional capacity building and ensure sustainability of the project initiatives and operations. Specifically, support will be required for:

- preparation of bidding documents;
- compliance with ADB procurement regulations and procedures;
- bid evaluations including responses to clarifications;
- support in the preparation and negotiation of contracts;
- project and contract management; and
- reporting.

To strength the PMO's project and contract management capabilities, external expertise will be required for FIDIC contract administration, safety and risk management, procurement

management, quality management and contract management as well as support in certain technical areas.

Training on the latest ADB procurement policies and regulations was provided and well-received by PMO, and procurement training will be provided continuously during the implementation period. Budget for trainings has been allocated in the total project cost.

D. External Influences Analysis

Governance	<p>The PCG fully supports the project. A project leading group (PLG) has been established under the PCG, and chaired by Pingjiang County Mayor and consists of representatives from County Government General Office, County Development and Reform Commission (CDRC), Bureau of Agriculture and Rural Affairs (BARA), Housing and Urban-Rural Development Bureau (HURDB), County Bureau of Finance (CBOF), Bureau of Natural Resources (BNR), Bureau of Forestry and Grassland (BFG), Bureau of Ecology and Environment (BEE), Urban Construction and Investment Co., Ltd, Bureau of Water Resources (BWR), Water Supply Co., Ltd and leaders from project town/townships.</p> <p>Currently, two laws govern public procurement: The Law of Tendering and Bidding (2000) and the Government Procurement Law (2012). National government policies are stable for fair competition and transparency in public procurement. ADB procurement policies have been well implemented in China for ADB financed projects for more than 30 years.</p> <p>Issues: Consulting services are not clearly addressed in the two national procurement laws. The PCG promises to follow the policies and regulations stipulated by ADB in the ADB-financed procurement activities.</p>
Economic	<p>It is expected that during the construction of the project, the local economic development will be vigorous and stable, while the GDP of Pingjiang County continue to develop at a high speed, with an average annual growth rate of more than 6%. The impact of COVID-19 pandemic is widespread, without exception in Pingjiang County. The current proposed project is therefore considered as a priority for the local government as part of post pandemic infrastructure investment.</p> <ul style="list-style-type: none"> ➤ In terms of prices, the staple building materials continue to be stable, energy prices are relatively cheap. Energy sources are also continuously transforming to cleaner ones. The growth rate of Hunan's price index in 2019 is 2.9%, which is expected to remain stable in the next few years; ➤ Regarding the employment, PRC has about 7 million university graduates every year. The employment pressure is high, however, the skilled labour with practical experience and skills is still lacking. For example, designers who can prepare bidding documents according to ADB contract requirements, and supervision engineer who can preside over ADB contract change technical coordination, or analyse changing cost are still of lack. ➤ For labour supply, the price and cost of unskilled labour have increased rapidly. Thus, contractors have generally increased the promotion of mechanized construction technology.

Sustainability	<ul style="list-style-type: none"> ➤ Impact of climate change: climate change mitigation and adaptation measures have been incorporated in the design. An increase of 6% rainfall intensity is adopted to account for the projected adverse effect of climate change; ➤ Green procurement: energy-saving design and green procurement principles will be followed, i.e., Outline of Green Construction in Hunan Province (issued in 2012); selection of low carbon emissions and energy saving equipment will be promoted in subprojects, following the government guidelines, i.e., National Key Energy-saving and Low-carbon Technology Promotion Catalog (2017 energy-saving section), National Key Energy-saving and Low-carbon Technology Promotion Catalog (2017 low-carbon section), Recommended Catalog of Energy-saving Electromechanical Equipment (Products), Elimination Catalog for High Energy Consumption Backward Mechanical and Electrical Equipment (product) and “Measures for the first purchase of two types of (green) products by the government of Hunan Province” and “the Catalogue of the first products purchased by the government of Hunan Province (the first batch)”. Under the project, any products listed in the “Elimination Catalog for High Energy Consumption Backward Mechanical and Electrical Equipment (product) are strictly prohibited. Goods and equipment purchasing under Subproject 9 will follow the energy-saving catalogue, low carbon catalogue, and other relevant catalogues issued by Hunan Provincial Government for promoting the green procurement practices, and PMO will make the best effort to adopt these guidelines within other subprojects, with consideration of cost-effectiveness. The Green Procurement Specialist, which will be recruited since the project start-up, will guide the application of green procurement practices, i.e., review technical specifications in bidding documents; ➤ Flood control works: On the basis of ecological priority and people-oriented design principles, the embankment design and construction emphasis nature based approach: “soil and water conservation + buffer zone + ecological revetment + river training”; ➤ Rural water supply: A water-saving water treatment process is adopted in the water treatment process of the water plant to reduce the self-use water rate of the water plant. The auxiliary production facilities of the water plant adopt water-saving appliances to reduce water consumption; ➤ Separating rainwater from sewers: Flooding problems at some locations and in some district areas in Pingjiang County because of e.g. too small sewer diameter, aged and damaged sewer pipes will be improved and solved through the dedicated project measures ➤ Livestock waste treatment: (i) Dry manure collection systems promoted in livestock farms; (ii) Anaerobic digestion for liquid manure; and (iii) application of digestate to eco-farming. These approaches will protect water bodies from contamination and eutrophication; ➤ Eco-farming: (i) Integrated pest control; (ii) Soil testing and fertilizing recommendations; (iii) Fertigation, link with irrigation system; (iv) Use of organic fertilizer and soil improvement; and ➤ Environmental education: Mainstreaming environmental education in the Pingjiang County local educational system and Integration of subproject components into environmental education - Special attention will be paid to youth engagement.
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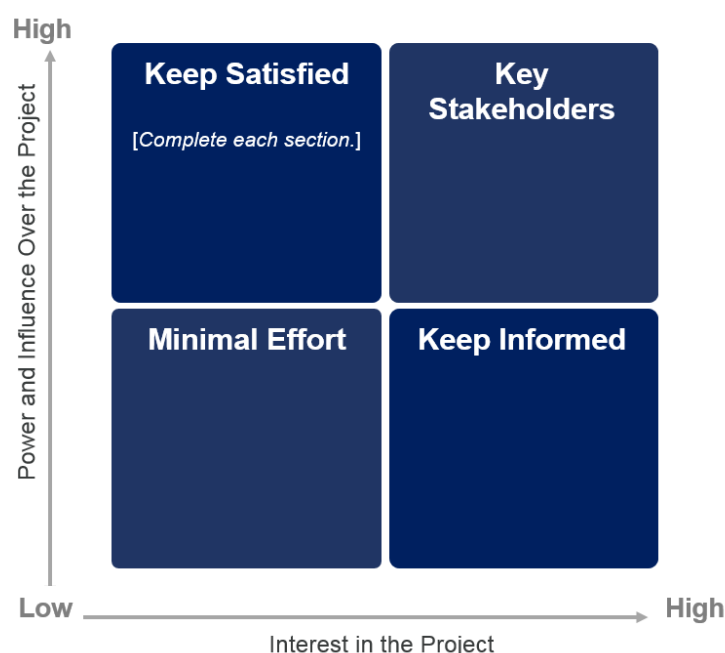
Technology	<p>For the infrastructure construction involved in this project, water supply, sewage collection and treatment, river embankment improvement, eco-farming, etc., the general design should give priority to mature technologies;</p> <p>The technology pace of change and innovation is slow for the construction packages – the technology involved is proven with minimal opportunities to gain advantage by installing innovative solutions;</p> <p>The technology pace of change and innovation is quick for goods packages and the integrated smart disaster risk management system packages with potential to gain advantage by sourcing and utilising credible recent innovations.</p>
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E. Key Procurement Conclusions

- National and provincial governments have enforced procurement laws and regulations;
- ADB procurement regulations have been implemented effectively for over 30 years in PRC;
- PRC has kept appropriate economic growth and stability. PRC economy is getting back to normal gradually since the full control of the COVID-19 outbreak; and
- Both environmental and ecological conditions have provided sustainable conditions for the project.

The possibility of using the Yueyang Municipal Government e-procurement PRTC for this ADB project is explored. However, bids using PRTC will need to follow domestic procedures and requirements for documentation and approvals. Before the first advertisement, the project team will study together with the PMO to explore all the steps that offered by the PRTC and to access if they are in line with ADB's requirements.

F. Stakeholder Analysis and Communication Plan



Stakeholder Type	Stakeholders	Power	Interest	Strategy Quadrant
Public	Central Government Hunan Provincial Government Pingjiang County Government Town and Township Governments Village committees	High High High High High	Low High High High High	Keep satisfied Key stakeholder Key stakeholder Key stakeholder Key stakeholder
Local Community	Local residents – directly benefited (including schools and youth generation, farmers) Local residents – indirect benefited (including local communities, i.e., farmers)	High High	High Low	Key stakeholder Keep satisfied
Contractors and Suppliers	Civil work contractors Suppliers Consultants	Low Low Low	High High High	Keep Informed Keep informed Keep informed
Internal	PMO PIUs	High High	High High	Key stakeholder Key stakeholder
Financial Institutions	ADB KfW	High High	High High	Key stakeholder Key stakeholder

G. Stakeholder Communication Plan

Stakeholder name and role	Keep satisfied group
Interest in the project?	Low, as indirect beneficiary
Support and influence level	High Power and Influence.
Objections, drivers, needs, and levers	Objectives: general public interest and livelihood improvement Drivers: project benefits. Needs: information and feedback. Levers: influence.
Action	Timely reporting and information sharing to seek their advices/supporting in a positive approach.
Responsible, accountable, consulted, or informed?	Consulted and informed.
Communicate what, when, and how?	Reporting, information disclosed through websites and meetings PCG and PMO will be responsible for public releasing Quarterly or semi-annual bases.

Stakeholder name and role	Key stakeholders group
Interest in the project?	High interest
Support and influence level	High Power and Influence as supporter, decision maker and influencer
Objections, drivers, needs, and levers	The objectives of this group are linked into knowledge on: <ul style="list-style-type: none"> • Fulfilment of requirements • Time Schedule • Quality • Compliance

	<p>The drivers for this group are quite varied, and include:</p> <ul style="list-style-type: none"> • Seeking benefits • Approvals • Seeking information. <p>Needs: Information and feedback. Levers: Enforcement, influence.</p>
Action	Promote the smooth implementation of the procurement plan, ensure the compliance of ADB procurement policies and regulations, significantly improve the procurement and project management capabilities of PMO and PIUs. Fix the gap between ADB requirements and domestic practices, and coordinate all related stakeholders as necessary.
Responsible, accountable, consulted, or informed?	The stakeholders in this group are seen as being Responsible, Accountable or Consulted – dependent on their drivers and involvement in the project management.
Communicate what, when, and how?	<p>Most communication will be supported by:</p> <ul style="list-style-type: none"> • Reporting • Online content • Presentations • Meetings • Paper-based documentation (as required) <p>PMO will have responsibility for communicating to this stakeholder group. Communication will be scheduled and regular (no less than quarterly as required or agreed), as well as ad-hoc as required.</p>

Stakeholder name and role	Key informed group
Interest in the project?	High interest
Support and influence level	Low to Medium Power and Influence
Objections, drivers, needs, and levers	<p>The objectives of this group are linked into knowledge on:</p> <ul style="list-style-type: none"> • Project activities, timings and schedule (especially in relation to implementation periods); • Development works and impacts; • Procurement plan, contract advertisement and contract award information; and • Other project information disclosure. <p>The drivers for this group are quite varied, and include:</p> <ul style="list-style-type: none"> • Public Support • Public participation • Opportunities to develop their business
Action	<p>The needs of the group are linked to:</p> <ul style="list-style-type: none"> • Timely information disclosure in a regular basis • Actively involved in the public consultation
Responsible, accountable, consulted, or informed?	Informed
Communicate what, when, and how?	<p>Communication in this area will be a mixture of:</p> <ul style="list-style-type: none"> • Media-Based • Online or contact information of PMO and/or PIUs

	<ul style="list-style-type: none"> Marketing and Information dissemination materials <p>PMO will have responsibility for communicating to this stakeholder group. Communication will be scheduled and regular for this group, to ensure that the stakeholders are informed.</p>
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H. Key Procurement Conclusions

Communication is an essential part of the procurement process during the implementation of procurement plan. PMO will make a mechanism to communicate with all stakeholders, and prepare a procurement manual to coordinate all the stakeholders.

