

Project Administration Manual

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People's Republic of China: Anhui Huangshan Xin'an
River Ecological Protection and Green Development
Project

ABBREVIATIONS

AC	-	Advanced Contracting
ADB	-	Asian Development Bank
AP	-	Affected Person
APDOF	-	Anhui Provincial Department of Finance
BOF	-	Bureau of Finance
BTP	-	Biodata Technical Proposal
CQS	-	Consultant's Qualification Selection
CSC	-	Construction Supervision Company
DMF	-	Design and Monitoring Framework
DMS	-	Detailed Measurement Survey
EA	-	Executing Agency
EHS	-	Environmental, Health and Safety
EIA	-	Environment Impact Assessment
EM	-	Ethnic Minority
EMP	-	Environmental Management Plan
ESMS	-	Environmental and Social Management System
EUROIBOR	-	EURO-interbank offered rate
FCUP	-	Foreign Capital Utilization Plan
FEOR	-	Financial Evaluation Opinion Report
FGD	-	Focused Group Discussion
FMA	-	Financial Management Assessment
FSR	-	Feasibility Study Report
FTP	-	Full Technical Proposal
GAP	-	Gender Action Plan
GIF	-	Green Investment Fund
GRM	-	Grievance Redress Mechanism
HD	-	House Demolishing
HDRC	-	Huangshan Development and Reform Commission
HMG	-	Huangshan Municipal Government
HMBOF	-	Huangshan Municipal Bureau of Finance
HPMO	-	Huangshan Municipal Project Management Office
HSDG	-	Huangshan District Government
HZDG	-	Huizhou District Government
HTIC	-	Huangshan Trust and Investment Corporation
HXIC	-	Huangshan Xintou Investment Corporation
KfW	-	Kreditanstalt für Wiederaufbau
IA	-	Implementing Agency
ICS	-	Individual Consultant Selection
IEE	-	Initial Environmental Examination
LAR	-	Land Acquisition and Resettlement
LIEC	-	Loan Implementation Environment Consultant
LP	-	Limited Partner
LURT	-	Land Use Right Transfer
MIS	-	Management Information System
MOF	-	Ministry of Finance
NDRC	-	National Development and Reform Commission

NPS	-	Non-point Source
OCB	-	Open Competitive Bidding
O&M	-	Operation and Maintenance
PAM	-	Project Administration Manual
PLG	-	Project Leading Group,
PMO	-	Project Management Office
PPMS	-	Project Performance Management System
PRC	-	People's Republic of China
QBS	-	Quality-Based Selection
QCBS	-	Quality and Cost Based Selection
QCG	-	Qimen County Government
RF	-	Retroactive Financing
RP	-	Resettlement Plan
RWW	-	Rural Wastewater
PIA	-	Project Impacted Area
PRC	-	People's Republic of China
SCG	-	She County Government
SDAP	-	Social Development Action Plan
SGE	-	Some Gender Element
SOE	-	Statement of Expenditure
SPMO	-	Sub-Project Management Office
STP	-	Simplified Technical Proposal
TA	-	Technical Assistance
TDG	-	Tunxi District Government
TN	-	Total Nitrogen
TP	-	Total Phosphorus
TPA	-	Targeted Poverty Alleviation
WA	-	Withdrawal Application
XCG	-	Xiuning County Government
YCG	-	Yi County Government
YREB	-	Yangtze River Economic Belt
1S1E	-	Single-stage one-envelop

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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 Huangshan Municipal Government (HMG), as the project executing agency, and Huangshan District Government (HSDG), Huizhou District Government (HZDG), Tunxi District Government (TDG), She County Government (SCG), Yi County Government (YCG), Qimen County Government (QCG), Xiuning County Government (XCG), and Huangshan Trust Investment Company (HTIC) as the project implementing agencies, are wholly responsible for the implementation of the project, 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 HMG, HSDG, HZDG, TDG, SCG, YCG, QCG, XCG, and HTIC 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 and project agreements. 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 and project agreements, the provisions of the loan and project agreements 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

A. Rationale

1. The Yangtze River Economic Belt (YREB) is one of the three key economic growth engines in the People's Republic of China (PRC). Its nine provinces and two specially administered municipalities account for more than 40% of the population, 40% of freshwater resources, and about 45% of the country's economic output. While having benefited from extensive growth since the late 1980s, the YREB is facing significant development challenges as a result of (i) increasing pollution and pressure on natural resources; (ii) slow transformation into green economic development; (iii) limited integration of waterways, ports, and intermodal logistics; and (iv) weak institutional coordination for strategic planning. To manage these challenges, the Government of the PRC formulated the YREB Development Plan 2016–2030,¹ which stipulates the prioritization of ecological protection and promotion of green development as the guiding principle for the YREB's future growth. In this context, the Asian Development Bank (ADB) and the Government of the PRC have agreed to adopt a framework approach which prioritizes: (i) ecosystem restoration, environmental protection, and management of water resources; (ii) inclusive green industrial transformation; (iii) construction of an integrated multimodal transport corridor; and (iv) institutional and policy reform. The project is included as part of the YREB framework.

2. The Xin'an River is an independent river system located within the YREB, originating from Huangshan Municipality (Huangshan)² in Anhui Province and passing through Hangzhou, the capital city of Zhejiang Province, before entering the East China Sea. The river is the main source of drinking water for 10 million residents living in the urban and rural areas surrounding Qiandao Lake and Hangzhou. Huangshan is a prefecture-level municipality located in the southern part of Anhui Province, comprising three urban districts and four counties with a population of 1.5 million and a land area of 9,807 square kilometers. HMG recognizes the great importance of protecting the ecological system of the Xin'an River, not only in preserving a sound living environment for its residents, but also in achieving water security for the people living downstream of the river basin.

3. In 2012, the government introduced a pilot cross-provincial ecological compensation (eco-compensation) scheme³ between Anhui and Zhejiang provinces as a new mechanism to help Huangshan Municipal Government (HMG) address cross-provincial water quality concerns in the Xin'an River Basin. In the first two phases (2012–2017) of the pilot scheme, an eco-compensation fund amounting to CNY3.7 billion was mobilized with the support of the central government and the two provincial governments. Majority of the resources mobilized were invested in Huangshan for the control of industrial wastewater pollution, improvement of wastewater collection and treatment capacity, and restoration of the ecosystem along the river. Through the scheme, HMG made significant progress in industrial and point source pollution control; with the discharge of chemical oxygen demand reduced by 28% and the water quality at the interprovincial section achieving the agreed standard. However, with rapid urbanization, intensified agriculture production, and tourism growth, maintaining the level of water quality at the upstream of the Xin'an

¹ Government of the PRC. 2016. Outline of the Yangtze River Economic Belt Development Plan, 2016–2030. Beijing.

² Huangshan Municipality is named after a local mountain range ("yellow mountain"). "Huangshan" in this report refers to the municipality only unless otherwise specified.

³ Under the scheme, the central government and two provincial governments set up an eco-compensation fund with water quality subjected to periodic assessment at the interprovincial section to determine whether: (i) Zhejiang Province should compensate Anhui Province to defray the ecological protection cost; or (ii) Anhui Province should compensate Zhejiang Province to pay for additional water treatment cost, in case water quality fails to meet agreed standards. From 2012–2017, the phosphorus index (measured by total phosphorus, total nitrogen, ammoniacal nitrogen, and permanganate indices) for water quality compensation index in Xin'an River was 0.833–0.880.

River is becoming increasingly difficult. HMG requested ADB for support to help design and implement a project that will improve the efficiency and effectiveness of their efforts to manage the point source pollution from urban and rural areas, and the non-point source pollution from the agriculture sector in rural areas to support the ecological protection and green development.

4. **Urban point source pollution.** As a result of continued investments in the control of water pollution, 90% of urban wastewater in Huangshan is being collected and treated. Despite this achievement, a significant part of the urban wastewater collection system requires upgrading. Many of the existing sewerage systems were not been systematically planned nor designed to cope with the pace of urbanization. The existing obsolete sewerage systems in Huangshan were designed as a combined stormwater and sewerage system. As a result, sewerage overflows occurring during storm season are directly discharged into streams and waterways. Due to its mountainous terrain, Huangshan is also vulnerable to flooding during storm season. The eroded urban embankment and revetment sections of the river system pose another concern, not only for flood management but also for water pollution control. The exposure of the river system to storm water run-off has contributed to the seasonal fluctuation of water quality.

5. **Rural point and non-point source pollution.** Rural areas in Huangshan, as in the YREB and much of the PRC, face relatively greater challenges compared to urban areas. Poor public infrastructure and sanitation service coverage is a major concern in rural Huangshan, affecting the people's living conditions and resulting in long-lasting point source pollution in rural areas. Around 75% of Huangshan's 889 administrative villages lack wastewater treatment facilities. Despite the effective control of industrial pollution, Huangshan's water bodies are still degraded due to non-point source pollution, 85% of which are derived from rural sources, particularly discharge of pollutants such as total nitrogen and total phosphorus from agricultural activities. The dispersed nature of agricultural activities also makes the control of agricultural non-point source pollution a challenge. In addition to agricultural activities, the resilience of the river ecosystem is impacted by poor forest management and pest attacks, undermining forest capacity to control soil erosion.

6. **Green Financing Mechanisms.** In view of the prevailing impact of agriculture non-point source pollution in Huangshan, a Green Incentive Fund to complement the ongoing cross-provincial eco-compensation scheme is needed. Such a fund would serve as a rewarding mechanism, through which HMG can provide cash grants as financial incentives to farmers who have achieved pollution control targets through adoption of sustainable farming practices, in accordance with a well-designed pollution control plan. In parallel, introducing a green investment fund to provide financing to support small- and medium-sized enterprises (SME) involved in green business development would give further impetus to venture into and expand ecological agriculture, eco-tourism, and pollution control. These new financing mechanisms will be introduced on a small-scale pilot basis under the project, in comparison with the traditional input-based and infrastructure-oriented public interventions in the PRC. Effective and innovative interventions are envisaged to have wider implications beyond the project scope.

7. **Institutional and environmental management capacity.** HMG has developed a series of online monitoring and management information systems (MIS) in the areas of water resources management, environmental monitoring, forestry management, and agriculture production. However, these systems are not integrated, which hinders the information sharing and collaboration among line agencies and other stakeholders. HMG needs urgent action to integrate these systems to strengthen its capacity in environmental monitoring, pollution control, and disaster risk management. Special support is required to further improve the information sharing with downstream cities in Zhejiang Province to further strengthen cross-provincial collaboration

established under the existing eco-compensation scheme. Operational research is also necessary to enhance HMG's planning capacity for green development, economic valuation of natural resources, sustainable operation and maintenance (O&M) of sanitation facilities in rural areas, and detailed design of operational mechanisms for the green incentive fund.

8. **Strategic fit.** The project will (i) address Huangshan's urban and rural environmental degradation issues; (ii) improve water quality in the Xin'an River Basin; and (iii) strengthen financing mechanisms, environmental management, and water quality monitoring capacities, improving the quality of life for the people. The project is consistent with the (i) PRC's Thirteenth Five-Year Plan, 2016–2020;⁴ (ii) Outline of the YREB Development Plan, 2016–2030 (footnote 1), (iii) PRC National New-Type Urbanization Plan, 2014–2020;⁵ (iv) PRC National Strategy for Rural Vitalization, 2018–2022;⁶ (v) ADB's Strategy 2030's operational priorities;⁷ and (vi) ADB's country partnership strategy for the PRC, 2016–2020.⁸ The project is aligned with the guidelines on the YREB's economic development issued by the State Council in 2014 to promote inclusive green development, environmental protection, and sustainable water resources management.

9. **Lessons.** The project design incorporates key lessons from previous ADB and development partner projects as well as international best practices and innovative approaches. These include (i) the importance of inclusive green development for sustainable growth; (ii) the need for innovative technology (information and communication technology-based and smart systems) and standards to address urban and rural environmental degradation; and (iii) the need to provide effective water resource management and monitoring systems, improved agricultural practices and stakeholder participation, and enhanced green development and financing.

B. Impact and outcome

10. The project is aligned with the following impact: sustainable economic growth and environmental improvement in the YREB achieved (footnote 1). The project will have the following outcome: economic and environmental conditions in the upstream of Xin'an River improved.⁹

C. Outputs

11. **Output 1: Urban point source pollution management facilities upgraded.** This output will include (i) sewage and stormwater management through upgrading the existing centralized sewerage systems in Huangshan's central district and four county urban areas; and (ii) river rehabilitation and flood control through river embankment.

12. **Output 2: Rural point and non-point source pollution control facilities and systems enhanced.** Innovative approaches supporting green agricultural and ecological practices will be adopted. This includes point and non-point source pollution controls through (i) decentralized sewage and on-site treatment system and environment management in rural villages; (ii) changing fertilizer application practices, including the improved use of organic fertilizer and

⁴ Government of the PRC. 2015. *Outline of the Thirteenth Five-Year Plan on National Economic and Social Development, 2016–2020*. Beijing.