The communication of relevant parties in the procurement process mainly focuses on:

- Procurement schedule, coordinate the requirements of regulatory agencies and stakeholders, so as to make preparations as early as possible;
- The quality of technical documents of the bid invitation, the construction drawings, bill of quantities and technical specifications required by the ADB;
- The differences between ADB's bid evaluation criteria and domestic practices; and
- Handling of reports and complaints in the procurement process;
- Provide public awareness training to the youth generation in schools and communities. A green procurement guideline will be prepared to promote green procurement practices in Pingjiang County.

PMO plays a key role in the communication of entire procurement process and project implementation. Effective communications will also be based on the quality of communication materials, timing, and approach to conduct communication. Both regular and progress-based updates should be scheduled in the procurement plan and project administration manual (PAM).

Section 3: Market Analysis

A. Porter's Five Forces

This Section is developed based on (1) recent similar projects carried out in Pingjiang; (2) case studies and findings under ADB / World Bank financing. Please refer to Appendices 1-15 for relevant project experiences and market research data.

Market analysis has been conducted intensively, assessments and results are presented in following tables by Works, Goods and Consulting Services. Experiences drawn from the market analysis can be summarized as follows:

- Civil works under the project are conventional natural-based, domestic competitive bidding is sufficient to attract qualified bidders, based on the understanding of domestic market, and other similar project studies;
- Contract packaging should consider the actual location, logistic, land acquisition implementation plan, detailed design etc, to make the package sufficient enough to attract qualified bidders;
- From the contract management perspective, the contract value should be sufficient to generate interest from the market. Works with similar nature and in similar location should be packaged to reduce the No. of contracts, and to be more attractive to qualified bidders;

- For standard readily available goods with low quality risk to support efficiency in procurement especially for low value low risks package, contract can be packaged by each category of products by using Request for Quotations due to the transparent prices in the market (most of the prices can be checked online through e-platform);
- It is better to group the design, build and equipment provisions for customized IT system in one contract to attract higher qualified bidders and ensure the compatibility of the system; meanwhile, obligations for supplier to guarantee a certain operation period will allow the staff of system owner to get sufficient knowledge, which will ensure the sustainable system operation;
- Based on local experiences and common practices, for the eco-farming demonstration subproject, it subjects to labor intensive of such civil work activities in large areas (1,930 ha eco-farming demonstration bases) in a seasonal based manner. There are external contractors available in the market for carrying out those works. However, due to the significant amount of stakeholders, whom own the land use right of such demonstration bases (farmer households, enterprises, village committees and farmer cooperatives), it will be difficult for PMO and PIUs to coordinate for actual contract implementation if an external contractor is involved. Therefore, community participation approach is an appropriate modality to deliver the eco-farming output whilst engaging the local stakeholders.

Competitive rivalry	High	<p><u>ADB-financed civil works:</u></p> <p>Subproject 1 will mainly involve civil works, including river embankment and channels construction, riverbank reinforcement, and ecological restoration, and pumping stations reconstruction. Civil works with similar nature within the same town or section should be packaged one contract to facilitate the detail designs on time and attract more qualified contractors (Appendix 1).</p> <p>Civil works under Subproject 2 is for protection and management station, habitat protection and restoration. This should be packaged as one single contract to make sure the completeness of facilities delivered, and attract more qualified contractors (Appendix 1).</p> <p>Civil works under Subproject 3 is only for rehabilitation of emergency management center, with small value (\$130,000), less complex. It will likely be more attractive to local bidders (Appendix 2).</p> <p>Civil works under Rural Toilet Reconstruction will involve 59,732 rural households in 464 villages of 24 towns and townships. Works within the same town or townships should be packaged one contract to attract more qualified contractors (Appendix 1)</p> <p>Civil works and goods under Subproject 9 will involve (1) renovation of 36 green development centers, this should be packaged as one contract due to less complex work and likely be more attractive to local bidders (Appendix 2), there are enough local contractors available in the market; (2) design, build and</p>
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		<p>equipment provisions of the exhibition center, and incorporating concept design submission as part of technical proposal evaluation given the quality of design of this experienced based spaced is important to the public awareness objective and legacy of the project. The point scoring system will be applied (Appendix 3); (3) Resources for environmental education piloting schools. Financial support will be provided to 36 public schools (indicative) for promoting the environmental educations to students. The selection of piloting schools will be carried out jointly by PMO and PIU (Education Bureau), supported by the Green Promotion and Environmental Education Specialist. More details will be determined during the project implementation period.</p> <p>China has a large number of civil engineering contractors with comprehensive specialties and strong competitiveness². Based on the previous local experiences, there will be sufficient bidders (around 5-50 bidders) to be attracted, and no pre-qualification is needed.</p>
Bargaining power of buyers	High	Due to over supplied market in civil works, the bargaining power of buyer (PMO) is high. In the bidding stage, PMO has the initiative in contract estimation and technical standards. The Contract Management and Procurement Specialist, Green Procurement, other technical specialists and PIUs' staff will ensure the preparation of good quality specifications.
Bargaining power of suppliers	Low	Because of the fierce competition in the market ³ , suppliers in the bidding stage often do not have much bargaining power in bidding.
Risk of new entrants	Low	Although new entrants have the opportunity to join the market competition, contractors who lack regional and ADB-funded project experience are unlikely to meet the requirements of substantive bidding response. Therefore, the risk of new entrants to this project is limited.
Risk of substitutes	Low-Medium	This project mainly is a government investment and infrastructure project, generally using mature technology, in which the construction drawing design is generally undertaken by the first-class domestic design institutes, who are familiar with technical standards and substitutes are generally prudent and risk controllable.
Competitive rivalry	Low-medium	<p><u>ADB-financed civil works and goods for Eco-farming subproject (Subproject 8)</u></p> <p>The external contractors for carrying out such civil work activities are available in the local market. However, due to labour intensive</p>

² China Construction Industry Association (CCIA) has 71 group members, including 52 local construction industry associations in different provinces, autonomous regions, municipality directly under the central government and cities, and 19 associations in various special sectors including. Over 5,000 company members (large construction enterprises) directly under the CCIA.

³ Based on the interview with Pingjiang Bureau of Commerce, there are 47 civil works contractors registered in Pingjiang.

		<p>of such civil work activities in large areas (1,930 ha eco-farming demonstration bases) in a seasonal based manner, and difficult to coordinate for actual contract implementation if an external contractor is involved. Furthermore, due to the significant amount of stakeholders, whom own the land use right of such demonstration bases (i.e., farmer households, enterprises, village committees and farmer cooperatives), it will be difficult for PMO and PIUs to coordinate for actual contract implementation if an external contractor is involved, based on local experiences. Community participation approach is an appropriate modality to deliver the eco-farming output whilst engaging the local stakeholders. Experiences are also drawn from several international financed projects and domestic financed projects (Appendix 15).</p> <p><u>PCG-financed civil works and goods for Livestock Waste Management subproject (Subproject 7)</u></p> <p>PRC procurement procedures will be applied for this purely PCG financed subproject.</p> <p>Although there are available contractors in the local market to carry out such works (including installation of equipment), community participation is encouraged to engage these 94 livestock farms to achieve the social objectives of the project.</p>
Bargaining power of buyers	High	Price is more or less fixed by PCG based on previous similar project experiences.
Bargaining power of suppliers	Low	The objective of eco-farming subproject is to demonstrate the eco-farming practices in communities, therefore, the normal commercial price and competition are not primary concerns. Livestock waste management subproject is under PCG counterpart financing, and the purpose of this subproject is to reduce greenhouse gas emissions, and application of bio-fertilizer.
Risk of new entrants	Low	Due to specialized nature of the requirements, there is low competitive rivalry, as well as low likelihood of new entrants.
Risk of substitutes	Low	No substitutes available.
Competitive rivalry	High	<p><u>ADB-financed Goods:</u></p> <p>Goods under Subproject 2 include (1) wetland monitoring and data collection system (Appendix 4); (2) office supplies (Appendix 5); (3) patrol boats (Appendix 6); (4) patrol cars, field tools and interphones (Appendix 7), (5) forest fire protection equipment (Appendix 8); (6) solid waste collection and transportation station (Appendix 9); (7) wetland monitoring equipment (Appendix 10). These goods are standard readily</p>

		<p>available goods with low quality risk to support efficiency in procurement especially for low value low risks package.</p> <p>Under the Subproject 3, an Integrated Smart Disaster Risk Management System will be developed based on the needs and requirements of the project objectives. Group the design, build and equipment provisions for customized IT system in one contract can attract higher qualified bidders and ensure the compatibility of the system (Appendix 11).</p> <p>Goods under Subproject 9 include (1) different types of garbage sorting cabinets for schools (Appendix 12); (2) air energy water heaters for schools;⁴ (3) solar-energy road lamps for schools⁵; (4) printing services (Appendix 13); and (5) non-consulting services for lab waste chemical reagents from schools (Appendix 14).</p> <p>China has a large number of goods manufacturers and suppliers with comprehensive specialties and strong competitiveness.</p>
Bargaining power of buyers	High	Due to over supplied market in goods, the bargaining power of buyer (PMO) is high. In the bidding stage, PMO has the initiative in contract estimation and technical standards. The Contract Management and Procurement Specialist, Green Procurement, other technical specialists and PIUs' staff will ensure the preparation of good quality specifications.
Bargaining power of suppliers	Low	Because of the fierce competition in the market, suppliers in the bidding stage often do not have much bargaining power in bidding. Prices for standard readily available goods often have transparent in the market (prices can be easily accessed through e-commerce companies).
Risk of new entrants	Low-High	Standard readily available goods are less technical complicated, it is relatively easy to enter the market. However, the IT systems are often technically complicated, it is relatively more complicated to enter the market.
Risk of substitutes	Low	Due to not too much new technologies will be adopted.
Competitive rivalry	High	<u>KfW-financed civil works and goods:</u>

⁴ <https://search.jd.com/search?keyword=%E7%A9%BA%E6%B0%94%E8%83%BD%E7%83%AD%E6%B0%B4%E5%99%A8&suggest=1.def.0.V13--38s0&wq=%E7%A9%BA%E6%B0%94%E8%83%BD%E7%83%AD%E6%B0%B4%E5%99%A8&cid3=18577>.

About 48 brands are selling air energy water heaters through this e-commerce firm. Of which, 15 brands have 1st level energy efficiency products (accessed on 12 August 2020). This subproject is selected to pilot in green procurement, therefore 1st level energy efficiency products will be selected. More market research can be done later when the actual procurement will be conducted.

⁵ https://search.jd.com/search?keyword=%E5%A4%AA%E9%98%B3%E8%83%BD%E8%B7%AF%E7%81%AF&wq=%E5%A4%AA%E9%98%B3%E8%83%BD%E8%B7%AF%E7%81%AF&ev=5913_85048%5E&cid3=11950.

Hundreds of solar energy lamps are available through this e-commerce firm (accessed on 12 August 2020), likely more available in the entire market.

		<p>Civil works and equipment under Subprojects 4, 5 and 6 (except toilet reconstruction in rural Pingjiang) will be financed by KfW (Co-financier under the project), KfW procurement guideline will prevail⁶. Works and equipment for new water supply in Subproject 4 should be delivered as a whole to ensure the effective operation of such facilities, and likely be more attractive to high qualified contractors nationally and internationally. Works under Subproject 5 should be packaged based on local conditions, urban part can be grouped as one contract, to make sure the coordination of works, make sure the rainwater and sewer system are separated as an complete loop.</p> <p>KfW requires all its financed contract packages should conduct international competitive bidding (ICB) to attract high qualified contractors and suppliers.</p> <p>A few KfW financed water sector projects in recent years in the PRC include:</p> <ul style="list-style-type: none"> • Nanning Langdong Wastewater Treatment Plant Phase IV;⁷ • Reclaimed Water Project for Changchun Water Group Urban Drainage Co., Ltd;⁸ • Yantai Urban Sewage Treatment Plant Upgrading Project;⁹ and • Comprehensive Environmental Improvement Project in Kunming Economic and Technological Development Zone¹⁰
Bargaining power of buyers	High	Due to over supplied market in civil works, the bargaining power of buyer (PMO) is high. In the bidding stage, PMO has the initiative in contract estimation and technical standards, with the support from KfW-financed consultants.
Bargaining power of suppliers	Low	Because of the fierce competition in the market, suppliers in the bidding stage often do not have much bargaining power in bidding.
Risk of new entrants	Low	Although new entrants have the opportunity to join the market competition, contractors who lack regional and KfW-funded project experience are unlikely to meet the requirements of substantive bidding response. Therefore, the risk of new entrants to this project is limited.
Risk of substitutes	Low-Medium	Most technology using in these subprojects is mature. However, since the project is targeting green procurement, chances for suppliers who are manufacturing energy-saving and low carbon products will likely have a chance.

⁶ KfW Procurement Guidelines: https://www.kfw-entwicklungsbank.de/PDF/Download-Center/PDF-Dokumente-Richtlinien/Vergaberichtlinien-2019-Englisch-Internet_2.pdf.

⁷ <https://www.chinabidding.com/bidDetail/240363490-BidResult.html>

⁸ <http://chinabidding.mofcom.gov.cn/bidDetail/bidding/bulletin/201709/231411632.html>

⁹ <http://chinabidding.mofcom.gov.cn/bidDetail/bidding/bulletin/201802/231530581.html>

¹⁰ <https://www.chinabidding.com/bidDetail/218723110.html>

Competitive rivalry	High	<p>Consulting services under the project include: (1) project start-up; (2) project management and technical support; (3) green procurement and environmental education support; and (4) external land acquisition and resettlement monitoring and evaluation. All these consulting services will be advertised internationally.</p> <p>The Consultant has researched potential regional competitors capable of taking on similar projects based on contract awards published by ADB,¹¹ Chinese traditional design, research institutes and universities, as well as international consulting institutions, can easily participate in the competition of consulting services for ADB loan projects. Due to the large number of bidding institutions, the specialties are comprehensive and the competitiveness is fierce.</p>
Bargaining power of buyers	High	In the bidding stage of these projects, PMO will prepare terms of reference (TOR) and submit to ADB for clearance.
Bargaining power of suppliers	Low	Because of the fierce competition in the market, the consultant's bargaining capacity is low.
Risk of new entrants	Low	Although new entrants have the opportunity to compete in the market, for the lack of industry and/or ADB-funded project experience, such consulting institution is unlikely to win the bid, so the risk is low.
Risk of substitutes	Low	The consultancy services in the project are in conventional nature.

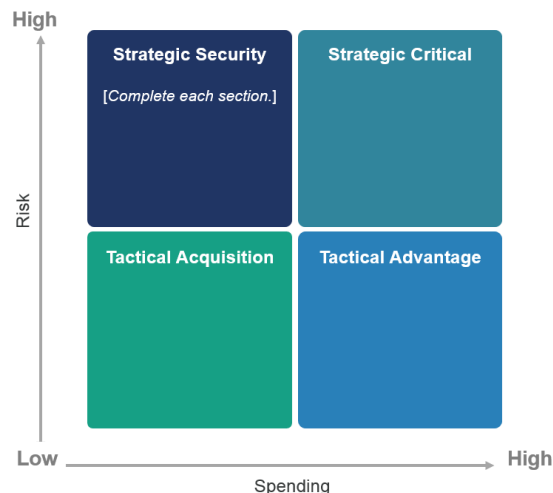
B. Key Procurement Conclusions

PRC's engineering construction market is a buyer's market and there is fierce competition among contractors. PMO, as the buyer, have the advantage of negotiating with the bidders. Special attention should be paid to specialized contracts for integrated smart disaster management system, wetland monitoring system, water treatment plant, etc.

The main risk for the PMO is the preparation of bidding documents, especially for the technical specifications. PMO often falls into a passive situation because of rushing work and neglecting the quality of design documents, resulting in huge design changes in subsequent contract implementation. Due to the wide distribution of this kind of pipeline and complexity of the terrain conditions, the design of the construction drawings may be inconsistent with the actual situation on the site. As a result, large-scale changes in construction are caused, which will slow down the progress and costs out of control. Therefore, PMO and PIUs should attach great importance to the quality of preparation of bidding documents, especially the technical section, to control risks during the implementation stage. Project start-up and implementation consultants will be recruited to support the PMO during the project implementation period, in addition to the procurement agency, to make sure ADB's procurement policies and regulations are fulfilled, and project objectives are fully incorporated in to designs, especially the green procurement practices.

¹¹ https://selfservice.adb.org/OA_HTML/OA.jsp?page=/adb/oracle/apps/xxcrs/loacsc/webui/LoacscHomePG&OAPB=ADBPOS_CMS_ISP_BRAND&_ti=59861948&oapc=24&oas=4FMEOIlee59Um1hbuewmuQ.

C. Supply Positioning



Strategic Security Disaster risk management system contract Wetland monitoring and data collection system contract	Strategic Critical Civil Works – River embankment construction and riverbank enforcement; water supply plant, rainstorm and sewer separation, rural wastewater collection and treatment, wetland rehabilitation, rural toilet renovation Civil Works – Exhibition center design and construction contract Consulting services
Tactical Acquisition Civil works – Office and green development centers renovation Goods - Road lamps, water heaters, garbage collection bins for schools Goods – Wetland related equipment	Tactical Advantage Civil works – Eco-farming Civil works – livestock waste management

D. Key Procurement Conclusions

IT systems (disaster risk management system, wetland monitoring and data collection system) are more about professional knowledge and equipment supply with technical complex, and the importance to achieve the entire project objectives, therefore, they are considered as strategy security.

River embankment construction and riverbank enforcement; water supply plant, rainstorm and sewer separation, rural wastewater collection and treatment, wetland rehabilitation, rural toilet renovation are the most strategic critical which shall be designed and constructed on village basis which local conditions vary very much. Therefore, bidding documents including design verification clause are highly preferred while the engineering designs shall also be conducted before tendering. This will reduce the risks for contract variations/over budgets to the PMO.

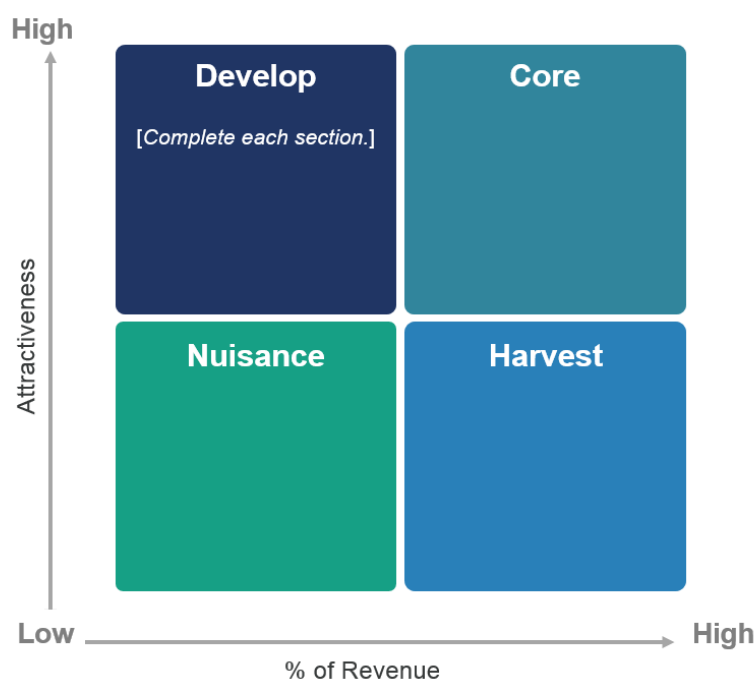
Consulting services related to project start-up, project management and capacity building, green procurement and environmental education, wetland monitoring are critical to the project

success, to support PMO for the entire project implementation, therefore, those are categorized as critical category.

Civil works under Eco-farming are largely distributed (1,930 ha) in Pingjiang (43 villages in 18 towns and townships for ecological rice, vegetable, orchards and tea garden; 51 villages in 8 towns and townships) and labour intensive based, therefore, these are categorized as tactical advantage.

Other contract packages have relatively low contract value or less complex in technical design and low procurement risk, categorized as tactical acquisition.

E. Supplier Preferencing



Develop Green procurement and environmental education support Wetland monitoring Project start-up consulting service Project management and capacity building consulting service	Core Disaster risk management system Wetland monitoring and data collection system Civil Works – River embankment construction and riverbank enforcement; water supply plant, rainstorm and sewer separation, rural wastewater collection and treatment, wetland rehabilitation, rural toilet renovation
Nuisance Goods - Road lamps, water heaters, garbage collection bins for schools Goods – Wetland related equipment	Harvest Civil Works – Exhibition center design and construction contract

F. Key Procurement Conclusions

Core contracts are the key for reaching project objectives for improving flood management infrastructure and rural livelihood services.

Harvest contracts should require high thresholds for bidders qualifications and experiences to attract competent potential bidders.

Capacity building contracts will be more attractive for NGO and high profile research institutes and universities, to increase contract attractiveness, the development contracts should clearly define tasks in the terms of reference (TOR). The harvest contract allows innovative designs and ideas, the use of point scoring system for design, build and equipment provisions of the exhibition center, and incorporating concept design submission as part of technical proposal evaluation given the quality of design of this experienced based spaced is important to the public awareness objective and legacy of the project.