⁵ Government of the PRC. 2013. *National New-Type Urbanization Plan, 2014–2020*. Beijing.

⁶ Government of the PRC. 2018. *National Strategy on Rural Vitalization, 2018–2022*. Beijing.

⁷ ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila.

⁸ ADB. 2016. *Country Partnership Strategy: Transforming Partnership: People's Republic of China and Asian Development Bank, 2016–2020*. Manila.

⁹ The design and monitoring framework is in Section IX. A.

biological pesticides with low toxicity at agricultural and forestry sites; and (iii) improvement of pine forest conditions through disease monitoring and prevention.

13. **Output 3: Green financing mechanisms piloted.** This includes the establishment, piloting and operationalization of a (i) Green Incentive Fund to encourage farmers to adopt sustainable farm management practices to address agricultural non-point source pollution in Huangshan; and (ii) green investment fund to invest in SMEs involved in green business.

14. **Output 4: Capacity for ecological system and project management strengthened.** This will enhance HMG's capacity in water resources and flood forecasting management in the Xin'an River Basin. This includes (i) establishing environmental, health, and safety management systems to strengthen its industrial and urban environmental monitoring and emergency response capacity; (ii) integrated smart¹⁰ MIS; (iii) studies on Huangshan city green development strategy, eco-compensation mechanisms, rural wastewater discharge standards, and green farming certification; and (iv) HMG implementation support and capacity development.

15. Detailed activities of all the subprojects are provided in Appendix 1.

16. **Value addition of ADB assistance.** The project will bring about innovation at the policy, operation, and technical levels. In particular, the project will introduce a green incentive financing mechanism to address agricultural non-point source pollution, which will be designed through participatory approaches via direct engagement of farmers and farmer cooperatives. This green incentive mechanism will introduce a new model in managing agriculture non-point source pollution, including establishment of green farming and farm management standards, introducing an independent third-party verification system, and implementing a results-based incentive payment mechanism. The green investment fund will create a new avenue to support SMEs in the green business who suffer from lack of access to long-term financing due to the general perception of low financial returns from their investments in ecological agriculture, eco-tourism and pollution control. The project will harness state-of-the-art information and communication technology elements to develop comprehensive and integrated smart MIS for water resource management, pollution control, environmental health and safety, emergency response, disaster prevention, and monitoring. Other special value additions include introducing an environmental and social management system (ESMS) for green financing in Huangshan. Moreover, ADB has leveraged and mobilized co-financing from Kreditanstalt für Wiederaufbau (KfW) for the project and has created a platform for collaboration between HMG and the Nature Conservancy to address agriculture non-point source pollution in the Xin'an River Basin. The Nature Conservancy will leverage the funds for complementary support to further enhance the green incentive fund mechanism implementation under the project.

17. **Green Investment Fund (GIF).** The GIF will target SMEs involved in green business in Huangshan, which need capital for investing in subprojects supporting the green agenda of HMG, the executing agency of the project. HMG selected the Huangshan Trust and Investment Corporation (HTIC), a state-owned enterprise wholly owned by HMG, as the implementing agency of the GIF component in the project. Huangshan Xintou Investment Company (HXIC), one of HTIC's wholly owned subsidiary companies, will be the fund manager of the GIF. The GIF will provide equity financing to qualified investees to implement the subprojects that protect the ecological environment and promote the green development in the upstream of Xin'an River. Appendix 4-A provides a list of potential subprojects and Appendix 4-B provides a draft term sheets of GIF.

¹⁰ Smart systems incorporate functions of sensing, actuation, and control in order to analyze a situation and make decisions based on the available data in a predictive or adaptive manner, thereby performing smart actions.

II. IMPLEMENTATION PLANS

A. Project Readiness Activities

Table 1: Project Readiness Activities

Indicative Activities	2019						2020							Responsibilities
	7	8	9	10	11	12	1	2	3	4	5	6	7	
Recruitment of procurement agent														HMG, HPMO
Advance contracting actions														HPMO, IAs
Retroactive financing actions														HPMO, IAs
Establish project implementation arrangements														HPMO, IAs
ADB management review meeting														ADB
FSR submission and approval														HDRC, HMG, HPMO
FCUP and FEOR preparation and submission														HMG
FCUP approval														NDRC
ADB management review meeting														ADB
ADB Board approval														ADB
Loan signing														ADB, HMG, MOF
Government legal opinion provided														HMG, MOF
Government budget inclusion														HMG
Loan effectiveness														ADB, MOF

ADB = Asian Development Bank, FCUP = foreign capital utilization plan, FEOR = financial evaluation opinion report, FSR = feasibility study report, IA = implementing agency, HDRC = Huangshan Development and Reform Commission, HMG = Huangshan Municipal Government, HPMO = Huangshan project management office, MOF = Ministry of Finance, NDRC = National Development and Reform Commission
Source: Asian Development Bank.

Table 2: Project Implementation Plan

[illegible]

[illegible]

Activities	2020				2021				2022				2023				2024				2025				2026			
	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
Activity 4.4: Improve the capacity to implement the project																												
Management Activities																												
Engage project management consultants																												
Design a smart project management, monitoring, and reporting system																												
Monitor and evaluate project performance using the smart project management system, and submit project progress reports																												
Implement social activities based on gender and social development action plans																												
Implement safeguard activities based on environment management plan and resettlement plans, and submit required monitoring reports																												
Submit the project completion report																												

EHS = environmental, health, and safety.

Source: Asian Development Bank.

C. Implementation Plan for Green Incentive Fund

19. Green Incentive Fund is a result-based compensation scheme to the participating tea gardens after the third party's verification of their adoption of green farming practice on a yearly basis. The compensation criteria and amounts will be developed by the feasibility study and certification system study, whose terms of reference (TOR) are outlined in the Appendix 2. When the loan becomes effective, the HP MO will select consultants to undertake the studies and identify interested tea gardens. The tea gardens will sign incentive payment agreements with the HP MO on their measurable green farming efforts and quantitative compensation. The third party engaged by the HP MO will verify the tea gardens' annual achievements; the HP MO will request Huangshan Municipal Bureau of Finance (HMBOF) to make payments to the certified tea gardens based on the verified achievements.

D. Implementation Plan for Green Investment Fund

20. The main activities of GIF in the implementation period are presented below:
- a) ADB will enter into a Loan Agreement with the PRC, acting through the Ministry of Finance (MOF); MOF will re-lend the ADB loan to Anhui Provincial Government (APG); APG will on-lend the ADB loan to HMG; HMG will enter into an on-lending agreement with HTIC, and all the on-lending will be arranged on the same terms as the loan from ADB to the PRC.
 - b) HTIC will enter into a Framework Cooperation Agreement (FCA) with the Account Bank for the operation of GIF Revolving Fund Account (RFA);
 - c) Huangshan Xintou Investment Company (HXIC) as the General Partner will enter into a Limited Partnership Agreement (LPA) (sample LPA is in Appendix H). The final LPA will need to be prepared based on the loan agreement and project agreement) with HTIC as Limited Partner to create and set-up GIF (An example LPA provided in Appendix 4-H);
 - d) HTIC will apply for the utilization of Xin'an River Eco-Compensation Fund from Huangshan Municipal Xin'an River Protection Bureau of HMG;
 - e) GIF will enter into Equity Investment Agreements with each of its investees for equity investments;
 - f) ADB loan proceeds will be disbursed from advance account to HTIC's GIF RFA maintained at the Account Bank.

21. The project implementation plan for GIF includes following preliminary defined activities: Step 1: Set up GIF including moving into a Limited Partnership structure with a formulized Limited Partnership Agreement (after loan signing); Step 2: Obtain management company license by regulatory board on PE funds for opening up to external investors (within 1 year after loan signing); Step 3: Obtain approval for LP from the Administration Bureau for Industry and Commerce (within 3 months after management company license has been obtained); Step 4: Potentially mobilize external investors to GIF (after step 3).

22. The HXIC will develop a comprehensive investment manual describing in detail the criteria, procedures and processes for selection, appraisal, approval, compliance requirements and standards, and required due diligence to incorporate as disbursement condition in accordance with ADB requirements and subject to ADB's no objection (within 3 months after loan signing). The investment manual will include integrity due diligence procedures which cover anti-money laundering internal control system and compliance requirements matching the requirements of national law and regulations as well as international standard as an operational level.

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Implementation Organizations: Roles and Responsibilities

Table 3: Project Implementation Organization

Project Implementation Organizations	Management Roles and Responsibilities
Executing Agency Huangshan Municipal Government (HMG)	<ul style="list-style-type: none"> Take overall responsibility for project implementation
Anhui Provincial Department of Finance	<ul style="list-style-type: none"> Relending the loan to HMG Manage the advance account
Project leading group	<ul style="list-style-type: none"> Chaired by the executive vice mayor of HMG Oversee the preparation and implementation of the overall project and provide overall guidance Meet regularly, discuss and take actions, if necessary, to ensure smooth overall project implementation
Huangshan project management office (HPMO)	<ul style="list-style-type: none"> Supervise day-to-day activities of the project and provide coordination support for the preparation and implementation of project components of each project implementing agency Report the progress of project implementation and compliance monitoring to ADB Submit required annual audit reports and financial statements of project account of HMG and project implementing agencies to ADB Engage project management consulting services Implement and monitor social and safeguard plans and submit monitoring reports Implement output 4 in collaboration with the concerned line agencies, as applicable. Engage external environmental and resettlement monitors Submit bidding documents, bid evaluation reports, and other necessary documentation to ADB for necessary approval Submit withdrawal applications
Subproject management offices (SPMO) in four counties and three districts of Huangshan	<ul style="list-style-type: none"> Responsible for project coordination and implementation of each subproject Overall financial supervision of the subproject within their jurisdiction
Implementing Agencies Huangshan District Government; Huizhou District Government; Tunxi District Government; She County Government; Yi County Government; Qimen County Government; Xiuning County Government; Huangshan Trust and Investment Corporation (HTIC)	<ul style="list-style-type: none"> Take overall responsibility for the implementation of the subproject, including provision of counterpart funding and repayment of the loan Implement subproject and be a focal point for liaison with the HPMO Recruit design, construction supervision, and required monitoring institutes Conduct procurement and contract management with the support of the procurement agent) Implement capacity building activities for implementing agencies Project accounting and financial management Ensure quality in project activities necessary to meet objectives Coordinate EMP implementation relating to their subproject Prepare withdrawal applications for submission to the local finance department and HPMO

Project Implementation Organizations	Management Roles and Responsibilities
	<ul style="list-style-type: none"> • Take actions as needed to implement social safeguards • Take actions as needed to implement the agreed gender and social action plans • Establish and maintain implementing agencies level project monitoring systems and reporting to HPMO • Arrange necessary counterpart funding • HTIC will prepare and submitted audited entity financial statement
Huangshan Xintou Investment Company (HXIC)	<ul style="list-style-type: none"> • Act as fund manager of GIF and assume the responsibility for day-to-day project implementation of GIF; • Provide staff resources with competence in technical, social, environmental, and financial issues pertaining to GIF implementation; • As general partner, enter into Limited Partnership Agreements with HTIC and other limited partners (should there be any other entity wanting to join the partnership as a funder) for GIF; • Review and assess subproject applications according to the selection criteria for subprojects described in this PAM; • Recommend subprojects to be financed by GIF to the Investment Decision Committee; • Obtain ADB's no objection where required; • On behalf of GIF, sign Equality Investment Agreements with Qualified Investees; • Establish a credit risk management mechanism to monitor the Fund' credit risk and interest rate risk in connection with the project; • Ensure implementation of social safeguards • Ensure implementation of the ESMS • Establish and implement GRM at GIF and subproject level; • Monitor the implementation progress of GIF, and subprojects, including compliance with the terms and conditions of the Onlending Agreement. Require remedial actions in the event of noncompliance with the obligations; • Prepare the supporting documents for ADB loan withdrawal described in the disbursement section of this PAM; • Prepare and submit (i) semi-annual project progress report; (ii) semi-annual ESMS implementation reports during the implementation stage (first 5 years after loan effectiveness) and annual reports in the following 10 years; (iii) consolidated audited statement of utilization of funds; and (iv) a completion report on the utilization of GIF, the execution of the Subprojects, their costs, the performance by HTIC and HXIC of the obligations under or referenced in the Project Agreement within 6 months after the completion date of the project or as ADB otherwise specified; and • Liaise with ADB, the Account Bank, limited partners of GIF, Qualified Equity Investees and other stakeholders.
The Account Bank	<ul style="list-style-type: none"> • Enter into FCA with HTIC; • Manage Revolving Fund Account (GIF RFA); • Disburse the Equity Financing to GIF and Qualified Investees.
Qualified Investees of Green Investment Fund	<ul style="list-style-type: none"> • Implement subprojects in accordance with the Equity Investment Agreement (EIA);

Project Implementation Organizations	Management Roles and Responsibilities
	<ul style="list-style-type: none"> • Comply with the requirements assigned under the ESMS, including providing information and reports required to HXIC; • Establish GRM at subprojects level; • Get approvals from relevant authorities such as local environmental protection bureaus and the development and reform commissions; • Undertake the procurement of goods and works in compliance with the procurement regulations (appendix 4-E); and • Provide monitoring and evaluation information and participate in the completion review of the subproject.
ADB	<ul style="list-style-type: none"> • Support the executing and implementing agencies, HPMO, and SPMOs to learn about ADB's policies, including procurement guidelines, financial management, loan disbursement, safeguards, and preparation of progress reports • Provide guidance to ensure compliance with loan and project agreements • Conduct inception mission, annual loan review missions, a midterm review mission, and a project completion review mission • Review and/or approve procurement actions for the ADB-financed contract packages • Process withdrawal applications and release loan funds • Monitor project implementation progress • Review annual audit reports and follow up on audit recommendations • Update regularly the project performance review reports with the assistance of the executing and implementing agencies; • Update regularly the project information documents for public disclosure at ADB website, including safeguard documents • Monitor implementation of ADB's anticorruption policies.
KfW	<ul style="list-style-type: none"> • Co-financer

ADB = Asian Development Bank, EMP = Environmental Management Plan, HMG = Huangshan Municipal Government, HPMO = Huangshan project management office, HTIC = Huangshan Trust and Investment Corporation, HXIC = Huangshan Xintou Investment Company, KfW = Kreditanstalt für Wiederaufbau, SPMO = subproject management office.