Section 4: Risk Management

A. Project Procurement Risk Assessment Risk Register

Risk Description	Likelihood ("L") (1–5)	Impact ("I") 1–5)	Risk Score (L x I)	Proposed Mitigation	Risk Owner
Procurement delay due to COVID-19 outbreak which may cause close down or travel restrictions	1	5	5	<p>PMO has built up experiences during the project period by using virtual meetings, which is expected to be applied in the coming future.</p> <p>PRTC allows online bids opening during the pandemic period if shut down is encountered.</p> <p>Meanwhile, the requirements for a COVID-19 health and safety plan are included in the environmental management plan, and will be integrated into all contracts, to make sure all proper measures and budget are on place.</p>	PCG, PMO
Delay of procurement due to delay of land acquisition	2	3	6	A resettlement plan has been prepared. Public consultations have been conducted and will continuously be conducted. Resettlement budget is allocated in project budget.	PCG, PMO
Poor performance of procurement agency	3	3	9	Increase selection thresholds and enhance supervision of the procurement agency's performance.	PCG, PMO
Low quality of bidding documents	3	5	15	<p>A procurement specialist for start-up period should be recruited to assist the PMO to carry out the selection of project implementation consultants for the proposed projects.</p> <p>Advance contracting will be applied for the PICs recruitment.</p> <p>Start the procurement capacity building activities and training for PMO procurement staff as soon as possible.</p>	PCG, PMO
Mis-procurement due to non-compliance to regulations	1	5	5	The first package of each type of procurement category for each subproject, along with integrated disaster management system and the design, build and equipment supply of exhibition center will be subject to prior review of ADB, to ensure good procedures, bidding documents and bid evaluation to follow up by other contracts.	PCG, PMO, ADB

No ADB accepted e-procurement	5	1	5	The use of PRTC will be further reviewed before the first advertisement. Transparency during the manually procurement process should be closely monitored.	PCG, PMO
Inadequate Procurement Capacity	3	3	9	PMO recruits a procurement agency that is very familiar with ADB guidelines and procedure to support the entire procurement procedures. A Procurement Specialist for the start-up period should be hired to build procurement capacity of all PMO staff. A project management and capacity building consulting firm will be recruited to support the entire project implementation in all aspect. A green procurement specialist will be recruited to support the promotion of green procurement practices under the project. A PMO focal point will be appointed.	PCG, PMO
PMO does not have procurement training program	3	3	9	PMO will develop procurement manual; ADB and Consultants will provide trainings to all procurement staff in related to ADB procurement policies and regulations	PCG, PMO
Bidding documents for national OCB are under revision	4	2	8	ADB accepted standard bidding documents should be used for all civil works, Goods and consulting services.	PCG, PMO
Delay in release of counterpart funds	2	2	4	Counterpart funds will be included in the government annual budget line.	PCG, PMO
Community participation approach failed due to significant amount of stakeholders and agreements	3	5	15	1. PMO will manage the community participation implementation agreements (CPIA), with support from PIUs. The template will be agreed between PMO and ADB before the signing of the first CPIA; 2. PMO will assign more staff for implementing this subproject as needed, to ensure sufficient resources in management and coordination with stakeholders (over 100 stakeholders); 3. PIUs (Bureau of Forestry, Bureau of Agriculture and Rural Affairs and Bureau of Education) will provide technical guidance from the designing, CPIAs	PCG, PMO

				<p>implementation and final acceptance.</p> <p>4. Eco-farming and livestock waste management specialist will be recruited to provide technical support and capacity building to PIUs and local communities for strengthening the eco-farming practices.</p>	
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Section 5: Options Analysis

Strategic Options Description	Feasibility (1–10)	Suitability (1–10)	Acceptability (1–10)	Overall (3–30)
(1) Open competitive bidding (OCB) to be used for most of the ADB financed contract packages for works and goods.				
Option 1: OCB advertised internationally Obstacles: English bidding documents need to be prepared, more working load for PMO. Market research showed that domestic market is mature in providing the works and goods that is needed under the project.	5	5	5	15
Option 2: OCB advertised nationally (OCB-AN) These civil works will be based on detailed design and conformance specifications prepared by the PMO.	9	9	7	25
(2) Prequalification				
Option 1: Prequalification	8	5	5	18
Option 2: No prequalification Since there are no complex engineering contracts, prequalification of contractors or suppliers is not required.	9	9	7	25
(3) Contract packaging for IT systems				
Option 1: purchasing equipment separate from IT services	9	6	3	18
Option 2: purchasing as an integral contract. Considering the professional knowledge and equipment supply with technical complex are required, and the importance to achieve the entire project objectives, therefore, disaster risk management system should be integrated into one contract to attract reputable suppliers, integrated database, compatible design, and consistent culture of the system as well as competitive prices, same for wetland monitoring and data collection system. Option 2 is more appropriate.	9	9	9	27
(4) Procurement of standard readily available goods with low quality risks				

Strategic Options Description	Feasibility (1–10)	Suitability (1–10)	Acceptability (1–10)	Overall (3–30)
Option 1: OCB-AN According to the demands, uses and technical specification of various types of equipment, different equipment will be separately purchased according to the types, uses and installation site to attract reputable suppliers, as well as competitive prices. One option considered is to purchase equipment by using OCB-AN.	7	5	7	17
Option 2: RFQ By analyzing these equipment and market availability, the price of such goods and equipment is transparent. Therefore, option 2 - RFQ modality would be more appropriate rather than OCB-AN for standard readily available goods with low quality risk to support efficiency in procurement especially for low value low risks packages (multiple packages), based on conformance specifications prepared by the PMO. This will save a lot time and ease procures due to a transparent domestic market. Price is available at different e-commerce companies.	10	10	9	27
(5) Eco-farming subproject				
Option 1: using external contractors through OCB-AN was considered as they are available in the market.	8	5	5	18
Option 2: Community participation approach Community participation approach was considered due to labor intensive of such civil work activities in large areas (1,930 ha eco-farming demonstration bases) in a seasonal based manner, and difficult to coordinate for actual contract implementation and coordination with the stakeholders if an external contractor is involved. Therefore, Option 2 - Community participation approach is considered as an appropriate modality to deliver the eco-farming output whilst engaging the local stakeholders.	8	8	8	24
(6) Consulting services – project implementation consultants				
Option 1: QCBS (80:20). For the project implementation consultants, the short-listing for consultancy services will be carried as per ADB procedures. QCBS method will be adopted for selection of project implementation consultants. Also the performance	7	7	8	22

Strategic Options Description	Feasibility (1–10)	Suitability (1–10)	Acceptability (1–10)	Overall (3–30)
based specifications (TOR - Terms of Reference) should be adopted.				
Option 2: QCBS (90:10). The quality of the consulting services is very important to ensure the proper service delivery with qualified consultants. Therefore, quality is more important than cost. Option 2 is considered as more appropriate method.	10	10	8	28
(7) Consulting services – wetland monitoring agency, external resettlement and social monitoring and evaluation				
Option 1: QCBS method.	7	5	5	20
Option 2: CQS method will be adopted for selection of wetland monitoring firm and external land acquisition and resettlement monitoring services due to rather small value. Consultants' qualification is important than cost. Option 2 is considered as more appropriate method and easier for contract management.	10	10	8	28

Section 6: Procurement Strategy Summary

Procurement Packaging and Scheduling

1. Contract packaging for the main civil works, including the river embankment construction and riverbank enforcement; water supply plant, rainstorm and sewer separation, rural wastewater collection and treatment, wetland rehabilitation, rural toilet renovation, were done to reflect the most appropriate contract sizes, procurement method and bidding procedure, which are in line with strategic priorities of the PMO to meet the different demands, locations, and construction time schedule.

2. The market assessment confirms that these works are common in the PRC and the market is highly competitive with sufficient number of contractors with general contractor licenses. All contracts packages are subject to post review (sampling) except that the first package of each type of procurement category for each subproject, along with integrated disaster management system and the design, build and equipment supply of exhibition center will be subject to prior review of ADB, to ensure correct procurement procedures.

3. The packaging for goods, including all kinds goods - road lamps, water heaters, garbage collection bins for schools, wetland subproject related equipment were also done, which are in line with their associated civil works packages if any. Based on market assessment, these goods to be procured are also common in PRC and the market is competitive with sufficient number of suppliers. Therefore, OCB-AN will be applied for large value contract packages, and RFQ for standard readily available goods with low quality risk to support efficiency in procurement especially for low value low risks packages.

4. To ensure sustainability and to achieve the social objectives of the project, community participation/force account approach will be used. Civil works for Eco-Farming Demonstration Subproject and Environmental Education Subproject will be contracted out to the communities (farmers, village committees, farmer cooperatives, agricultural enterprises and/or forestry enterprises, and schools) based on CPIA between PMO, PIUs (Bureau of Forestry or Bureau of Agriculture and Rural Affairs) and communities, and in compliance with the requirements for community participation in procurement in accordance with ADB Procurement Regulations for ADB Borrowers: Goods, works, Nonconsulting and Consulting Services (2017, as amended from time to time). Specific procedures for contracting local communities under community participation, and a draft CPIA are included in the PAM, the detailed design of facilities to be constructed, clear duties and responsibilities of each party for the project activities, quality control, project acceptance standards and funds payment are included. The first CPIA will be submitted for prior review before its implementation.

5. Advanced procurement for the project management and capacity building consulting services (CS-TA-01) has been proposed under the project. Project start-up consultants will be recruited by using PCG counterpart funds, prior to loan effectiveness, to maximize the project readiness.

6. The indicative Procurement Plan has been prepared with the following assumptions:

- Consultancy service contracts will be prioritized to be procured as soon as possible;
- The packages distribution provided is tentative and may vary as per the requirement of carrying out the project;
- The Estimated Value indicated for each contract package in the Procurement plan are

- tentative and may vary;
- The Estimated Value indicated for each contract package in the Procurement plan are confidential and are for internal consumption only as values to be put in the tenders is not yet finalized and hence the same should not be uploaded on the website for any reference by the prospective bidders;
 - The Estimated Value indicated for each contract package will also be impacted with the variation in the Exchange Rate. For the subject estimation, an exchange rate of \$ 1.00 = CNY 6.9909 (as of 13 July 2020) is applied;
 - The Advertisement Date mentioned for each contract package is also tentative and may be preponed or postponed as per the requirement of carrying out the project; and
 - Non-ADB financed contracts will be listed in the procurement plan under a separate list from the ADB financed contracts.

Lists of Active Procurement Packages (Contracts)

7. The following table lists goods, works, nonconsulting, and consulting services contracts for which the procurement activity is either ongoing or expected to commence within the procurement plan's duration (18 months).

Goods, Works, and Nonconsulting Services							
Package No.	General Description	Estimated value (\$)	Procurement method	Review	Bidding procedure	Advertisement Date (quarter, year)	Comments
Output 1 - Subproject 1: Flood prevention and risk management in Miluo River							
MR-CW01	River channel harness and river embankment in Mijiang Bridge - Mishui Bridge (left bank)	23,337,961	OCB-AN	Prior	1S1E	Q2, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
MR-CW02	River channel harness and river embankment in Mijiang Bridge - Mishui Bridge (right bank)	20,539,253	OCB-AN	Post (sample)	1S1E	Q3, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
MR-CW03	River embankment in Yangzhishan (left bank of Xianjiang River)	10,557,485	OCB-AN	Post (sample)	1S1E	Q4, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
MR-CW04	River embankment in Huaqiao Community	12,747,072	OCB-AN	Post (sample)	1S1E	Q3, 2022	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
MR-CW05	River embankment in Shiqian Town	14,502,421	OCB-AN	Post (sample)	1S1E	Q4, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
Output 1 - Subproject 2: Huangjin River National Wetland Park restoration and protection							
HW-CW01	Protection management station, habitat protection and restoration project civil works	2,298,216	OCB-AN	Prior	1S1E	Q2, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
HW-GS01	Office supplies	67,399	RFQ	Post (sample)		Q3, 2021	Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: RFQ Goods

Goods, Works, and Nonconsulting Services							
Package No.	General Description	Estimated value (\$)	Procurement method	Review	Bidding procedure	Advertisement Date (quarter, year)	Comments
HW-GS02	Patrol boats	62,905	RFQ	Post (sample)		Q4, 2021	Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: RFQ Goods
HW-GS03	Patrol cars, field tools and interphones	112,331	RFQ	Post (sample)		Q4, 2021	Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: RFQ Goods
HW-GS04	Forest fire protection equipment	59,161	RFQ	Post (sample)		Q4, 2021	Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: RFQ Goods
HW-GS05	Solid waste collection station and transportation vehicle	74,887	RFQ	Post (sample)		Q4, 2021	Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: RFQ Goods
HW-GS06	Wetland monitoring equipment	113,829	RFQ	Post (sample)		Q4, 2021	Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: RFQ Goods
HW-GS07	Wetland monitoring and management system	1,373,014	OCB-AN	Prior	1S1E	Q4, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Goods
Output 1 - Subproject 3: Integrated smart disaster risk management system							
DM-CW01	Renovation of Emergency Management Center	109,550	RFQ	Post (sample)		Q4, 2021	Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: RFQ Works
DM-GS01	Integrated Smart Disaster Risk Management System	8,125,726	OCB-AN	Prior	1S1E	Q2, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: IT SBD
Output 2 – Subproject 6: Rural domestic wastewater treatment and sanitary conditions improvement							
RT-CW01	1,087 HHs toilet reconstruction in Chengguan Town	517,720	OCB-AN	Post (sample)	1S1E	Q3, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW02	2,682 HHs toilet reconstruction in Sanyang Township	1,277,392	OCB	Post (sample)	1S1E	Q4, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW03	4,146 HHs toilet reconstruction in Anding Town	1,974,670	OCB	Prior	1S1E	Q2, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW04	1,528 HHs toilet reconstruction in Fushoushan Town	727,761	OCB	Post (sample)	1S1E	Q1, 2022	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW05	3,595 HHs toilet reconstruction in Sanshi Town	1,712,238	OCB	Post (sample)	1S1E	Q2, 2022	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works

Goods, Works, and Nonconsulting Services							
Package No.	General Description	Estimated value (\$)	Procurement method	Review	Bidding procedure	Advertisement Date (quarter, year)	Comments
RT-CW06	2,654 HHs toilet reconstruction in Jiayi Town	1,264,056	OCB	Post (sample)	1S1E	Q3, 2022	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
Output 3 – Subproject 8: Promotion of eco-farming technology and practices							
EF-CW01	Eco-farming for rice, vegetable and orchards production bases 187 ha	1,125,167	CPP	Prior Review for the 1st CPIA		Q2, 2021- Q2 2024	Number of contracts: 6* Prequalification of bidders: No Advance contracting: No Bidding document: CPIA
EF-CW02	Eco-farming for tea camellia production piloting 800 ha	8,656,508	CPP	Prior Review for the 1st CPIA		Q2, 2021- Q2 2024	Number of contracts: 70* Prequalification of bidders: No Advance contracting: No Bidding document: CPIA
EF-CW03	Eco-farming for tea production piloting 940 ha	9,511,274	CPP	Prior Review for the 1st CPIA		Q2, 2021- Q2 2024	Number of contracts: 30* Prequalification of bidders: No Advance contracting: No Bidding document: CPIA
Output 4 – Subproject 9: Green procurement practices and environmental education							
EE-GS01	Textbook printing	438,091	OCB-AN	Post (sample)	1S1E	Q2, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Goods
EE-GS02	Book storage cabinets, three color garbage sorting bins and smart garbage bins	413,378	OCB-AN	Prior	1S1E	Q2, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Goods
EE-CW01	Renovation of 36 green development centers	1,330,178	OCB-AN	Post (sample)	1S1E	Q2, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
EE-GS03	Air energy water heaters	328,004	OCB-AN	Post (sample)	1S1E	Q2, 2022	Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: NA
EE-GS04	Solar street lamps	313,928	OCB-AN	Post (sample)	1S1E	Q2, 2022	Number of contracts: 1 Prequalification of bidders: No Advance contracting: No
EE-NCS01	Disposal of waste chemical reagents	52,122	RFQ	Post (sample)		Q2, 2021	Non-consulting service Number of contracts: 1 Prequalification of bidders: No Advance contracting: No
EE-CW03	Design, build and equipment provisions of environmental protection Exhibition Center	629,053	OCB-AN	Prior	1S2E (point scoring system)	Q2, 2022	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works

* The No. of contracts are based on the first round of consultation that PMO and PIUs carried out due December 2019. The total No. of contracts should be confirmed before the first CPIA award.

Consulting Services							
Package No.	General Description	Estimated value (\$)	Selection method	Review	Type of Proposal	Advertisement Date (quarter, year)	Comments
CS-TA-01	Technical support, project management and capacity building (150 person-months)	1,125,000	QCBS	Prior	FTP	Q4, 2020	Advance contracting, quality-cost ratio of 90:10,

							time-based contract
CS-TA-02	External resettlement and social monitoring and evaluation	180,000	CQS	Prior	STP	Q2, 2021	26 person months, time-based contract
HW-CS01	3-year wetland monitoring program	224,662	CQS	Prior	STP	Q2, 2021	Lump-sum contract

Lists of Inactive Procurement Packages (Contracts) Required Under the Project

8. The following table lists goods, works, nonconsulting, and consulting services contracts for which the procurement activity is either ongoing or expected to commence beyond the current procurement plan's duration.

Goods, Works, and Nonconsulting Services							
Package No.	General Description	Estimated value (\$)	Procurement method	Review	Bidding procedure	Advertisement Date (quarter, year)	Comments
Output 1 - Subproject 1: Flood prevention and risk management in Miluo River							
MR-CW06	River embankment in Chengxi and Chengping sections	3,814,208	OCB	Post (sample)	1S1E	Q1, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
MR-CW07	River embankment in Chengteng and Sima sections	5,761,926	OCB	Post (sample)	1S1E	Q1, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
Output 2 – Subproject 6: Rural domestic wastewater treatment and sanitary conditions improvement							
RT-CW09	1,843 HHs toilet reconstruction in Mujin Township	877,790	OCB	Post (sample)	1S1E	Q2, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW010	2,272 HHs toilet reconstruction in Longmen Town	1,082,115	OCB	Post (sample)	1S1E	Q3, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW11	1,407 HHs toilet reconstruction in Shiniuzhen Town	670,130	OCB	Post (sample)	1S1E	Q4, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW12	3,638 HHs toilet reconstruction in Nanjiang Town	1,732,718	OCB	Post (sample)	1S1E	Q1, 2024	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW013	1,490 HHs toilet reconstruction in Shangtashi Town	709,662	OCB	Post (sample)	1S1E	Q2, 2024	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW14	1,240 HHs toilet reconstruction in Banjiang Township	590,591	OCB	Post (sample)	1S1E	Q3, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW015	2,315 HHs toilet reconstruction in Sandun Township	1,102,596	OCB	Post (sample)	1S1E	Q4, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works

Goods, Works, and Nonconsulting Services							
Package No.	General Description	Estimated value (\$)	Procurement method	Review	Bidding procedure	Advertisement Date (quarter, year)	Comments
RT-CW16	2,082 HHs toilet reconstruction in Tongshi Town	991,622	OCB	Post (sample)	1S1E	Q1, 2024	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW17	3,798 HHs toilet reconstruction in Meixian Town	1,808,924	OCB	Post (sample)	1S1E	Q3, 2024	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW18	1,539 HHs toilet reconstruction in Dazhou Township	733,000	OCB	Post (sample)	1S1E	Q4, 2024	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW19	1,756 HHs toilet reconstruction in Yuping Town	836,353	OCB	Post (sample)	1S1E	Q3, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW20	1,809 HHs toilet reconstruction in Cenchuan Town	861,596	OCB	Post (sample)	1S1E	Q4, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW22	2,929 HHs toilet reconstruction in Wukou Town	1,395,033	OCB	Post (sample)	1S1E	Q2, 2024	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
RT-CW24	1,090 HHs toilet reconstruction in Xiangjia Town	519,149	OCB	Post (sample)	1S1E	Q4, 2024	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works
Output 4 – Subproject 9: Green procurement practices and environmental education							
EE-CW02	Support for environmental education piloting in 36 schools	269,594	CPP/FA*	Prior Review for the 1st CPIA/FAA		Q2, 2025	Number of contracts: 36 Prequalification of bidders: No Advance contracting: No Bidding document: CPIA/FAA

* The final procurement arrangement will be confirmed during the project implementation when the scope of these activities and selection criteria are finalized.

Non-ADB Financing

9. The following table list works, goods, and consulting services contracts over the life of the project, financed by non-ADB sources.

Goods, Works, and Nonconsulting Services				
General Description	Estimated Value (cumulative, \$)	Estimated No. of Contracts	Procurement Method	Comments
Output 2: Subproject 4: Integrated water supply in urban and rural Pingjiang				
New water supply plant capacity 2.5×10 ⁴ m ³ /d – equipment contract	2,580,616	1	ICB	KfW financed contract packages ³⁷ Advertising planned: Q2, 2021 – Q2, 2023 Prequalification of bidders: No Domestic preference applicable: No
New water supply plant capacity 2.5×10 ⁴ m ³ /d – civil work contract	6,244,103	1	OCB-NA	

³⁷ KfW Procurement Guidelines: https://www.kfw-entwicklungsbank.de/PDF/Download-Center/PDF-Dokumente-Richtlinien/Vergaberichtlinien-2019-Englisch-Internet_2.pdf.

Goods, Works, and Nonconsulting Services				
General Description	Estimated Value (cumulative, \$)	Estimated No. of Contracts	Procurement Method	Comments
Drinking water supply and distribution pipelines 58.8 km	8,824,754	1	ICB	Advance contracting: No Bidding document: Following ADB standard bidding document templates for Works and/or Goods E-procurement: No KfW Prior review
Total pipeline to HHs 1,063.68 km	13,162,965	1	ICB	
Output 2: Subproject 5: Separating rainwater from sewers in urban and rural Pingjiang				
Separating rainwater from sewers in 12 urban areas	12,415,804	1	ICB	KfW financed contract packages Advertising planned: Q2, 2021 – Q2, 2023 Advertising: international Prequalification of bidders: No Domestic preference applicable: No Advance contracting: No Bidding document: Following ADB standard bidding document templates for Works E-procurement: No KfW Prior review
Separating rainwater from sewers in 22 towns	9,766,652	1	ICB	
Output 2: Subproject 6: Rural domestic wastewater treatment and sanitary conditions improvement				
Wastewater collection and treatment facilities for 136 schools	14,292,329	1	ICB	KfW financed contract packages Advertising planned: Q2, 2021 – Q2, 2023 Advertising: international Prequalification of bidders: No Domestic preference applicable: No Advance contracting: No Bidding document: Following ADB standard bidding document templates for Works E-procurement: No KfW Prior review
Wastewater collection and treatment facilities for 26 hospitals	2,738,287	1	ICB	
Rural centralized domestic wastewater collection and treatment facilities for 21 communities	9,399,801	1	ICB	
Output 4: Subproject 10: Institutional, technical and management capacity improved				
Technical support and capacity building	945,760	1	ICB	KfW financed contract package Advertising planned: Q2, 2021 Advertising: international Prequalification of bidders: No Domestic preference applicable: No Advance contracting: No KfW Prior review
Output 1 - Subproject 1: Flood prevention and risk management in Miluo River				
River embankment in Yang'an Bridge	5,339,373	1	PRC domestic procedure	Financed by counterpart funds of PCG Advertising planned: Q2, 2021 – Q2 2025 Advertising: National Prequalification of bidders: No Domestic preference applicable: No Bidding document: following PRC domestic practices E-procurement: Yes
Jinshazhou ecological rehabilitation	3,261,175	1	PRC domestic procedure	
New built one pumping station and reconstruction 2 pumping stations	3,017,985	1	PRC domestic procedure	
River embankment in Longmen Town, Mujin Township, Changshou Town, Jiayi Town and Sanshi Town	3,378,417	1	PRC domestic procedure	
River embankment in Anding Town and Wengjiang Town	2,600,617	1	PRC domestic procedure	
River embankment in Wukou Town, Wushi Town and Yuanyi Center	2,835,164	1	PRC domestic procedure	
Protection of aquatic germplasm resources in Miluo River	74,887	1	PRC domestic procedure	
Output 2: Subproject 4: Integrated water supply in urban and rural Pingjiang				
Drinking water supply pipeline 2,500 m	1,975,627	1	PRC domestic procedure	Financed by counterpart funds of PCG Advertising planned: Q2 2021 Advertising: National Prequalification of bidders: No Domestic preference applicable: No
Water distribution station capacity 10,000 m³/d	1,094,218	1	PRC domestic procedure	
Drinking water supply and distribution pipelines 38,977 m	3,021,956	1	PRC domestic procedure	