Source: Asian Development Bank.

23. Upon the signing of the loan agreement between ADB and the Ministry of Finance (MOF), ADB, KfW and the government have reached in an agreement that all procurement of goods, works and services including consulting services funded from ADB and KfW financing will follow ADB procurement rules and regulations and there is no KfW review and approval requirement for EA/IAs procurement documents and decisions in addition to ADB no-objections.

B. Key Persons Involved in Implementation

Executing Agency

Huangshan Municipal Government (HMG)	<p>Officer's Name: Xiaohua Liu Position: Executive Deputy Mayor Telephone: 05592355169 Email address: hsshxm@126.com Office Address: Floor 16, No. 1 Tiandu Road, Huangshan Municipal Government Building, Anhui Province, PRC</p>
Huangshan municipal project management office (HPMO)	<p>Officer's Name: Weidong Wang Position: HPMO Director Telephone: 05592351621 Email address: hsshxm@126.com Office Address: Floor 4, No.1 Tiandu Road, Huangshan Municipal Government Building, Anhui Province, PRC</p>

Implementing Agencies

Huangshan District Government (HSDG)	<p>Officer's Name: Wusi Du Position: SPMO Director Telephone: 05598500397 Email address: 648501352@qq.com Office Address: Floor 4, Huangshan District Government Building, Anhui Province, PRC</p>
Huizhou District Government (HZDG)	<p>Officer's Name: Yuguang Hu Position: SPMO Director Telephone: 05593582798 Email address: 1298920236@qq.com Office Address: Floor 4, No.86 Yinbin Road, Huizhou District, Huangshan City, Anhui Province, PRC</p>
Tunxi District Government (TDG)	<p>Officer's Name: Housong Liu Position: SPMO Director Telephone: 13955987504 Email address: 292781314@qq.com Office Address: No. 7 Xingyu Road, Yanghu Town, Tunxi District, Huangshan City, Anhui Province, PRC</p>
She County Government (SCG)	<p>Officer's Name: Ning Xu Position: SPMO Director Telephone: 05596575029 Email address: hssxshb@126.com; Office Address: Floor 2, No. 18 Ziyang Road, Huicheng Town, She County, Huangshan City, Anhui Province, PRC</p>

Yi County Government (YCG)

Officer's Name: Hui Hu
 Position: SPMO Director
 Telephone: 05595551190
 Email address: 532670531@qq.com
 Office Address: No. 54 Zhi Street, Yi County,
 Huangshan District, Anhui Province, PRC

Qimen County Government (YCG)

Officer's Name: Jianping Fang
 Position: SPMO Director
 Telephone: 05594513724
 Email address: 38579111@qq.com
 Office Address: No. 3 Xueqian Street, Qimen County,
 Huangshan City, Anhui Province, PCR

Xiuning County Government (YCG)

Officer's Name: Wenli Zhou
 Position: SPMO Director
 Telephone: 05597516889
 Email address: 1793536176@qq.com
 Office Address: Room 909, No.9 Shuyuan Road,
 Xiuning County, Huangshan City, Anhui Province, PRC

Huangshan Trust Investment Company

Officer's Name: Xu Wang
 Position: Deputy President
 Telephone: 05592588128
 Email address: admin@hsxtjt.com
 Office Address: Yudong Building 19F, Shewuqian Road,
 Tunxi District, Huangshan City, Anhui Province, PRC

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Mission Leader

Name: Mingyuan Fan
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 Telephone No.: +63 2 632 1763
 Fax No.: +63 2 636 2534
 Email address: mfan@adb.org

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Beijing, PRC

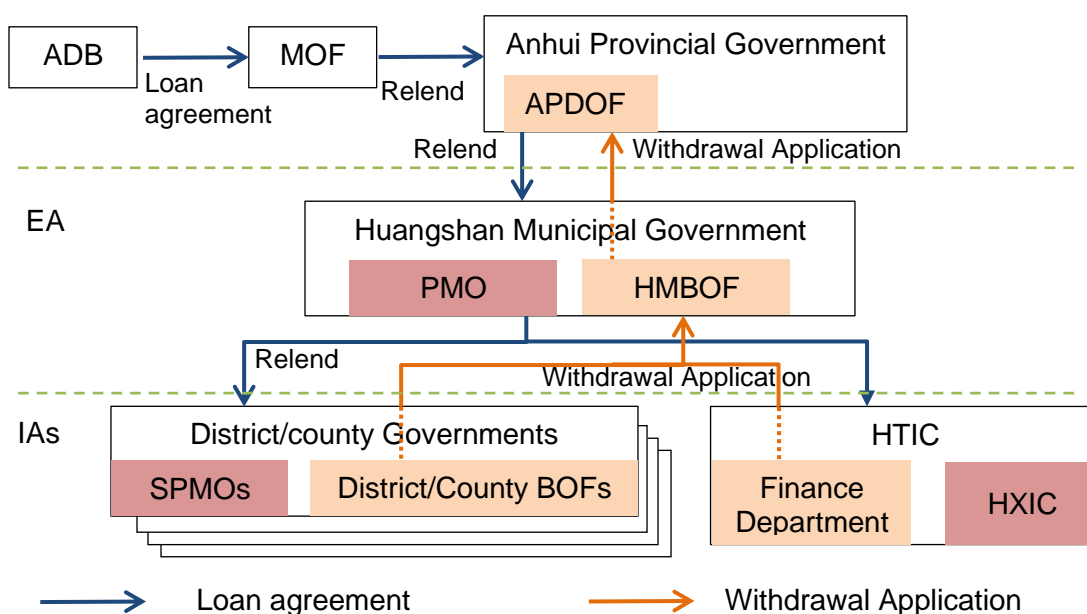
Staff Name: Mr. Wolfram Erhardt
 Position: Director
 Telephone No.: +86 10 8527 5171
 Fax No.:
 Email address: wolfram.erhardt@kfw.de

C. Project Organization Structure

24. Upon the signing of the loan agreement between ADB and the Ministry of Finance (MOF), MOF will sign the relending agreement with the Anhui Provincial Government, and the Anhui Provincial Government will in turn sign the onlending agreement with HMG. HMG will then relend to the participating district and county governments, and to Huangshan Trust and Investment Corporation (HTIC) for the green investment fund component of the loan. The loan agreements will follow the same terms and conditions.

25. Upon effectiveness of the loan, withdrawal applications will be initiated from the district or county level Bureau of Finance (BOF) based on ADB's share of the estimated expenditures for the next six months and send to Anhui Provincial Finance Department through Huangshan Municipal BOF. The loan proceeds disbursement and fund flow are described in greater detail in Section I.

26. HMG, as the executing agency, has established a project leading group¹¹ and a project management office (PMO). The participating district and county governments, as implementing agencies, will implement the project through their respective district- or county-level SPMOs under the PMO's leadership. For the green investment fund component of the loan, the Green Investment Fund (GIF) under Output 3, HTIC will be the implementing agency. The detailed arrangements of the GIF component will be elaborated in the separate project administration manual (PAM) for GIF.



ADB = Asian Development Bank, APDOF = Anhui Provincial Department of Finance, BOF = Bureau of Finance, HMBOF = Huangshan Municipal Bureau of Finance, HTIC = Huangshan Trust Investment Company, HXIC = Huangshan Xintou Investment Corporation, MOF = Ministry of Finance, PMO = Huangshan Municipal Project Management Office, SPMO = Subproject Project Management Office (District/County Project Management Office).

¹¹ Chaired by the executive vice mayor of HMG and comprised of officers from Huangshan Municipal Development and Reform Commission, Huangshan Finance Bureau, and other municipality bureaus.

D. Implementation Arrangement and Procedures of Green Investment Fund

1. General

27. The Green Investment Fund will be jointly funded by ADB, KfW, and HMG. The GIF fund size is CNY200 million in which ADB loan contributes 50%, KfW loan provides 25%, and HMG provides the remaining balance of 25%. GIF will be established as a focused mechanism under the project to finance deployment of green investments in key sectors.

28. HMG acts as the executing agency, and HTIC acts as the implementation agency for the GIF component. HTIC's subsidiary HXIC will serve as the equity investment manager and the general partner in charge of the governance and the implementation as per the principles, objectives, covenants and guidelines set in the Loan and Project Agreements signed with ADB and KfW.

29. HXIC is an existing entity with expertise in operating equity investments. The staff of HXIC hold diverse backgrounds and expertise in financial and technical disciplines. Current staffing is 9 professionals with qualifications and suitable experience to implement and manage GIF, all with academic backgrounds and Qualification Diploma issued by the China Security Association. Key staff's replacements in the first six years of operation are subject to ADB's no objection.

30. GIF will focus on investing in SMEs in green business in Huangshan that need small to medium sized investment for development assessed against the eligibility criteria for pollution control, green economy development, and climate change adaptation and/or mitigation. GIF will see a majority of its investment benefitting rural population within (i) ecological agriculture, (ii) ecotourism, and (iii) pollution control.

31. HXIC will identify investments with appropriate business models for expansion green development and will provide financing that addresses the potentials identified. HXIC, as the fund manager, provides GIF with the following activities, but not limited to: fund raising, implementation of investment selection and appraisal, administration and investment advisory services and investment governance. The investment review and approval process will include investment structuring to mitigate all risks and appraisal of environmental impact and risk under the environmental and ESMS. An ESMS is developed and will be adopted and implemented by HTIC and HXIC in accordance with national policies and regulations, and ADB's Safeguard Policy Statement (2009).¹² Prior to recommending an investment to the Investment Decision Committee of GIF, HXIC will conduct integrity, financial, technical, environmental and social due diligence to confirm compliance with the subproject selection criteria,¹³ ESMS, and national environment, health and safety law and regulations. HXIC will also monitor the implementation performance of investments, including measurement and verification of green improvements, and preparation of periodic progress reports on investment implementation to be submitted to ADB.

2. Investment Selection

32. Detailed investee and subproject selection criteria are attached in Appendix 4-C. This section includes a resume of the selection criteria and the selection decision.

33. All investments by GIF will contribute to at least one of the green investment eligibility criteria (presented Figure 1.) in terms of pollution source control, green economy development

¹² ADB. 2009. *Safeguard Policy Statement*. Manila.

¹³ The subproject selection criteria can be accessed in Appendix 4-C.

and climate change adaptation/mitigation, and without imposing adverse impact on the other criteria. GIF can solely participate in investments that conform to the detailed principles as presented in Appendix 4-C. The individual investments will be evaluated and selected by the Investment Decision Committee based on a risk assessment and credit rating proposed by HXIC.

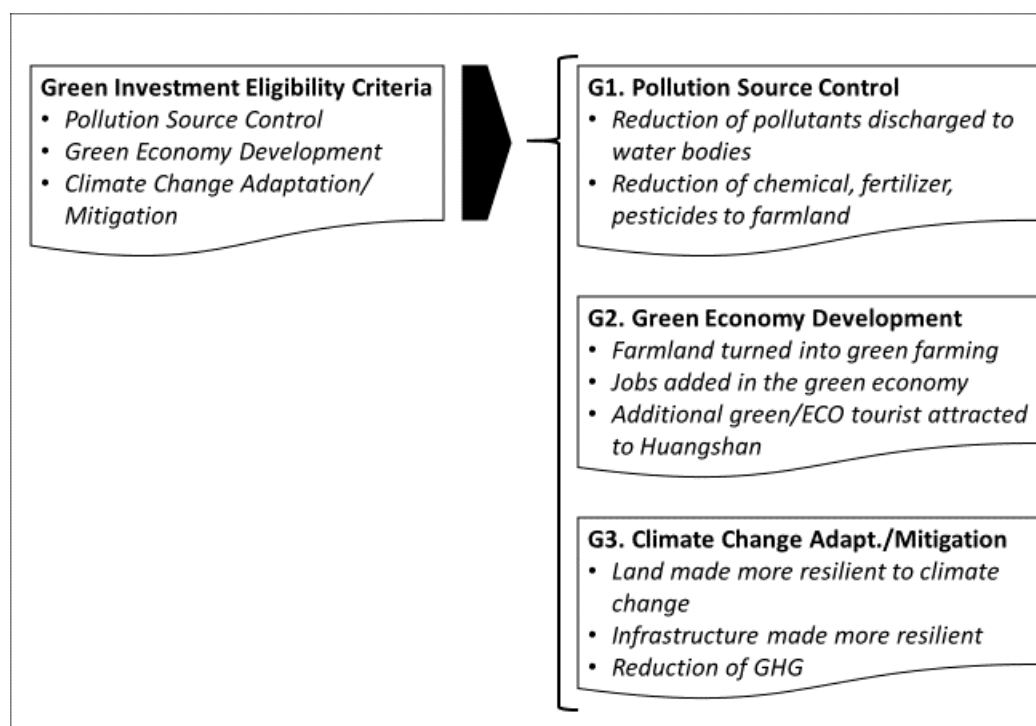


Figure 1: Investments' Green Selection Criteria

34. The subprojects for potential investments will be appraised against the selection criteria without compromising financial returns making the investment profitable. After investments being made the green criteria are used for follow-up and results reporting e.g. at project completion and investment exit.

35. As a general guidance but not strict requirements, GIF's investment portfolio will target 40% in ecological agriculture, 30% in ecotourism and 30% in pollution control. The individual investments will be of no one more than 30% of the fund size (CNY60 million), and not above 50% of the share of the qualified investee. Investment exit is expected between four and seven years after the investment is made.

36. HXIC shall keep a record of the results of its due diligence activities to be made available for inspection by ADB upon request. HXIC is required to prepare subproject appraisal reports to verify compliance with the applicable selection criteria.

3. Specific Implementation Arrangements for Investments

37. GIF will not make any investment which is on ADB SPS Prohibited Investment and Activities List. GIF shall adopt the ESMS prepared for the investments and shall carry out environmental and social due diligence of the investments to be financed by GIF.

38. Prior to providing or committing to provide any proceeds for the first equity investment or

equity investment above the free limit of CNY60 million, GIF shall submit through HMG for ADB's prior review and approval documentation related to proposed investments, including description and appraisal of the investment, the investee, due diligence report, the proposed exit strategy, in such form and detail as ADB may request, describing the proposed investment, the terms and conditions of the proposed investment, and drafts of equity investment agreement.

39. Whenever GIF proposes to make any investment, HXIC shall before GIF enters into or agrees to the related investment, submit to HMG a "no objection" application for approval of the related investment. Such application shall satisfy the terms and conditions specified in the onlending agreement between HMG and HTIC and shall contain a description and appraisal of the investment, the investee, due diligence report, the proposed exit strategy, and such other information as HMG shall reasonably request. Upon HMG's approval, the proposal is submitted to the Investment Decision Committee for its endorsement.

40. HXIC shall ensure that each Qualified Investee, prior to receiving any financial assistance from GIF, enters into an Equity Investment Agreement, in each case in a form acceptable to ADB and that reflects the applicable requirements of the Loan Agreement, the Project Agreement, the established Project Administration Manual and the ESMS, in addition to any other provisions a prudent financier would request for equity financing.

4. Fund organization

41. HTIC, limited partner for the GIF, is a state-owned enterprise wholly owned by HMG through its Asset Management Office. Through its subsidiaries, HTIC is engaged in a wide range of financial businesses: financial guarantee, capital leasing, industrial investment, forest exchange, and private equity investment. As of August 2019, it owns seven subcompanies for business operation and seven supporting departments – General, Legal, Human Resource, Appraisal, Risk, Finance and Information Technology.

42. HXIC, a subsidiary of HTIC, functions as fund manager and general partner of the GIF. HXIC has a dedicated full-time Office with around 9 experienced staff with qualifications and experience in technical and financial disciplines responsible for implementation and management of the project. Currently, there are no staff with qualifications or experience in environmental or social safeguards. The environment and social officers are required to be appointed for the ESMS establishment, operation, and reporting, at least three months before the first equity investment is made. HTIC will provide staff resources to HXIC and maintain the positions shown in figure 2.

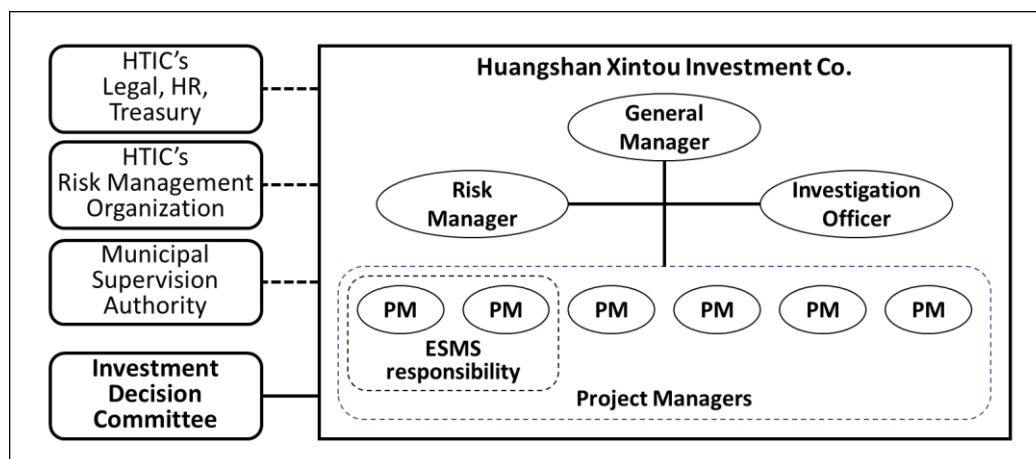


Figure 2: Organization Chart of HXIC

43. A team of experts and project managers in HXIC will provide the following expertise: (i) assessing the risk profile of the potential investments; (ii) evaluating the technology and business model; (iii) assessing capacity of the potential investees; (iv) reviewing and assessing due diligence according to the selection criteria and approval process for investments; (v) recommending approval of the investment to GIF's Investment Decision Committee; (vi) obtaining ADB's no objection where required; (vii) operate the risk management mechanism to monitor GIF's risk in connection with the investment; (viii) monitoring the implementation progress of the investment, including compliance with the terms and conditions of the investment implementation contracts; (ix) taking remedial actions in the event of noncompliance with the obligations; (x) supporting HTIC for the preparation of the ADB loan withdrawal applications; (xi) participating in the external audit of investments' accounts by providing ADB access to auditors; (xii) monitoring return from investment; (xiii) monitoring the performance of the Account Bank; and (xiv) prepare and submit semi-annual project progress report, semi-annual ESMS implementation reports during the implementation stage and annual reports in the following 10 years; audited statement of utilization of funds; and a project completion report.

44. The Investment Decision Committee is staffed with 2 representatives from the HPMO; 2 representatives of the Xin'an River Protection Bureau (the manager of Xin'an River Eco Compensation Fund), and 1 representative of HXIC. The directors of HPMO and the Xin'an River Protection Bureau jointly have one vote veto. The decision-making setup of the Investment Decision Committee will be approved by the HMG with no-objection from ADB.

IV. COSTS AND FINANCING

45. The project is estimated to cost EUR190.06 million. The project investment costs include (i) goods, works, and consulting services to support the development of comprehensive information services and management platforms; (ii) a Green Incentive Fund (eco-compensation mechanism) to promote green farming practices through economic incentives; (iii) a Green Investment Fund to invest companies implementing green projects; (i) modernization of agricultural production; and (v) project management.

46. The government has requested a regular loan of EUR90.09 million from ADB's ordinary capital resources and EUR50 million from KfW to help finance the project. The ADB loan will have a 25-year term, including a grace period of 6 years; an annual interest rate determined in accordance with ADB's EURO-interbank offered rate (EURIBOR)-based lending facility; a maturity premium of 0.1% per annum (based on an average loan mutuality of 15.75 years under the straight-line method; a commitment charge of 0.15% per year on undisbursed amount; and such other terms and conditions set forth in the draft loan and project agreements. The KfW loan will have a 15-year term, including a grace period of 5 years; an annual interest rate determined in accordance with 6-month EURIBOR-based lending facility; a commitment charge of 0.25% per year on undisbursed amount; an upfront fee of 0.35% on total loan amount; and such other terms and conditions set forth in the draft loan and project agreements.

47. The government will make the loan proceeds available through APG to HMG, which in turn will make the loan proceeds available to the district and county level governments on terms and conditions acceptable to ADB. HMG will bear the foreign exchange and interest rate variation risk of the loan proceeds.

48. The ADB loan will finance 47.4% of the total project costs, including expenditures relating to civil works, goods, and consulting services for eligible ADB-financed expenditures including the

Green Investment Fund. KfW will contribute 26.3% of the total project costs, including the balance of expenditures relating to civil works and goods, capacity building at the subproject level, subproject management and the green investment fund. The municipal government will contribute 26.3%, including contingencies and financial charge during development that is not to be capitalized.

A. Cost Estimates Preparation and Revisions

49. **Preparation.** The cost estimates were prepared jointly by the design institute, HPMO, district and county SPMOs, HTIC, KfW, and ADB with support from the transaction technical assistance (TA) consultants. The sources and basis of cost estimates were reviewed during project preparation and confirmed by related parties. The process was facilitated by a model in excel software which enabled easy updating or revision, if necessary. The model is maintained by both the HPMO and ADB.

50. **Revision.** Revision of cost estimates will be conducted when deemed necessary during implementation. The HPMO will be responsible in proposing and drafting the revision which will be subject to ADB's approval.

B. Key Assumptions

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

- (i) Exchange rate: ¥6.8987 = \$1.00, CNY7.6576=€1.00 (as of 2 August 2019).
- (ii) Price contingencies based on expected cumulative inflation over the implementation period are as follows:

Table 4: Escalation Rates for Price Contingency Calculation

Item	2020	2021	2022	2023	2024	2025	Average
Foreign rate of price inflation	1.50%	1.60%	1.60%	1.60%	1.60%	1.60%	1.58%
Domestic rate of price inflation	1.80%	2.00%	2.00%	2.00%	2.00%	2.00%	1.97%

Source: Asian Development Bank.

- (iii) The ADB loan has loan term of 25-year including a 6-year grace period; the KfW loan has a tenor of 15 years with a 5-year grace period.
- (iv) Financing costs for the ADB loan include interest during implementation (IDC) and commitment fee charges. The IDC is computed at a 5-year fixed EURO swap rate of 0.066% plus an ADB spread of 0.50% and a maturity premium of 0.1%. The commitment fee is levied at 0.15% against the undisbursed amount of the loan each year. KfW loan's IDC is computed at a 5-year fixed EURO swap rate plus a spread of 0.55%. The commitment fee is levied at 0.25% annually on undisbursed amount. An upfront fee of 0.35% at the beginning of the loan also applies to the total amount of the loan.
- (v) The executing and implementing agencies have assured ADB that counterpart funding will be provided or secured in a timely manner, including any additional counterpart funding required for any shortfall of funds or cost overruns
- (vi) The cost of preparing sufficient due diligence of investment opportunities for GIF will be held by HXIC. HTIC will provide management fee to HXIC of 3% annually of the capital committed and not yet returned to Limited Partners. The Management Fee is paid up-front on a half yearly basis.

C. Detailed Cost Estimates by Expenditure Category

Table 5-1: Detailed Cost Estimates by Expenditure Category for the Project

Item	CNY Million			\$ million			€ million			% of Base Cost
	Foreign Exchange	Local Currency	Total Cost	Foreign Exchange	Local Currency	Total Cost	Foreign Exchange	Local Currency	Total Cost	
A. Investment Costs										
1. Civil works	-	783.17	783.17	-	113.52	113.52	-	102.27	102.27	60.0%
1A. Civil works for Xin'an River Basin ^a	-	657.03	657.03	-	95.24	95.24	-	85.80	85.80	50.3%
1B. Civil works for Yangzi River Basin ^b	-	126.14	126.14	-	18.29	18.29	-	16.47	16.47	9.7%
2. Mechanical and equipment	-	150.58	150.58	-	21.83	21.83	-	19.66	19.66	11.5%
3. Project management and capacity development	51.64	-	51.64	7.49	-	7.49	6.74	-	6.74	4.0%
4. Project preparation	-	2.38	2.38	-	0.34	0.34	-	0.31	0.31	0.2%
5. Land acquisition and resettlement	-	3.70	3.70	-	0.54	0.54	-	0.48	0.48	0.3%
6. Consulting services for start-up	1.15	-	1.15	0.17	-	0.17	0.15	-	0.15	0.1%
7. Survey, design, consultancy and supervision	-	60.14	60.14	-	8.72	8.72	-	7.85	7.85	4.6%
8. Green Incentive Fund	-	52.80	52.80	-	7.65	7.65	-	6.90	6.90	4.0%
9. Green Investment Fund	-	200.00	200.00	-	28.99	28.99	-	26.12	26.12	15.3%
Subtotal A	52.79	2,035.94	1,305.57	7.65	295.12	189.25	6.89	265.87	170.49	100.0%
B. Contingencies	7.53	127.66	135.19	1.09	18.51	19.60	0.98	16.67	17.65	10.4%
C. Financial Charges during Implementation	0.70	13.98	14.68	0.10	2.03	2.13	0.09	1.83	1.92	1.1%
Total Project Cost (A+B+C+D)	61.02	2,177.59	1,455.43	8.84	315.65	210.97	7.97	284.37	190.06	111.5%

^a Xin'an River Basin includes Huizhou District, Xiuning County, Tunxi District, She County, and Yi County.