Goods, Works, and Nonconsulting Services				
General Description	Estimated Value (cumulative, \$)	Estimated No. of Contracts	Procurement Method	Comments
Drinking water supply and distribution pipelines 19,791 m	531,879	1	PRC domestic procedure	Bidding document: following PRC domestic practices E-procurement: Yes
The northern area water supply pipeline to HHs 340.87 km	1,684,614	1	PRC domestic procedure	
The eastern area water supply pipeline to HHs 722.82 km	3,956,656	1	PRC domestic procedure	
Output 2 – Subproject 6: Rural domestic wastewater treatment and sanitary conditions improvement				
4,587 HHs toilet reconstruction in Changshou Town	2,184,711	1	PRC domestic procedure	Financed by counterpart funds of PCG Advertising planned: Q4 2022-Q3 2024 Advertising: National Prequalification of bidders: No Domestic preference applicable: No Bidding document: following PRC domestic practices E-procurement: Yes
2,536 HHs toilet reconstruction in Longmen Town	1,207,854	1	PRC domestic procedure	
3,597 HHs toilet reconstruction in Wengjiang Town	1,713,191	1	PRC domestic procedure	
4,112 HHs toilet reconstruction in Wushi Town	1,958,476	1	PRC domestic procedure	
Output 3 - Subproject 7: Sustainable livestock waste management				
Livestock wastewater treatment in 94 farms	4,875,941	Multiple contracts	PRC domestic procedure	Financed by counterpart funds of PCG Advertising planned: Q2, 2021 – Q2 2025 Bidding document: following PRC domestic practices E-procurement: Yes
Output 4 – Subproject 10: Institutional, technical and management capacity improved				
Agricultural products quality monitoring equipment	242,587	1	PRC domestic procedure	
Office supplies and IT equipment for PMO	74,833	Multiple	PRC domestic procedure	

Consulting Services				
General Description	Estimated Value (cumulative)	Estimated No. of Contracts	Procurement Method	Comments
Output 4 – Subproject 9: Green procurement practices and environmental education				
Environmental education textbook compilation and review	29,955	1	PRC domestic procedure	
Output 4 – Subproject 10: Institutional, technical and management capacity improved				
Project start-up Environment Specialist	15,000	1	PRC domestic procedure	TOR to be approved by ADB before the advertisement Advertising planned: Q4, 2020 -Q1 2021 Advertising: National PCG counterpart funds financed
Project start-up Financial Management Specialist	15,000	1	PRC domestic procedure	
Project start-up Procurement Specialist	15,000	1	PRC domestic procedure	
Project start-up Social and Resettlement Specialist	22,500	1	PRC domestic procedure	
Project start-up Fish Monitoring Specialist	7,500	1	PRC domestic procedure	
Green Procurement Specialist	60,000	1	PRC domestic procedure	
Environmental Education Specialist	45,000	1	PRC domestic procedure	
Green Development Policy Specialist	22,500	1	PRC domestic procedure	
Construction supervision services	3,838,579	Multiple	PRC domestic procedure	

Procurement Method

10. OCB is identified as the most suitable method for the project to ensure best value for money for all contracts except for a few smaller packages if they are standard readily available goods with low quality risk to support efficiency in procurement especially for low value low risks

packages. According to the market risk analysis, the civil works and goods procurement of this project are fully supplied in the domestic market of China, so domestic advertising is adopted. Request for quotation (RFQ) is proposed for the procurement of small-size civil works with contract value less than CNY4,000,000, and goods supply with contract value less than CNY2,000,000.³⁸

11. The procurement of consulting services are in accordance with ADB's Procurement Policy 2017, the Procurement Regulations for ADB Borrowers 2017. QCBS, CQS and ICS will be used.

Prequalification

12. Prequalification will not be used for any of the packages of works and goods for this project. However, consultant shortlist procedure will be used for QCBS contract of consulting service.

Bidding Procedures

13. The bidding procedures for works and goods will follow a one-stage, one envelope process (1S1E), except the contract for Exhibition Center design, build and equipment provisions, of which, one-stage, two envelope process (1S2E) will be followed. Chances for conducting advertisement through Yueyang Municipal PRTC will be reviewed before the first advertisement. All procurement opportunities shall be advertised through nationally accessible platform such as China Tendering & Bidding Public Service Platform at <http://bulletin.cebpubservice.com/>.

Specifications

14. Conformance technical specifications shall be prepared for works and goods. Items listed in the Bill of Quantities shall be cross referenced with the relevant clauses of the technical specifications. Technical specifications: clear standards for civil engineering, and specific inspection methods for the consistency of standards. For goods contracts, technical specifications should clearly describe their features. Technical specifications should also include requirements for environment, safety and technical management information.

15. Equipment performance requirements can be determined by the results of consulting activities. Requirements for installation, operation manual, maintenance and training needs should also be taken into consideration.

Review Requirements

16. To avoid procurement risks, the first package of each type of procurement category for each subproject, along with integrated disaster management system and the design, build and equipment supply of exhibition center will be subject to prior review of ADB, and all consulting service contracts should be applicable with prior review.

17. Other civil works and goods supply contracts will be subject to post review (sampling) and post procurement audits. Post review (sampling) will be conducted at annual project review missions by ADB or its consultants, or on an ad hoc basis when necessary.

³⁸ The National Development and Reform Commission (NDRC) Order 16-2018 (came into effectiveness on 1 June 2018), Regulation of Must-Be-Tendering for Engineering Project, the estimated single contract value over CNY 4 million (about \$0.57 million) for works, over CNY 2 million (about \$0.29 million) for goods and CNY 1 million (about \$0.14 million) for services that should be conducted by open competitive bidding.

Standstill Period

18. In China's domestic bidding practice, as the provision of TBL, the publicity period should not less than three (3) days. And according to the Regulation on Implementation of the TBL, the bidder could make a complaint to the relevant supervision department within 10 days from the date it knows or should have known about the bidding activities do not conform to the provisions of laws and relevant regulations.

19. The PRC specific SBD (updated 2020) allows for standstill period for EA to choose as an option (e.g. national provision, ADB recommended provision or none). Suitable provision shall be indicated in the Bid Data Sheet if such a provision is applicable.

Standard Bidding Documents and Contract Forms

20. Since this project is a loan project of ADB, according to the common practice in China, all goods and works contracts for payment of ADB loans (see the procurement plan) are prepared in accordance with the PRC specific SBD (updated 2020) stipulated by ADB and China Ministry of Finance (MOF). In terms of decentralized rural sewage treatment facilities and domestic garbage disposal facilities of this project, which are not construct-only contracts, which have been included some auxiliary equipment and materials, such as pumps, valves, pipes and communication cables etc. are combined with the civil engineering to generate an integrated contract for bidding. In this case, the item listed in the BOQ shall be taken as the unit of measurement and payment, and equipment supplied by the bidder shall be evaluated according to the requirements of the technical specifications. In addition, the bidding documents for consulting contracts are compiled according to ADB standard templates. All above-mentioned standard bidding document or templates can be used are as follows:

- PRC specific SBD for Works (updated in 2020);
- PRC specific SBD for Goods (updated in 2020);
- ADB Template for IT services SBD;
- Community Participation Implementation Agreement³⁹ (to be developed by PMO and approved by ADB PPFD/OGC);
- ADB Template for RFQ Works;
- ADB Template for RFQ Goods;
- RFP Template for Time-based Consulting Services (QCBS 90:10 weights); and
- RFP Template for Lump Sum Consulting Services (CQS).

Pricing and Costing Methods

21. Mainly unit price/measurement costing are expected for BOQ based contracts. Generally, the unit price contract based on bill of quantities is adopted in civil engineering. If the bill includes equipment, all the items in the bill of equipment are merged into the bill of quantities of civil engineering and paid by measurement. For some sub-items that are supplied as complete sets, such as coagulant dosing equipment, automatic control equipment, etc., when overall payment is required, they are also often paid by the unit of measurement.

³⁹ The draft CPIA is attached in PAM. It will be further reviewed and revised once the detailed designs are available for more details. The first CPIA should be prior reviewed by ADB before the actual signing.

22. Regarding the various types of equipment in the bill of quantities, when the contract is executed, after the equipment is supplied and installed in place, the supervisory engineer shall measure and pay according to the contractor's quotation.

23. Time-based contract is generally applied for consulting services.

Key Performance Indicators

24. As part of the contract management strategy, the PMO will identify key performance indicators (KPIs) for each contract to monitor the contractor's performance during contract implementation. Some of the KPIs for the projects rather simple civil works contracts are suggested below:

Submission of work program within 28 days from issue of notice to commence:	5%
Mobilize required equipment and personnel:	10%
Takeover of site and prepare building layout:	5%
Submit contract management plan:	2%
Establish facilities like testing laboratory, safety and health measures:	2%
Comply with legal regulations including necessary insurance policies:	2%
Green procurement practices application	2%
Construction achievement in phases:	72%

25. Where contract packages are identified to have possible significant sustainability impacts, sustainability related KPIs may be introduced.

Evaluation Method

26. The bid evaluation method will be the lowest evaluated price with responsive bids for most ADB financed OCB and RFQ goods and works packages as it well reflects the fairness and meeting the minimum criteria for the competence. For exhibition center design and build contract, a point scoring system will be adopted to introduce conceptual design quality evaluation criteria.

27. For ADB financed consulting services for project management and capacity building, weight of 90:10 for technical and financial proposals is adopted for QCBS method for consultancy services to reflect the importance of the technical competence, qualifications and experiences in delivering the services.

28. Civil works and goods bids evaluation are to organize professional evaluation teams to assess all bids fairly and professionally, to choose and confirm the bidding documents that fulfill the requirements, and to complete all the works required by the contract in a timely and high quality manner, more importantly, the green procurement requirements should be considered during the bids evaluation.

Contract Management Approach

29. A detailed contract management plan (CMP) for civil work contracts shall be in place prior implementation, which may include graphs or flowcharts (with the time frame) that will illustrate these procedures in a visual form (certain standard forms of contract provide such graphs). The project EMP includes a COVID-19 health and safety plan to address COVID-19 health risks, this should also be included in the CMP. The plan will be prepared in line with government regulations and guidelines on COVID-19 prevention and control, and in consultation with public health agencies in the area. The plan will include (i) measures to record the locations that workers have

visited/lived immediately before and during project work; (ii) schedules for disinfecting/cleaning offices, yards, stores and labor camps; (iii) measures to implement temperature checks and other health checks on-site; (iii) physical distancing measures, particularly in worker camps; (iv) requirements for mandatory use of personal protective equipment such as facemasks, and provision of handwashing stations, hand sanitizers, and other appropriate protective measures; (v) how workers and residents living near project sites will be provided with information to protect themselves from COVID-19; (vi) procedures to be adopted in the event a worker is suspected of having contracted COVID-19; and (vii) other COVID-19 prevention and control measures appropriate for the local context.

Value for Money

30. Strategic procurement planning was carried out to identify procurement risks, develop mitigating measures, review procurement options and agree on fit-for-purpose procurement arrangements. Value for Money (VfM) will be achieved through assigning dedicated in-house PMO staff as green procurement focal, applying community participation approach for eco-farming, assigning early start-up consulting as non-banked financed packages to ensure mobilization efficiency, the use of RFQ modalities for standard readily available goods with low quality risk, the use of point scoring system for design, build and equipment supply of the exhibition center packages as well as clean delineation of ADB and KfW funded packages to avoid dual agencies procurement review on the same package.