^b Yangzi River Basin includes Qimen County and Huangshan District.

Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

52. The detailed cost estimates for appraised investments by expenditure category together is provided in Table 5-2. The cost estimates by expenditure category for the subsequent batch of investments will be prepared during project implementation.

Table 5-2: Cost Estimates by Expenditure Category for Green Investment Fund

Item	CNY Million			\$ million			€ million			% of Base Cost
	Foreign Exchange	Local Currency	Total Cost	Foreign Exchange	Local Currency	Total Cost	Foreign Exchange	Local Currency	Total Cost	
A. Investment Costs										
1. Capital committed	-	197.04	197.04	-	28.56	28.56	-	25.73	25.73	98.5%
2. Management Expenses of HXIC	-	2.96	2.96	-	0.43	0.43	-	0.39	0.39	1.5%
Subtotal A	-	200.00	200.00	-	28.99	28.99	-	26.12	26.12	100.0%
B. Recurrent Costs	-	-	-	-	-	-	-	-	-	0.0%
C. Contingencies	-	2.79	2.79	-	0.40	0.40	-	0.36	0.36	1.4%
D. Financial Charges during Implementation ^a	-	2.08	2.08	-	0.30	0.30	-	0.36	0.27	1.0%
Total Project Cost (A+B+C+D+E)	-	204.87	204.87	-	29.70	29.70	-	26.75	26.75	102.4%

HXIC-Huangshan Xintou Investment Company.

^a Including financial charges during construction.

Sources: Asian Development Bank estimates.

D. Allocation and Withdrawal of Loan Proceeds

Table 6A: Allocation and Withdrawal of Loan Proceeds (Summary)

Number	Item	Total Amount Allocated for ADB Financing (€ million) Category	Percentage and Basis for Withdrawal from the Loan Account
1	Works, Goods and Services**	73.58	Up to 100% of total expenditures claimed ^a
2	Green Incentive Fund***	3.45	100% of total expenditures claimed
3	Green Investment Fund****	13.06	100% of total expenditures claimed
	Total	90.09	

ADB = Asian Development Bank.

^a Detailed category amounts and disbursement percentages to be used during disbursement are in Table 6b of the PAM.

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

*** Subject to the condition for withdrawal described in paragraph 7 (a) and (b) of Schedule 3 of the Loan Agreement.

**** Subject to the condition for withdrawal described in paragraph 7 (a) and (c) of Schedule 3 of the Loan Agreement.

Source: Asian Development Bank estimates.

Table 6B: Allocation and Withdrawal of Loan Proceeds (Detailed)

Category		ADB Financing		
No.	Item	Amount Allocated (€ million)		Percentage and Basis for Withdrawal from the Loan Account
		Category	Subcategory	
1	Works, Goods, and Services	73.58		
1A	Works for Xin'an River Basin ^{a,c}		51.99	60.6% of total expenditure claimed
1B	Works for Yangzi River Basin ^{b,c}		8.24	50.0% of total expenditure claimed
1C	Goods, Services ^c		13.20	50.0% of total expenditure claimed
1D	Consulting Services for Start-up ^c		0.15	100% of total expenditure claimed
2	Green Incentive Fund ^{c,d}	3.45		100% of total expenditure claimed
3	Green Investment Fund ^{c,e}	13.06		100% of total expenditure claimed
	Total	90.09		

^a Xin'an River Basin includes Huizhou District, Xiuning County, Tunxi District, She County, and Yi County.

^b Yangzi River Basin includes Qimen County and Huangshan District.

^c Subject to the condition for withdrawal described in paragraph 7 (a) of Schedule 3 of the Loan Agreement.

^d Subject to the condition for withdrawal described in paragraph 7 (a) and (b) of Schedule 3 of the Loan Agreement.

^e Subject to the condition for withdrawal described in paragraph 7 (a) and (c) of Schedule 3 of the Loan Agreement.

Source = Asian Development Bank estimates.

E. Detailed Cost Estimates by Financier

Table 7: Cost Estimates by Financier
(€ million)

Category	Asian Development Bank		KfW		Government		Total Cost (D)
	Amount (A)	% of Cost Category (A/D)	Amount (A)	% of Cost Category (A/D)	Amount (B)	% of Cost Category (B/D)	
A. Investment Costs							
1. Civil works	60.23	58.9%	28.54	27.9%	13.50	13.2%	102.27
1A. Civil works for Xin'an River Basin ^a	51.99	60.60%	20.31	23.67%	13.50	15.74%	85.80
1B. Civil works for Yangzi River Basin ^b	8.24	50%	8.24	50.00%	-	0.00%	16.47
2. Mechanical and equipment	9.83	50.0%	9.83	50.0%	-	0.0%	19.66
3. Project management and capacity development	3.37	50.0%	3.37	50.0%	-	0.0%	6.74
4. Project preparation	-	0.0%	-	0.0%	0.31	100.0%	0.31
5. Land acquisition and resettlement	-	0.0%	-	0.0%	0.48	100.0%	0.48
6. Consulting services for start-up	0.15	100.0%	-	0.0%	-	0.0%	0.15
7. Survey, design, consultancy and supervision	-	0.0%	-	0.0%	7.85	100.0%	7.85
8. Green Incentive Fund ^c	3.45	50.0%	1.72	25.0%	1.72	25.0%	6.90
9. Green Investment Fund ^c	13.06	50.0%	6.53	25.0%	6.53	25.0%	26.12
Subtotal A	90.09	52.8%	50.00	29.3%	30.40	17.8%	170.49
B. Contingencies	-	0.0%	-	0.0%	17.65	100.0%	17.65
C. Financial Charges during Implementation	-	0.0%	-	0.0%	1.92	100.0%	1.92
Total Project Cost (A+B+C+D)	90.09	47.3%	50.00	26.3%	49.97	26.3%	190.06
% Total Project Cost	47.4%		26.3%		26.3%		100.0%

^a Xin'an River Basin includes Huizhou District, Xiuning County, Tunxi District, She County, and Yi County.

^b Yangzi River Basin includes Qimen County and Huangshan District.

^c 100% of total expenditure claimed for these two funds

Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

F. Detailed Cost Estimates by Outputs and/or Components

Table 8: Cost Estimates by Output
(€ million)

Item	Total Cost	Output 1		Output 2		Output 3		Output 4	
		Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category
A. Investment Costs									
1. Civil works	102.27	60.41	59.1%	41.86	40.9%	-	0.0%	-	0.0%
1A. Civil works for Xin'an River Basin ^a	85.80	46.78	54.5%	39.03	45.5%	-	0.0%	-	0.0%
1B. Civil works for Yangzi River Basin ^b	16.47	13.64	82.8%	2.83	17.2%	-	0.0%	-	0.0%
2. Mechanical and equipment	19.66	-	0.0%	11.74	59.7%	-	0.0%	7.92	40.3%
3. Project management and capacity development	6.74	-	0.0%	-	0.0%	-	0.0%	6.74	100.0%
4. Project preparation	0.31	0.18	59.1%	0.13	40.9%	-	0.0%	-	0.0%
5. Land acquisition and resettlement	0.48	-	0.0%	0.48	100.0%	-	0.0%	-	0.0%
6. Consulting services for start-up	0.15	-	0.0%	-	0.0%	-	0.0%	0.15	100.0%
7. Survey, design, consultancy and supervision	7.85	4.54	57.8%	3.31	42.2%	-	0.0%	-	0.0%
8. Green Incentive Fund	6.90	-	0.0%	-	0.0%	6.90	100.0%	-	0.0%
9. Green Investment Fund	26.12	-	0.0%	-	0.0%	26.12	100.0%	-	0.0%
Subtotal A	170.49	65.14	38.2%	57.52	33.7%	33.01	19.4%	14.82	8.7%
B. Contingencies	17.65	7.95	45.0%	7.07	40.0%	0.91	5.1%	1.73	9.8%
C. Financial Charges during Implementation	1.92	0.73	38.0%	0.65	33.9%	0.34	17.8%	0.20	10.3%
Total Project Cost (A+B+C+D)	190.06	73.82	38.8%	65.24	34.3%	34.26	18.0%	16.74	8.8%
% Total Project Cost	100.0%	73.82	38.8%	65.24	34.3%	34.26	18.0%	16.74	8.8%

^a Xin'an River Basin includes Huizhou District, Xiuning County, Tunxi District, She County, and Yi County.

^b Yangzi River Basin includes Qimen County and Huangshan District.

Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank

G. Detailed Cost Estimates by Year

Table 9: Detailed Cost Estimates by Year
(€ million)

Item	Total Cost	Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Year 6 2025
A. Investment Costs							
1. Civil works	102.27	-	14.14	46.85	30.88	9.02	1.39
1A. Civil works for Xin'an River Basin ^a	85.80	-	11.65	39.60	26.23	7.09	1.24
1B. Civil works for Yangzi River Basin ^b	16.47	-	2.49	7.25	4.65	1.93	0.16
2. Mechanical and equipment	19.66	-	6.40	6.32	2.64	2.15	2.15
3. Project management and capacity development	6.74	-	1.81	1.48	1.38	1.13	0.95
4. Project preparation	0.31	0.31	-	-	-	-	-
5. Land acquisition and resettlement	0.48	0.48	-	-	-	-	-
6. Consulting services for start-up	0.15	-	0.15	-	-	-	-
7. Survey, design, consultancy and supervision	7.85	6.46	0.28	0.28	0.28	0.28	0.28
8. Green Incentive Fund	6.90	-	0.43	1.72	1.72	1.72	1.29
9. Green Investment Fund	26.12	-	26.12	-	-	-	-
Subtotal A	102.27	-	14.14	46.85	30.88	9.02	1.39
B. Contingencies	17.65	0.52	2.53	6.34	4.97	2.24	1.06
C. Financial Charges during Implementation	1.92	0.24	0.34	0.34	0.34	0.33	0.34
Total Project Cost (A+B+C+D)	190.06	8.01	52.18	63.33	42.21	16.86	7.46
% Total Project Cost	100.0%	4.2%	27.5%	33.3%	22.2%	8.9%	3.9%

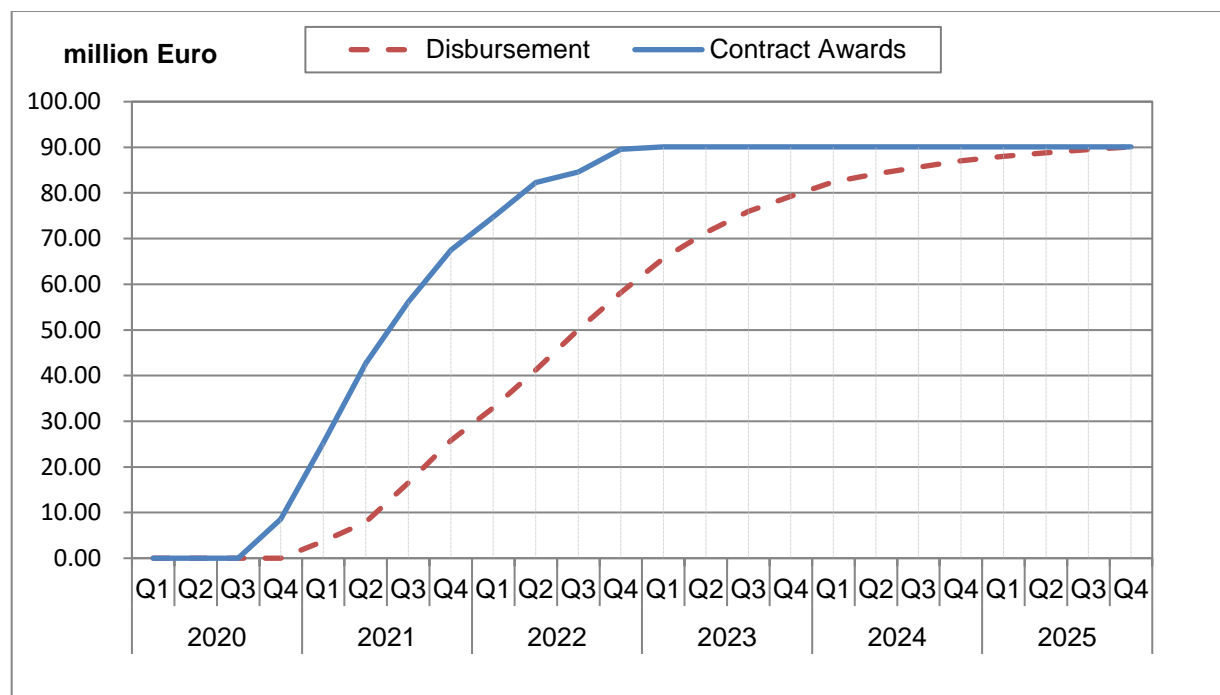
^a Xin'an River Basin includes Huizhou District, Xiuning County, Tunxi District, She County, and Yi County.