31. Contract packaging for the main component with civil works, including the river embankment construction and riverbank enforcement; water supply plant, rainstorm and sewer separation, rural wastewater collection and treatment, wetland rehabilitation, rural toilet renovation, eco-farming demonstration etc. was done to reflect the most appropriate contract sizes, procurement method and bidding procedure (29 packages with a total cost estimate of USD 116.3 million, OCB-Nationally advertised, 1S1E; 1 package with a total cost estimate of USD 0.63 million, OCB-Nationally advertised, 1S2E; 142 packages with a total cost estimate of USD 19.56 million, community participation in procurement; and one package with a total cost estimate of USD 0.11 million, RFQ), which are in line with strategic priorities of the PCG and PMO to meet the different demands, locations, and construction time schedule.

32. The market assessment confirms that these works are common in the PRC and the market is highly competitive with sufficient number of contractors with general contractor licenses. All contracts packages are subject to prior review except that post review will be applied for some low value packages to increase procurement efficiency.

33. To ensure sustainability and to achieve the social objectives of the project, community participation approach will be used. Civil works for Eco-Farming Demonstration Subproject and Environmental Education Subproject will be contracted out to the communities (farmers, village committees, farmer cooperatives, agricultural enterprises and/or forestry enterprises, and schools) based on CPIA between PMO, PIUs (Bureau of Forestry or Bureau of Agriculture and Rural Affairs) and communities, and in compliance with the requirements for community participation in procurement in accordance with ADB Procurement Regulations for ADB Borrowers: Goods, works, Nonconsulting and Consulting Services (2017, as amended from time to time). Specific procedures for contracting local communities under community participation, the detailed design of facilities to be constructed, clear duties and responsibilities of each party for the project activities, quality control, project acceptance standards and funds payment should be included in the CPIA. The first CPIA will be submitted for prior review before its implementation.

34. The packaging for goods, including IT systems, and office supplies and furniture, wetland related equipment, water heaters and road lamps, garbage sorting bins etc, were also done (6 packages with a total cost estimate of USD 10.99 million, OCB-Nationally advertised, 1S1E; 6 packages with a total cost estimate of USD 0.49 million, RFQ). Based on market assessment these goods to be procured are also common in PRC and the market is competitive with sufficient number of suppliers.

35. As a good practice to be promoted in the project, green procurement will be taken into consideration during the entire procurement process, i.e., the preparation of bidding documents, bid evaluation and contract awards. This can potentially be used to reduce environmental pollution, improve environmental product and service range, and promote more targeted market launches of innovative eco-friendly products. During the project implementation, a green procurement guideline will be prepared to guide such practices in Eco-farming Demonstration Subproject (Subproject 8) and Environmental Education Subproject (Subproject 9), and will be further submitted to PCG for its consideration for the entire Pingjiang County.

Appendices (accessible through this [link](#))

Appendix 1: Similar Project Experiences

Appendix 2: Potential Bidders for Indoor Renovation

Appendix 3: Potential Bidders for Exhibition Center Design, Build and Equipment

Appendix 4: Potential Bidders for Wetland Monitoring and Data Collection System

Appendix 5: Potential Bidders for Office Supplies and Furniture

Appendix 6: Potential Bidders for Patrol Boats

Appendix 7: Potential Bidders for Patrol Vehicles and Field Tools

Appendix 8: Potential Bidders for Fire Protection Equipment

Appendix 9: Potential Bidders for Solid Waste Collection and Transportation Vehicle

Appendix 10: Potential Bidders for Wetland Monitoring Equipment

Appendix 11: Potential Bidders for Smart Disaster Management System

Appendix 12: Potential Bidders for Storage Cabinets and Garbage Sorting Bins

Appendix 13: Potential Bidders for Printing Services

Appendix 14: Potential Bidders for Lab Waste Chemical Reagents Disposal

Appendix 15: Experiences for Community Participation Approach

Appendix 5: Draft Community Participation Implementation Plan

1. Project objectives

The main agricultural crops in the project area are mainly rice, vegetables, tea, tea camellia, orchards (i.e., grapes, and pears). However, agricultural development is still based on conventional practices, such as, low yield and productivity, insufficient capital investment, and insufficient application of advanced technologies. There are also some other issues in the project area for agricultural development, i.e., lack of sufficient agricultural infrastructure, low resource utilization rate, low industrialization level, and urgent optimization of the planting industry structure. Therefore, the development of ecological agriculture in the project area is relatively lagging, and there are problems such as low product yield, low quality, high levels of pesticides and fertilizer utilization, small planting scale, and low demonstration benefits.

To solve above mentioned constraints, Pingjiang County Government applied loans from the Asian Development Bank (ADB) for the construction of eco-farming demonstration sites, and promoting the eco-farming practices in Pingjiang, by improving the basic conditions of agricultural production in the project area, water-saving irrigation, ecological interplantation, green pest prevention and control, and reduction of pesticides and fertilizers. These practices will contribute to improve water resource utilization efficiency and farmland water storage capacity, reduce the resilience of agricultural floods and droughts; improve water and soil conservation capacity in the project area, reduce pesticide and fertilizer application, reduce soil erosion and agricultural non-point source pollution; strengthen the ecological agricultural production, promote the transformation of agricultural production, increase agricultural efficiency and increase farmers' income, and help rural revitalization.

2. Project main activities

It is estimated that a total of 28,947.65 *mu* of various types of eco-farming demonstration bases will be built. The main content includes:¹

- [1]. Establish 1,800.00 *mu* ecological rice demonstration bases. The main activities include land consolidation, irrigation and drainage channels, ecological ditches, farming roads, organic fertilizer application, etc.;
- [2]. Establish 400.00 *mu* ecological vegetable demonstration bases. The main activities include soil improvement, water storage tanks, spray (drip) irrigation facilities, pest sticky boards, seedling greenhouse, organic fertilizer application, etc.;
- [3]. Establish 600.00 *mu* ecological orchard demonstration bases. The main activities include soil improvement, water storage tanks, spray (drip) irrigation facilities, solar insecticidal lamps, pest sticky boards, organic fertilizer application, etc.;
- [4]. Establish 14,130.40 *mu* ecological tea demonstration bases. The main activities include base land cleaning, land consolidation, plantation ditches, production roads, ecological drainage ditches, water storage tanks, solar insecticidal lamps, organic fertilizer application, tea seedling plantation and tending, etc.;
- [5]. Establish 12,017.25 *mu* ecological tea camellia demonstration bases. The main activities include land preparation, land cleaning, seedling plantation, seedling tending, farming roads, organic fertilizer application etc.

¹ Detailed project activities of each site will be decided and agreed among PMO, PIUs and PIEs.

3. Project location

The eco-farming subproject is distributed in 89 villages of 19 towns, the indicative project location is presented in Table 1.

Table 1: List of indicative project activities and location

No.	Project activities		Construction site		Construction scale (<i>mu</i>)	
			Town	Village	New built	Rehabilitation
1	Ecological rice	Double cropping rice	Wushi Town	Shichi Village		400.00
		Double cropping rice	Jiayi Town	Yanglinjie Village		400.00
		Rice and fish farming	Yuping Town	Shili Village		400.00
		Rice shrimp intercropping	Anding Town	Gaoping Village		600.00
Subtotal						1800.00
2	Ecological vegetables		Changshou Town	Tangkou Village		400.00
Subtotal						400.00
3	Ecological orchard (240 <i>mu</i> for grapes and 360 <i>mu</i> for pear)		Yuanyi Center	Yuanyi Village		600.00
Subtotal						600.00
4	Ecological tea		Anding Town	Zhongxian Village		247.70
				Baiping Village	466.30	
				Guantan Village	791.50	
				Fujia Village		143.00
				Fujia Village		300.00
				Yuetian Village		108.00
				Qiuhu Village	148.00	39.00
				Zhenghuang Village	200.00	
			Sanshi Town	Danjiang Village	100.00	100.00
				Baiyu Village		458.10
				Gaohe Village	56.00	
				Feitian Village		102.00
				Diping Village	60.00	
				Sanjiao Village	509.20	
				Totou Village	124.00	
			Sandun Township	Fair village	92.70	
				Qinfang Village	77.90	
			Meixian Town	Jiangyuan Village		118.70
				Au Shang Group	23.20	
				Zheliao Village	61.30	
			Tongshi Town	Dongyuan Village	263.40	
			Shangtashi Town	Longtou Village	950.00	400.00
			Nanjiang Town	Fenghuang Village	206.00	
				Baihe Village	203.40	422.50
			Wengjiang Town	Zhangyi Village	301.70	
			Jiayi Town	Yanglinjie Village	352.60	
				Yanglinjie Village	155.60	

No.	Project activities	Construction site		Construction scale (mu)		
		Town	Village	New built	Rehabilitation	
			Lutou Village	350.00		
			Gaoduan Village	1,864.00		
		Hongqiao Town	Mufuxin Village		190.60	
			Mufuxin Village	1,542.00		
			Daqingshi Village		435.50	
		Xiangjia Town	Jinlong Village	312.20		
			Golden Village	247.40		
		Fushoushan Town	Luxi Village	480.00		
			Baisi Village	250.00		
			Shangshan Village	300.00		
		Sanyang Township	Changchong Village	306.00		
			Jiashan Village	70.90		
			Dazhou Township	Dayuan Village	100.00	
				Yaozhou Village	100.00	
Subtotal				11,065.30	3065.10	
5	Ecological tea camellia	Anding Town	Daqiao Village	138.88		
			Zhima Village	78.66		
			Jiangdong Village	68.94		
			Zhenghuang Neighborhood Committee	170.78		
			Guantang Village	209.01		
			Xiaotian Village	31.61		
			Tian Mo Village	214.47		
			Yuetian Village	287.30		
			Anding Village	35.04		
			Gaoping Village	86.24		
			Nagata Village	289.24		
		Jiayi Town	Hengjiang Village	81.81		
			Union Village	275.23		
			Yangliu Village	193.39		
			Tanwan Village	286.90		
			Tanwan Village	179.80		
			Kayi Village	108.68		
			Zaolun Village	109.62		
			Zaolun Village	173.47		
			Lijiang Village	125.98		
			Xianzhong Neighborhood Committee	47.53		
		Meixian Town	Swan Village	125.89		
			Xiabai Village	81.56		
			Zheliao Village	108.33		
			Jiangyuan Village	304.28		
			Donggao Village	58.91		
			Gaoyi Village	38.41		
			Shiling Village	84.47		
			Sanli Village	33.29		
			Xiaoyuan Village	233.09		
		Sandun Township	Lushi Village	443.22		
			Xinxing Village	36.40		

No.	Project activities	Construction site		Construction scale (mu)	
		Town	Village	New built	Rehabilitation
			Huilong Village	682.21	
			Zoujia Village	1,887.36	
			Daishi Village	37.16	
			Zhonglong Village	114.52	
			Chetian Village	51.66	
		Sanshi Town	Hengcha Village	303.43	
			Huantian Village	179.17	
			Samsung Village	55.84	
			Baofeng Village	34.10	
			Lianhua Village	776.62	
			Xindongan Village	158.14	
			Sanjiao Village	73.46	
		Tongshi Town	Hewang Village	990.96	
			Yongxiang Village	33.32	
			Yangdun Village	139.83	
			Yanzhou Village	451.62	
			Bangshang Village	110.62	
			Dezi Village	112.52	
			Shidong Village	129.49	
		Mujin Township	Daxing Village	342.00	
		Wushi Town	Yanjia Village	438.21	
	Subtotal			11,842.65	0.00
	Tea camellia nursery	Tongshi Town	Bangshang Village		114.55
		Jiayi Town	Sizhou Village		60.05
		Subtotal			174.60
		Total Camellia			11,842.65
	Grand Total			22,907.95	6,039.70

4. Project organizations

- Project Management Unit: Pingjiang Project Management Office (PMO)
- Project implementation unit (PIU): Pingjiang County Bureau of Forestry (BOF), Pingjiang County Bureau of Agriculture and Rural Affairs (BARA)
- Project implementation entity (PIE): village committees, farmers, farmers cooperatives, agricultural enterprises, forestry enterprises and other qualified PIEs.

Table 2: Roles and responsibilities of all parties involved in the eco-farming subproject

Pingjiang Project Management Office	<ul style="list-style-type: none"> • Responsible for the overall implementation and coordination of this subproject ; • Disclose project information and receive application proposals; • Screen and select qualified PIEs; • Recruit design institutes to carry out the detailed designs; • Recruit construction supervision agencies to carry out contract management and quality assurances; • Draft the community participation implementation agreement (CPIA) , and submit it to ADB for approval if there are any significant changes; • Jointly with the BARA and/or the BOF to sign CPIAs with qualified PIEs; • Organize BARA and/or BOF to provide technical guidance for PIEs; • Organize technical trainings for farmers; • Organize project acceptances; • Review and approval payment applications and make payments; and
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	<ul style="list-style-type: none"> • Other necessary coordination.
Agriculture and Rural Affairs Bureau	<ul style="list-style-type: none"> • Assist the PMO to implement the relevant activities related to ecological rice, ecological orchards, ecological vegetables and ecological tea garden; • Assist the PMO to screen and select qualified PIEs; • Assist design institutes to carry out the detailed designs; • Together with the PMO to sign CPIAs with qualified PIEs; • Provide technical guidance for PIEs during the project implementation; • Provide technical trainings to farmers; • Cooperate with the PMO to carry out project acceptance; and • Other necessary technical support.
Forestry Bureau	<ul style="list-style-type: none"> • Assist the PMO to implement the relevant activities related to ecological tea camellia garden establishment and rehabilitation; • Assist the PMO to screen and select qualified PIEs; • Assist design institutes to carry out the detailed designs; • Together with the PMO to sign CPIAs with qualified PIEs; • Provide technical guidance for PIEs during the project implementation; • Provide technical trainings to farmers; • Cooperate with the PMO to carry out project acceptance; and • Other necessary technical support.
Qualified project implementation entities (village committees, farmers, farmers cooperatives, agricultural enterprises, forestry enterprises)	<ul style="list-style-type: none"> • Sign the CPIA with the PMO, BARA or BOF; • Carry out project activities based on the detailed designs in a timely manner; • Maintain timely communication with the PMO, BARA or BOF to obtain sufficient technical support; • Responsible for project operation and maintenance; • Submit payment request based on the progress (milestone) as indicated in the CPIA; • Cooperate with the project acceptance; if any remedy measures required, the rectification should be in place on time; • Actively participate in technical training and experience exchange, and promote the successful experience of the project; • Ensure that the use of project funds complies with the requirements as indicated in the CPIA; and • Ensure the project activities are carried out in compliance with the ADB's Safeguard Policy Statement (2009).

5. Project implementation measures

5.1. Selection criteria for qualified PIEs

The selection criteria for qualified PIEs include:

- (1) Willingness to participate the project, willing to take responsibilities and obligations for the project, and willingness to prepare and implement the activities according to project requirements;
- (2) PIEs can be village committees, farmers, farmers cooperatives, agricultural enterprises, forestry enterprises and other eligible entities with soundness financial capacity;
- (3) Possess sufficient land resources, with clear land utilization rights, convenient transportation, and relatively concentrated areas for project activities, which is conducive to scale operation and management of eco-farming;
- (4) The potential location meets the local government's planning and requirements;
- (5) Supported by the local village committee and/or town government, which can provide a good collaborative environment;
- (6) Should be able to demonstrate experience in cultivation, plantation, maintenance and operation of similar scale, to ensure good performance to carry out project activities;

- (7) Should have abundant labor resources, with strong project organization and implementation capabilities to carry out project activities;
- (8) Will not trigger land acquisition and resettlement;
- (9) No adverse effects on ethnic minorities and vulnerable groups;
- (10) Ensure the project activities are carried out in compliance with the ADB's Safeguard Policy Statement (2009);
- (11) Other requirements of the ADB and PMO.

5.2. Implementation procedures

- (1) Project information disclosure, including project application requirements;
- (2) Express of interest and submit applications to PMO or local governments (town government or village committees) to participate the project due 30 December 2019;
- (3) Review applications and check if the land application comply with local planning and land use requirements, to determine whether the applications can be declared officially accepted and identified as qualified PIEs;
- (4) Design institute will carry out site visit and carry out detailed designs (as part of the CPIA, Annex 1 in Appendix 1), based on discussions with PMO, BOF or BARA and the related PIE;
- (5) Sign a CPIA (CPIA template is attached as Appendix 1);
- (6) Carry out project activities according to the detailed designs, including land preparation, planting, tending, etc.;
- (7) BARA and BOF will provide technical guidance on-site to PIEs as needed or as required;
- (8) Construction supervision agencies engaged by PMO will carry out site inspection;
- (9) PIEs to submit Funds Application Form, together with necessary supporting documents;
- (10) In accordance with the provisions and requirements of the CPIA, carry out the acceptance review and issue the acceptance certificate;
- (11) Funds disbursement to PIEs.

5.3. Funds application and disbursement

According to the payment milestone as indicated in the CPIA, PIEs can prepare a payment request by filling the Pingjiang County Project Funds Application Form, and submit to PMO, together with necessary supporting documents (i.e., CPIA, acceptance certificate, etc.) and receipts. PMO will review and approve the payment requests and issue payment accordingly to PIEs.

Appendix 1: Indicative Community Participation Implementation Agreement

Project name ADB Hunan Miluo River Disaster Risk Management and Comprehensive Environmental Improvement Project – Eco-farming Demonstration Subproject

CPIA No.: _____ **Date of signing:** [DD], [MM] [YYYY]

Party A: Pingjiang Project Management Office

Party B:

Party C:

Type of activities	Tea camellia garden new built	<input type="checkbox"/>	Tea camellia garden rehabilitation	<input type="checkbox"/>	Camellia nursery cultivation	<input type="checkbox"/>
	Ecological tea garden new built	<input type="checkbox"/>	Ecological tea garden rehabilitation	<input type="checkbox"/>		
	Ecological rice farmland rehabilitation	<input type="checkbox"/>	Ecological vegetables (rehabilitation)	<input type="checkbox"/>	Ecological orchard renovation	<input type="checkbox"/>

Construction location _____ Group _____ Village _____ Town, Pingjiang County

Contract period: This contract takes into effect on the date signed by all parties, that is, from [DD], [MM] [YYYY] to [DD], [MM] [YYYY]

In order to ensure the implementation quality and progress of the ADB Hunan Miluo River Disaster Risk Management and Comprehensive Environmental Improvement Project – Eco-farming Demonstration Subproject, in accordance with the laws and regulations of the People's Republic of China related to the contract, all parties agree to perform the following terms of this contract, on the basis of equity, free will, and mutual benefits.

Section 1: Prerequisites for Party B's participation

1. Party B must have the legal land utilization right for the project related base, meet all conditions of the project site selection, and accept Party A's inspection.
2. Party B should ensure sufficient labor forces to carry out the project on time ;
3. Party B must ensure no land acquisition and resettlement should be triggered;
4. Party B must ensure that the project will not have any adverse effects on ethnic minorities and vulnerable groups;
5. Party B shall ensure the project activities are carried out in compliance with the ADB's Safeguard Policy Statement (2009).

Section 2: Project Implementation Obligations

Party A's Rights and obligations

1. Carry out supervision on project progress and quality control based on the detailed designs, and carry out acceptance of activities undertaken by Party B.
2. Retain rights to request Party B if the activities undertaken by Party B are not qualified, until proper remedial measures are undertaken.
3. Provide training and technical guidance to Party B to promote the smooth implementation of project activities, with the support from Party C.

Party B's rights and obligations

1. Have right to request Party A to provide technical services according to the needs of project construction.
2. Party B must implement the project activities in accordance with the agreed detailed designs and standards, otherwise the contract will be terminated. Party B shall bear all financial losses and any other consequences arising therefrom.
3. Should accept Party A's training, technical guidance, inspection and acceptance review. In case of unqualified activities, remedial measures should be undertaken as required by Party A, and the related costs shall be borne by themselves.
4. Provide Party A with information on labor input, material used, funds utilization and funds management or other information as required by Party A.
5. Effective management and protection of project facilities to prevent any form of destruction. In case of any damage, Party B shall raise funds to take remedial measures.
6. Provide Party A with the documents, evidences and other information as required for funds application, and provide to ADB for review as reasonably required.
7. Party B must ensure that no proceeds of the Loan are used to finance any activity included in the list of prohibited investment activities provided in Appendix 5 of the SPS.
8. Party B acknowledges that ADB reserves the right to investigate directly, or through its agents, any alleged corrupt, fraudulent, collusive or coercive practice relating to this CPIA; and (b) cooperate with any such investigation and extend all necessary assistance for satisfactory completion of such investigation.

Section 3: Payment

1. After Party B has completed the detailed project activities in Annex 1 of this CPIA and accepted by Party A as progress, Party B shall prepare the Payment Request and submit to Party A for review and approval, together with supporting documents, in accordance with the payment schedule as indicated in this CPIA.
2. According to the Inspection and Acceptance Measures and Standards,¹ complete the acceptance review, and pay the funds according to the payment progress as indicated in Table 1.

Table 1: Indicative payment schedule

Payment time and quantity		Unit price (yuan / ha)					
		Total	1 st Year			2 nd Year	3 rd Year
			Subtotal	1 st payment	2 nd payment	3 rd payment	4 th Payment
				Spring	Autumn		
1.	Ecological tea camellia – new plantation						
2.	Ecological tea camellia – rehabilitation						
3.	Tea camellia nursery cultivation						
4.	Ecological tea garden – new plantation						

¹ To be developed upon loan effectiveness.

5.	Ecological tea garden – rehabilitation						
6.	Ecological orchard						
7.	Ecological vegetables						
8.	Ecological rice production						

3. Conditions for milestone payments:²

- (1) First payment milestone:
- (2) Second payment milestone:
- (3) Third payment milestone:
- (4) Fourth payment milestone:

Section 4: The Effective Date and Contract Period

1. This contract shall take effect on the date signed by all parties.
2. This contract is valid from the effectiveness date to the date of project final acceptance after the completion of all activities.

Section 5: Other Issues

1. Party B shall ensure safe production conditions, the health and safety of workers during construction activities, including preventing and control of COVID-19 based on local regulations, and shall be responsible for all casualties and accidents.
2. All parties to the CPIA shall accept inspections by ADB and Pingjiang County Government during the performance of the CPIA.
3. In the event of a dispute, no matter where the cause comes from, it should be resolved through relevant legal institutions.
4. This CPIA will be issued in three identical copies. Each copy will valid upon being signed (stamped) by all parties, and each party will take away an original copy.
5. The construction area indicated in this CPIA is not regarded as the actual area, and the actual acceptance area shall prevail.
6. This CPIA is protected by national laws and will become effective as soon as it is signed by all parties. All parties shall abide the signed CPIA and have no right to amend it.
7. If there are any other things that need to be amended, all parties should negotiate the content.

List of Annex:

Annex 1: Project detailed designs and project topographic map

² To be developed based on the detailed designs and to be decided case by case.

This CPIA shall be signed by Party A, Party B and representatives of the PIUs (BOF or BARA) as the Party C.

Party A

Signature: _____

Name (seal): _____

Position: _____

Date: _____

Party B

Signature: _____

Name (seal): _____

Position: _____

Date: _____

Party C (PIUs - BOF or BARA)

Name (seal): _____

Position: _____

Date: _____

Annex 1: Project detailed designs and project topographic map

(The detailed designs will include specifications of all works, goods and materials, including seedlings)