^b Yangzi River Basin includes Qimen County and Huangshan District.

Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank

H. Contract and Disbursement S-Curve



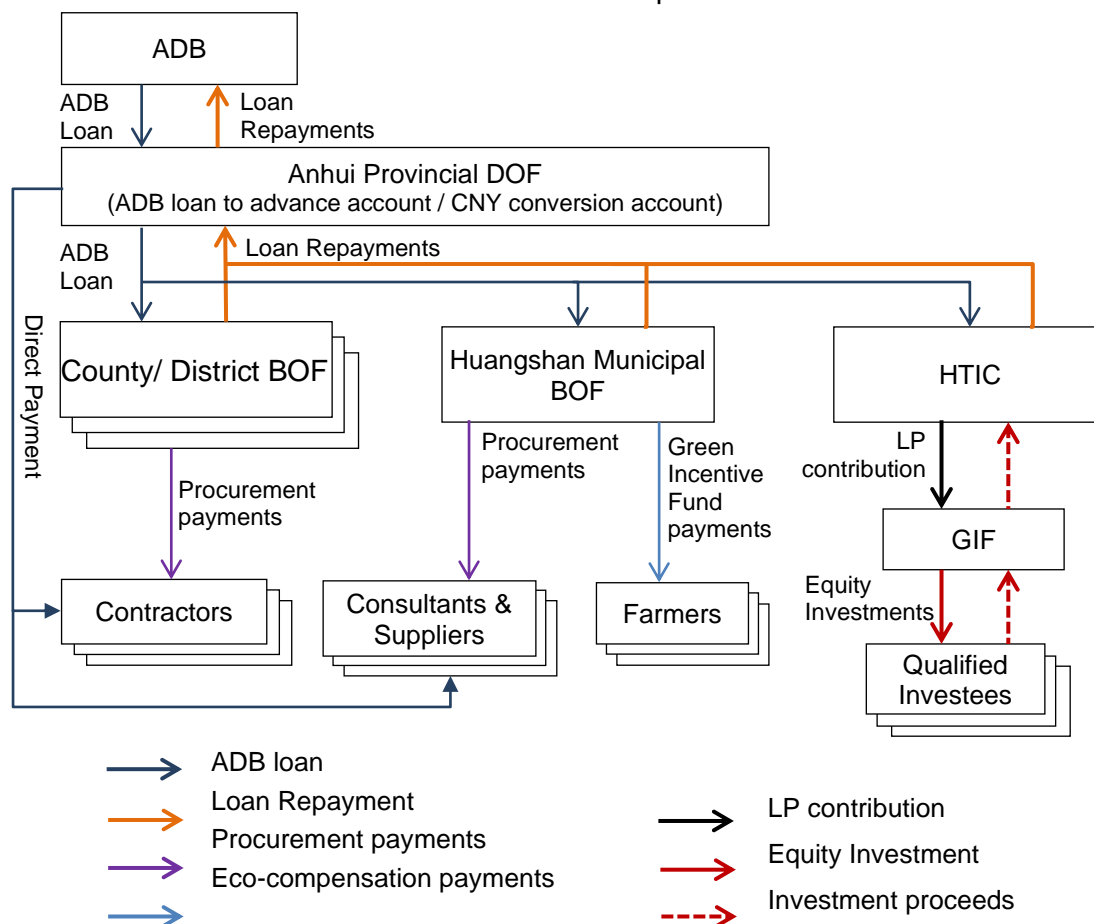
(€ million)										
Year	Projected Contract Awards					Projected Disbursement				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2020	0.00	0.00	0.00	8.54	8.54	0.00	0.00	0.00	0.00	0.00
2021	16.67	17.46	13.48	11.34	58.95	3.73	4.16	8.64	9.25	25.77
2022	7.18	7.63	2.28	5.01	22.11	7.18	8.22	8.84	8.15	32.40
2023	0.49	0.00	0.00	0.00	0.49	7.51	5.68	4.58	3.34	21.11
2024	0.00	0.00	0.00	0.00	0.00	3.16	1.74	1.46	1.41	7.77
2025	0.00	0.00	0.00	0.00	0.00	0.94	0.79	0.72	0.59	3.04
Total					90.09					90.09

Source: Asian Development Bank estimates.

I. Fund Flow Diagram

1. General

53. ADB loan proceeds will go to the advance account at the Anhui Provincial Department of Finance. The loan proceeds will then be used to either: 1) pay project expenditures directly, 2) reimburse: (i) district and/or county-level finance bureaus for payments to contractors by district and/or county PMOs; (ii) Huangshan Municipal Bureau of Finance for payments for consulting services or centrally procured equipment (e.g., printers for all PMOs) and supplies (iii) Huangshan Municipal Bureau of Finance for payments to eligible farmers for Green Incentive Fund; or 3) transfer funds to HTIC for the Green Investment Fund component.



ADB = Asian Development Bank, BOF = Bureau of Finance, GIF = Green Investment Fund, HTIC = Huangshan Trust and Investment Corporation, LP = Limited partner.

Figure 3: Fund flow chart of the Project

2. Fund flow for project loan

54. ADB will enter into a Loan Agreement with the PRC, acting through MOF; MOF will on-lend ADB loan to APG; APG will on-lend ADB loan to HMG; HMG will enter into an onlending agreement with HTIC.

55. Anhui Provincial Department of Finance (APDOF), on behalf of APG, will establish an advance account denominated in euro to receive loan proceeds from ADB, and a CNY Conversion Account (CCA) in CNY to receive the conversion of ADB loan funds from euro to CNY.

3. Green Incentive Fund

56. The disbursement of the Green Incentive Fund will be implemented by the HMBOF. The HMBOF will disburse directly to the participating tea gardens through its designated account based on the list of participating tea gardens and their corresponding amounts provided by HPMO. The HPMO will (i) agree with the tea gardens in advance in terms of the compensation scheme, (ii) engage the third party to verify actual achievements, and (iii) provide this information to HMBOF as supporting documents for disbursement. Upon signing of Incentive Payment Agreement, HMBOF will release the fund from its designated account, and claim reimbursement from the advance account at APDOF for ADB's share of the expenditures. It is cash grant so there is no repayment from tea gardens to the HMG.

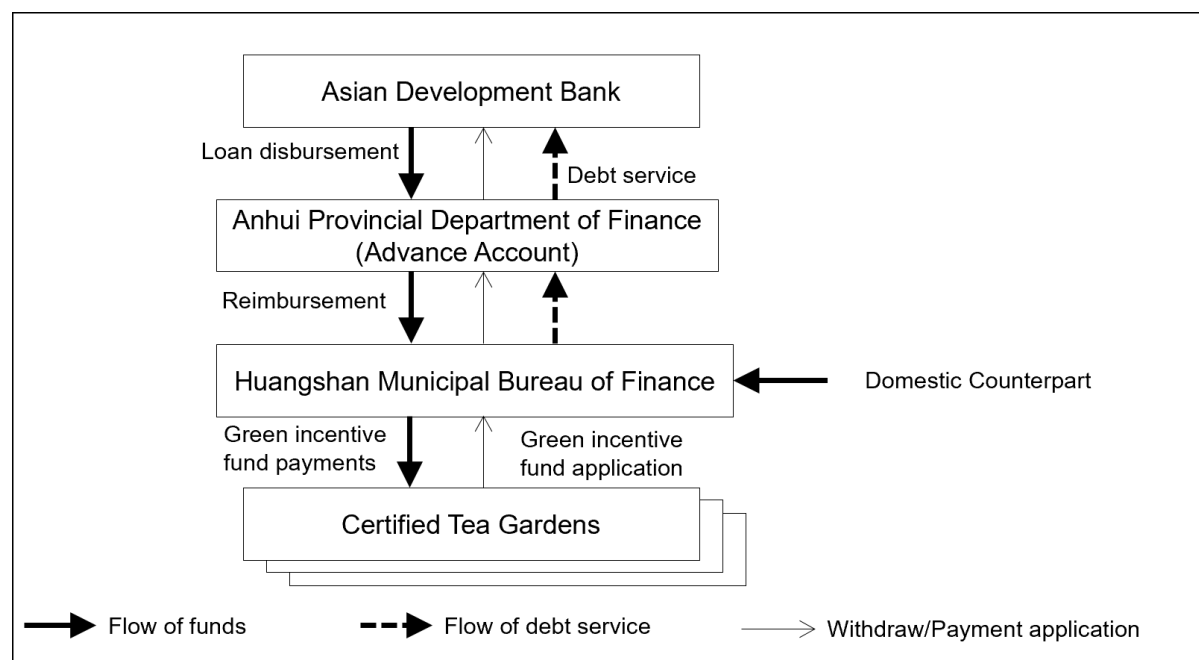


Figure 4: Fund flow chart of Green Incentive Fund

4. Green Investment Fund

57. Figure 4 shows the (i) cash flows of ADB loan funds to and from Qualified Investees; (ii) repayment flows and withdrawal application flows between ADB, HMG and HTIC. The agreement flow, loan disbursement and fund flow are as follows:

- (i) HTIC as LP will enter into a Limited Partnership Agreement with HXIC to create GIF.
- (ii) ADB loan proceeds will be disbursed to APDOF's advance account and converted into CNY in the CCA.
- (iii) HXIC will enter into Equity Investment Agreements with the Qualified Investees.
- (iv) Based on the executed Equity Investment Agreements, HXIC through HTIC will request transfer of funds from the advance account to the GIF RFA
- (v) HXIC disburses the loan proceeds from the GIF RFA to Qualified Investees within 3 business days upon receiving funds from advance account.
- (vi) The cash accumulated in the RFA will be used for reinvesting and/or setting up new LP's for equity financing to subprojects until ADB loan principal repayments are due.

58. **Loan proceeds re-deployment.** HXIC shall cause GIF (during their respective reinvestment periods) to, redeploy all Divested Capital to make further investments in Qualified Investees as quickly as feasible after GIF divest from the eligible investee and the proceed is paid to the GIF. The capital will be redeployed to new Eligible Investee for eligible subproject, if not paid to HMG for serving the debt service obligations.

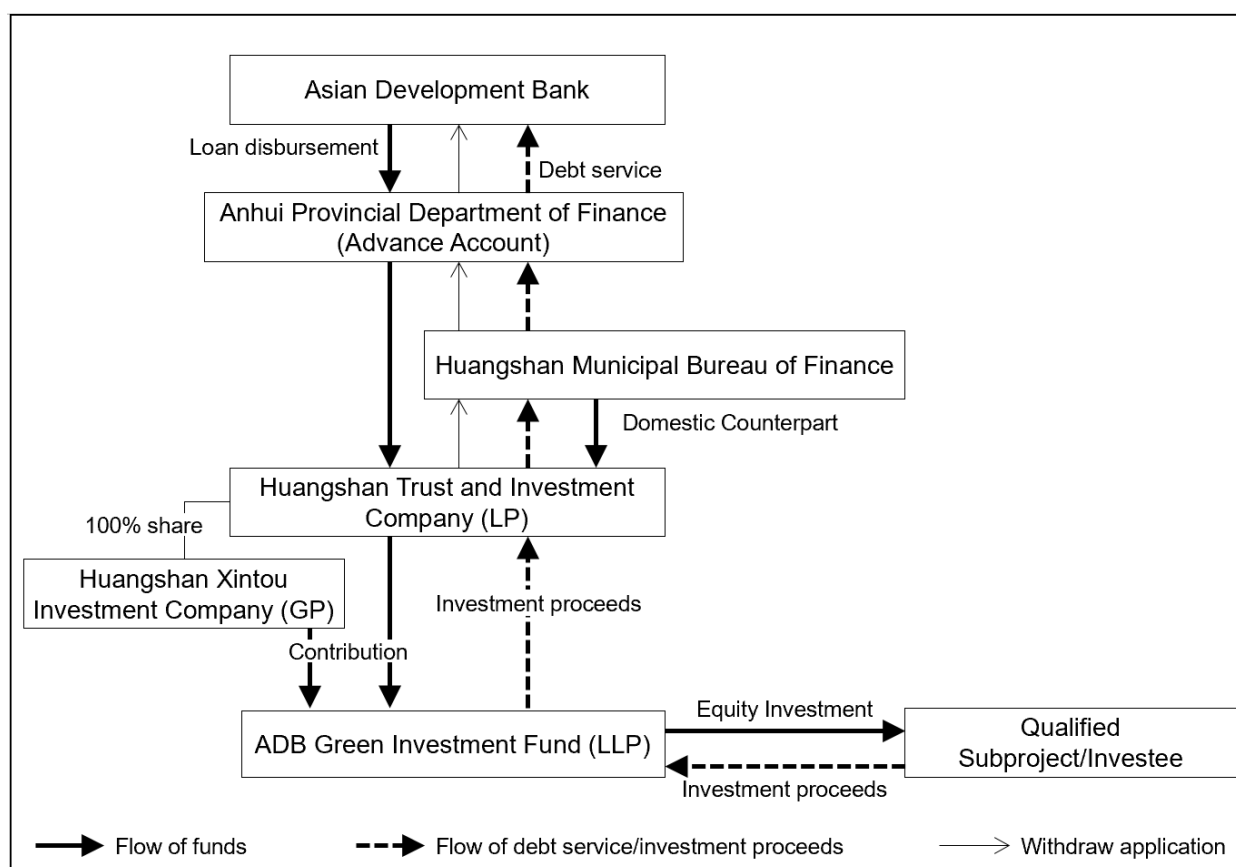


Figure 5: Fund flow chart of Green Investment Fund

V. FINANCIAL MANAGEMENT

A. Financial Management Assessment

59. The financial management assessment (FMA) was conducted in accordance with Asian Development Bank's (ADB) Financial Management and Analysis of Projects, Financial Due Diligence: A Methodology Note, and other relevant technical guidance.¹⁴ The FMA considered the financial management capacity of HMG as the project executing agency, and the seven implementing agencies for the investment loan component, Huangshan District Government, Huizhou District Government, Tunxi County Government, She County Government, Yi County Government, Qimen County Government, and Xiuning County Government. HMG selected Huangshan Trust and Investment Corporation (HTIC), the implementing agency for the GIF component. HTIC, incorporated in January 2016 in Huangshan, is a 100% state-owned enterprise of the Huangshan Municipal Government. HTIC is operating under PRC's commercial law and is financially autonomous. Huangshan Xintou Investment Company (HXIC) is 100% owned subsidiary of HTIC, will be the fund manager of the GIF. The FMA also assessed the financial management capacities of both HTIC and HXIC for implementing the financial intermediation loan component. The FMA covered funds-flow arrangements, staffing, accounting and financial reporting systems, financial information systems, and internal and external auditing arrangements.

60. The FMA confirms that both the executing agency and the eight implementing agencies have satisfactory financial management capacity and capability in terms of funds-flow management, advance funds usage, SOE procedures, accounting and financial reporting, and auditing to effectively and efficiently implement the project.

61. The key weakness in project financial management is executing and implementing agencies' lack of experience in executing ADB-financed projects. This risk will be mitigated through financial management action plan. The overall financial management risk-rating of the project before considering mitigating measures is moderate.

62. The identified key financial management risks will be mitigated by the proposed action plan as shown in Table 10 and will be closely monitored during project implementation.

Table 10: Proposed Financial Management Action Plan

Action	Responsibility	Timing
Appointment of qualified financial management staff to perform key roles in executing agency and implementing agencies	executing agency, implementing agencies	Two months before loan effectiveness
Defining clear financial management job descriptions and requirements for roles and responsibilities within executing agency and implementing agencies, including but not limited to internal structure, reporting lines, separation of duties, tasks and responsibilities, performance requirements	executing agency, implementing agencies	Two months before loan effectiveness
Development of a comprehensive investment manual for GIF to include detailed criteria, procedures, process, compliance requirements	HMG, HTIC, ADB	Three months after loan signing

¹⁴ The guideline is available electronically from the ADB website (<https://www.adb.org/projects/operations/financial-management-resources>).

Action	Responsibility	Timing
and standards in terms of qualified investments' selection, approval, due diligence, safeguards, and monitoring		
Development of financial management manuals and training of relevant staff	executing agency, implementing agencies	Two months before loan effectiveness
Training on ADB's financial management requirements, including accounting and reporting, project auditing, loan disbursement, and foreign exchange risk management	executing agency, implementing agencies, ADB	One month before loan effectiveness
Consultation within related government offices, external professionals, and financial services providers on interest rate and foreign exchange risk management	executing agency, implementing agencies, ADB	During first year of project implementation

ADB = Asian Development Bank, GIF = green investment fund, HMG = Huangshan Municipal Government, HTIC = Huangshan Trust and Investment Corporation.

Source: Asian Development Bank.

63. No significant country-level financial management issues are identified. Overall inherent risk and control risk are assessed as moderate.

B. Disbursement

1. Disbursement Arrangements for ADB Funds

64. The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time),¹⁵ and detailed arrangements agreed upon between the government and ADB. Online training for project staff on disbursement policies and procedures is available.¹⁶ Project staff are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

65. **Advance fund procedure.** The Anhui Provincial Department of Finance (APDOF) will establish and maintain an advance account. The currency of the ADB advance account is in Euro. The advance account is to be used exclusively for ADB's share of eligible expenditures. The APDOF will administer the advance accounts and will be accountable and responsible for proper use of advances to the advance accounts. The advance accounts will be for the overall project including the investment project loan component and the financial intermediation loan component.

66. The total outstanding advance to the advance account will not exceed the estimate of ADB's share of expenditures to be paid through the advance account for the forthcoming six months. HMBOF may request for initial and additional advances to the advance account based on an estimate of expenditure sheet¹⁷ setting out the estimated expenditures to be financed through the account for the forthcoming six months. Supporting documents will be submitted to ADB or retained by the IAs in accordance with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time) when liquidating or replenishing the advance account.

¹⁵ The handbook is available electronically from the ADB website (<http://www.adb.org/documents/loan-disbursement-handbook>).

¹⁶ Disbursement eLearning. http://wpqr4.adb.org/disbursement_elearning.

¹⁷ Estimate of Expenditure sheet is available in Appendix 8A of ADB's *Loan Disbursement Handbook* (2017, as amended from time to time).

67. **Statement of expenditure (SOE) procedure.**¹⁸ The SOE procedure may be used to reimburse eligible expenditures or liquidate advances to the advance account.

68. **Statement of expenditure (SOE) procedure for GIF.** For the GIF component, SOE for FIL procedure may be used for reimbursement of eligible expenditures or liquidation of advances to the advance account for equity investment below the free limit of CNY60 million. Reimbursement and liquidation of individual payments in excess of the free limit should be supported by full documentation when submitting the withdrawal application to ADB. For the first equity investment or equity investment above the free limit, investment proposals need to be submitted by the HTIC through the HMG to ADB for prior review and approval. This enables ADB to satisfy itself on the quality of the HTIC's appraisal of subprojects.

69. Supporting documents and records for the expenditures claimed under the SOE will 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.

70. **Conditions for withdrawals for project loan.** The withdrawal shall not be made until (i) the KfW Loan Agreement is executed and delivered, and (ii) all conditions precedent to the loan effectiveness shall have been fulfilled.

2. Disbursement Arrangements for the Green Incentive Fund

71. HMG will assign a designated account for the proposed Green Incentive Fund that will be disbursed through the following steps:

- (i) HMG, with support of ADB and KfW and consultants, conducts a participatory design and study to develop the guidelines for the Green Incentive Fund operation mechanism, including (a) green tea garden selection criteria, (b) tea garden application for participation and approval procedure, (c) third party monitoring and result verification mechanism, and (d) result-based compensation mechanism;
- (ii) HMG issues the guidelines for the Green Incentive Fund and invites tea gardens to apply for participation;
- (iii) HMG, through HPMO, screens, selects and approves participating tea gardens;
- (iv) participating tea gardens implement the green farming practice as promoted by HMG;
- (v) HMG engages a third-party monitoring agent to assess and verify the progress and achievements made by the participating tea gardens in reducing the targeted pollution discharge;
- (vi) HMG makes compensation payments from its designated account to the participating tea gardens in accordance with the pre-announced criteria, and the tea gardens sign receipts for cash grant received.

¹⁸ SOE forms are available in Appendix 7B and 7D of ADB's *Loan Disbursement Handbook* (2017, as amended from time to time).

- (vii) HMG submits the receipts signed by the tea gardens as the evidence of payments made, together with the compensation criteria, to APDOF to request reimbursement of funds from the advance account for ADB's share of expenditures.

72. **Conditions for withdrawals for Green Incentive Fund.** The withdrawal shall not be made until (i) the HMG adopt clear reward guidelines, disbursement arrangement, and eligibility criteria for the Qualified Recipient (each recipient of the cash grant from the Green Incentive Fund), (ii) screen and approve the Qualified Recipient in compliance with the foregoing requirements, and (iii) execute and deliver an Incentive Payment Agreement with all Qualified Recipient in addition to the above requirements stipulated in the para 70.

3. Disbursement Arrangements for the Green Investment Fund

73. The disbursement processing sequence for the GIF will be as follows.

- (i) HTIC as LP will enter into a Limited Partnership Agreement with HXIC to create GIF.
- (ii) ADB loan proceeds will be disbursed to APDOF's advance account and converted into CNY in the CCA.
- (iii) HXIC will enter into Equity Investment Agreements with the Qualified Investees.
- (iv) Based on the executed Equity Investment Agreements, HXIC through HTIC will request transfer of funds from the advance account to the GIF RFA.
- (v) HXIC disburses the loan proceeds from the GIF RFA to Qualified Investees within 3 business days upon receiving funds from advance account, and
- (vi) The cash accumulated in the RFA will be used for reinvesting and/or setting up new LP's for equity financing to subprojects until ADB loan principal repayments are due.

74. **Conditions for withdrawals for GIF.** The withdrawal shall not be made until (i) Onlending Agreement has been signed between HMG and HTIC; (ii) the Limited Partnership Agreement for GIF have been signed by HTIC and HXIC; (iii) the GIF is formally established, with the permission of the HMG, for the purpose of providing equity investment; (iv) the Framework Cooperation Agreement has been signed and the Revolving Account has been opened at the Account Bank, (v) the ESMS for the Project gas been endorsed and adopted by the HTIC for GIF, and (vi) the Equity Investment Agreement with all relevant Qualified Investee (an investee which satisfies the eligibility criteria set out in Appendix 4-C to the PAM) shall have been executed and delivered by HXIC and Qualified Investee in addition to above requirements stipulated in the para 70.

75. Before the submission of the first withdrawal application, the borrower will submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the government, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is stipulated in the *Loan Disbursement Handbook* (2017, as amended from time to time). Individual payments below such amount must 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 will ensure sufficient category and contract balances before requesting disbursements. Use of ADB's Client Portal for Disbursements¹⁹ system is encouraged for submission of withdrawal applications to ADB.

4. Disbursement Arrangements for Counterpart Fund

76. The HPMO and the implementing agencies will be responsible for (i) preparing disbursement projections, and (ii) requesting budgetary allocations for counterpart funds in annual government budgets, which is to be reviewed by the city governments and approved by the city people's congresses. Based on actual incurrence of costs, the HPMO and the district and county implementing agencies will initiate disbursement requests to their relevant finance bureaus. Upon confirmation of the eligibility of the payments, the finance bureaus will disburse directly to the contractors.

C. Accounting

77. The executing agency and implementing agencies will maintain, or cause to be maintained, separate books and records by funding source for all expenditures incurred on the project, following the accrual-based accounting system and in accordance with the accounting policies and procedures for government fiscal revenues and expenditures issued by the MOF. These accounting policies and procedures are also used to record and report the receipts and payments of fiscal revenues and expenditures through computerized systems with the ability to generate financial statements. The HPMO will ensure that project financial statements are prepared by district and county SPMOs in accordance with the government's accounting laws and regulations which are consistent with international accounting principles and practices.

78. **Statement of Utilization of Funds for GIF.** HTIC will maintain a Revolving Fund Account to accept ADB and KfW loan proceeds. HTIC will cause HXIC to manage the accounts at GIFF. HXIC will prepare annual consolidated statements of utilization of funds (SUF) in accordance with the government's accounting laws and regulations which are consistent with international accounting principles and practices acceptable to ADB. A sample statement is in Appendix 4-D.

D. Auditing and Public Disclosure

1. General

79. The HMG will cause the detailed project financial statements prepared by HPMO and the implementing agencies to be audited in accordance with equivalent national standards and by an independent auditor both acceptable to ADB. The audited project financial statements together with the auditor's opinion in the English language will be submitted to ADB within six months from the end of the fiscal year by the HPMO. Annual Audited Entity Statements of the Executing Agency (AEFS) should be submitted by HMG and the project implementing agencies (three district and four county governments in Huangshan).

¹⁹ The ADB Client Portal Disbursement system facilitates online submission of withdrawal application 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>.

80. For entities preparing independent entity financial statements, the audited entity financial statements, together with the auditor's report and management letter, will be submitted in the English language to ADB within six months from the end of the fiscal year to which they relate.

81. 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 executing agency was in compliance with the financial covenants contained in the legal agreements (where applicable).

82. 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.

83. The government, HMG, and the implementing agencies 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.²⁰ 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.

84. 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.²¹ 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 after ADB's confirmation of their acceptability by posting them on ADB's website. The management letter, additional auditor's opinions, and audited entity financial statements will not be disclosed.²²

2. For Green Investment Fund

85. The audited SUF for GIF together with the external auditor's report will be prepared by HTIC and submitted to ADB within 6 months after the close of the fiscal year to which they relate.

86. In addition to the annual audited SUF, HTIC will (i) have its financial statements audited annually by independent auditors whose qualifications, experience and terms of reference are

²⁰ 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.

²¹ ADB. 2018. Access to Information Policy. Manila.

²² This type of information would generally fall under access to information policy exceptions to disclosure. ADB. 2018. *Access to Information Policy*. Paragraph 17.

acceptable to ADB, in accordance with international auditing standards or the national equivalent acceptable to ADB; (ii) as part of each such audit, have the auditors prepare the auditors' opinion(s) on the financial statements and compliance with any financial covenants it is required to maintain as specified in the loan or project agreements; and (iii) furnish to ADB not later than 6 months after the end of the fiscal year to which they relate, copies of such audited financial statements and auditors' opinion(s), all in the English language, and such other information concerning these documents and the audit as ADB shall from time to time reasonably request.

VI. PROCUREMENT AND CONSULTING SERVICES

87. In accordance with the Procurement Regulation for ADB Borrowers (2017), the procurement risk assessment and the strategic procurement planning have been conducted and concluded that the project procurement is at low risk as the executing and implementing agencies have experienced in managing international financial institution's funded projects.

A. Advance Contracting and Retroactive Financing

88. All advance contracting and retroactive financing will be undertaken in conformity with ADB Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time).²³ The issuance of invitations for bids, bidding documents, bid evaluation reports, and draft contracts under advance contracting and retroactive financing will be subject to ADB prior approval. The borrower, HMG, HSDG, HZDG, TDG, SCG, YCG, QCG, XCG and HTIC have been advised that approval of advance contracting and retroactive financing does not commit ADB to finance the project.

89. **Advance contracting.** Advance contracting will apply to the urgent procurement of two works contracts for (i) Smart River Monitoring System of Huangshan and (ii) Village Environment Improvement Project in Tunxi District, and three consulting services contracts for start-up support.

90. **Retroactive financing.** Retroactive financing will apply to the urgent procurement of civil works 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.

B. Procurement of Goods, Works, and Consulting Services

91. All procurement of the ADB-financed works, goods and non-consulting services, and consulting services will be undertaken in accordance with Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time).²⁴

92. The Project has a total 59 contract packages to be financed by ADB, including 28 civil works contracts, 11 goods contracts, and 20 service contracts. Open competitive bidding (OCB) procedures nationally advertised will be used for all civil works and goods contracts. Quality- and cost-based selection (QCBS), quality-based selection (QBS), consultants' qualification selection

²³ <https://www.adb.org/documents/adb-procurement-policy>.

²⁴ Since cofinancier's resources and ADB's ordinary capital resources are used to jointly finance individual procurement packages, universal procurement will apply to all procurement packages to be financed under this project. ADB. 2015. *Enhancing Operational Efficiency of the Asian Development Bank*. Manila.

(CQS), and individual consultant selection (ICS) procedures will be applied for consulting services procurement.

93. An 18-month procurement plan indicating threshold and review procedures, goods, works, and consulting service contract packages and procurement guidelines are in section C.

94. **OCB.** OCB using national advertising will be used for contracts. For procurement under OCB, the following provisions will be applied: (i) the advertisement will be published in the national press for national advertising, ADB website encouraged, an official gazette, or an open access website; (ii) standard bidding documents issued in 2015 by the Ministry of Finance will be used for OCB national advertising, while the standard bidding document for ICT procurement issued by the ADB can be adopted for supply contracts related to the ICT monitoring equipment supply and software development; and (iii) bidding documents will only be in Chinese language (except for contracts which require ADB's prior review and approval) for OCB advertised nationally, and the currencies for bidding and payment will be in CNY unless otherwise agreed between HMG and ADB. Procurement under OCB will use the single-stage, one-envelope procedure. The relevant sections of ADB's Anticorruption Policy²⁵ (1998, as amended from time to time) will be included in all procurement documents and contracts. Bidding will not be conducted using electronic system tools. If bidding rules set by the Public Resources Trading Center are inconsistent with ADB's procurement policy and regulations, ADB's procurement policy and regulations shall prevail.

95. **Consulting Services.** All consultants will be recruited according to ADB Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time). Appendix 2 contains the indicative terms of references for all consulting services. Consulting firms will be engaged using either the quality- and cost-based selection with a standard quality: cost ratio of 90:10, and consultants qualification selection using either full technical proposal, simplified technical proposal or biodata technical proposal. Individual consultants will be engaged through individual consultant selection procedure.

96. **Thresholds for ADB Review.** For the first civil works package and the first goods package, regardless of the estimated contract amount, the invitations for bids, bidding documents, bid evaluation reports, and draft negotiated contracts need ADB's prior review and approval. For the subsequent nationally advertised OCB packages, invitations for bids, bidding documents, bid evaluation reports, and signed contracts provided they are consistent with previously approved documents will not require ADB's prior review. Post review (sampling) approach based on the procurement risk assessment results and strategic procurement planning conducted for the project will be adopted.

97. **Procurement Principles for GIF.** Procurement activities for the qualified enterprises of GIF will follow commercial practice of the selected commercial entities but should address the core procurement principles as stated in ADB Procurement Policy, and adopt appropriate procedures, including (i) payment of reasonable prices, and (ii) fair canvassing when selecting suppliers. All qualified enterprises will be encouraged to procure all goods through competitive bidding or shopping when such procedures are most appropriate in the interest of economy and efficiency. HTIC should monitor procurement and report to ADB if there occurs any inconsistency with ADB core procurement principles and PRC's procurement laws. To provide guidance to qualified investees in undertaking procurement using ADB loan proceeds, and for HTIC to monitor

²⁵ <http://www.adb.org/Documents/Policies/Anticorruption-Integrity/default.asp>

the procurement activities undertaken by qualified enterprises, a project specific procurement regulation has been prepared and included in Appendix 4-E.

C. Procurement Plan

Basic Data

Project Name: Preparing Yangtze River Economic Belt Projects - Anhui Huangshan Xin'an River Ecological Protection and Green Development Project	
Project Number: 52026	Approval Number:
Country: People's Republic of China	Executing Agency: Huangshan Municipal Government
Project Procurement Classification: B	Implementing Agency: 8 IAs: District and county government of Tunxi District, Huangshan District, Huizhou District, She County, Xiuning County, Yi County, Qimen County, and Huangshan Trust Investment Company
Procurement Risk: Low	
Project Financing Amount: ADB Financing: €90.09 million KfW Financing: € 50.00 million Non-Bank Financing: €50.57 million	Project Closing Date: 30 December 2026
Date of First Procurement Plan: 15 August, 2019	Date of this Procurement Plan: 8 November 2019

ADB = Asian Development Bank, KfW = Kreditanstalt für Wiederaufbau.
Source: Asian Development Bank.

1. Methods, Review, and Procurement Plan

98. Except as ADB may otherwise agree, the following process thresholds shall apply to procurement of goods, works, non-consulting services, and consulting services:

Procurement of Goods and Works

Method	Comments
Open Competitive Bidding Advertised Nationally	The procurement assessment examined potential for attracting enough qualified bidders to ensure contract is delivered on time, to requisite quality and exhibit value for money. It was concluded that no works and goods contracts would require international advertising to attract enough qualified bidders. All works and goods contracts can therefore be advertised nationally following OCB procedures.

OCB = open competitive bidding, RFQ = request for quotation.
Source: Asian Development Bank.

Consulting Services

Method	Comments
Quality-and cost-based selection	The following submissions are required for prior review and approval by ADB: Submission 1 (Preparing Cost Estimates, Shortlist, and Request for Proposals), Submission 2 (Evaluating Technical Proposals and Preparing Evaluation Report), Submission 3 (Opening and Evaluating the Financial Proposal(s), Ranking the Proposals, and Recommending Contract Award). Quality and cost ratio – 90:10
Consultant qualification selection	Consultant Qualification Selection (CQS) is adopted for small consultancy services.

Method	Comments
Individual consultant selection	Start-up individual consultants will be engaged by individual consultant selection method.

ADB = Asian Development Bank.

2. Lists of Active Procurement Packages (Contracts)

99. The following table lists goods, works, non-consulting services, and consulting services contracts for which the procurement activity is expected to commence within the procurement plan duration.

Goods, Works, and Non-Consulting Services							
Package No.	General Description	Estimated Value (€ x 1000)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
Works-HZ-1	Sewage and Stormwater Sewer Upgrade Project in Huizhou District	12,228	OCB Natl	Post	1S1E	2020 Q4	Works
Works-HS-4	Sewage and Stormwater Sewer Upgrade Project in Huangshan District	2,060	OCB Natl	Post	1S1E	2020 Q4	Works
Works-XN-1	Sewage and Stormwater Sewer Upgrade Project in Xiuning County - 1	5,521	OCB Natl	Post	1S1E	2021 Q2	Works
Works-XN-2	Sewage and Stormwater Sewer Upgrade Project in Xiuning County -2	5,580	OCB Natl	Post	1S1E	2022 Q1	Works
Works-YX-1	Sewage and Stormwater Sewer Upgrade Project in Yi County	6,199	OCB Natl	Post	1S1E	2021 Q1	Works
Works-SX-1	Sewage and Stormwater Sewer Upgrade Project in She County-1	3,407	OCB Natl	Post	1S1E	2021 Q2	Works
Works-SX-2	Sewage and Stormwater Sewer Upgrade Project in She County-2	5,599	OCB Natl	Post	1S1E	2021 Q3	Works
Works-SX-3	Sewage and Stormwater Sewer Upgrade Project in She County-3	6,195	OCB Natl	Post	1S1E	2022 Q1	Works
Works-SX-4	Sewage and Stormwater Sewer Upgrade Project in She County-4	1,554	OCB Natl	Post	1S1E	2022 Q3	Works
Works-QM-1	Sewage and Stormwater Sewer Upgrade Project in Qimen County-1	3,229	OCB Natl	Post	1S1E	2020 Q4	Works
Works-QM-2	Sewage and Stormwater Sewer Upgrade Project in Qimen County -2	3,110	OCB Natl	Post	1S1E	2021 Q3	Works
Works-QM-3	Sewage and Stormwater Sewer Upgrade Project in Qimen County-3	3,156	OCB Natl	Post	1S1E	2022 Q3	Works
Works-XN-3	Village Environment Improvement Project in Xiuning County-Shangshan 1	2,801	OCB Natl	Post	1S1E	2021 Q2	Works
Works-XN-4	Village Environment Improvement Project in	1,671	OCB Natl	Post	1S1E	2021 Q4	Works

Goods, Works, and Non-Consulting Services							
Package No.	General Description	Estimated Value (€ x 1000)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
	Xiuning County-Shangshan 2						
Works-XN-5	Village Environment Improvement Project in Xiuning County-Shangshan 3	2,957	OCB Natl	Post	1S1E	2022 Q2	Works
Works-XN-6	Village Environment Improvement Project in Xiuning County-Xikou	2,144	OCB Natl	Post	1S1E	2021 Q3	Works
Works-XN-7	Village Environment Improvement Project in Xiuning County-Wucheng	2,977	OCB Natl	Post	1S1E	2022 Q3	Works
Works-HZ-2	Village Environment Improvement Project in Huizhou District	944	OCB Natl	Post	1S1E	2021 Q3	Works
Works-TX-1	Village Environment Improvement Project in Tunxi District-1	1,293	OCB Natl	Prior	1S1E	2020 Q4	Works (1 st works contract)
Works-TX-2	Village Environment Improvement Project in Tunxi District-2	9,372	OCB Natl	Post	1S1E	2021 Q4	Works
Works-HS-1	Xinhua Village Environment Improvement Project in Huangshan District	1,644	OCB Natl	Post	1S1E	2021 Q2	Works
Works-SX-4	Xitou Village Environment Improvement Project in She County-1	7,139	OCB Natl	Post	1S1E	2020 Q4	Works
Works-SX-5	Xitou Village Environment Improvement Project in She County-2	1,734	OCB Natl	Post	1S1E	2021 Q3	Works
Works-SX-2	Environmental Infrastructure Improvement along Xin'an River in She County	3,430	OCB Natl	Post	1S1E	2021 Q3	Works
Works-YX-2	Zhang River Rehabilitation Project in Yi County	493	OCB Natl	Post	1S1E	2021 Q3	Works
Works-HS-2	Caocun River Rehabilitation Project in Huangshan District	2,084	OCB Natl	Post	1S1E	2021 Q2	Works
Works-SX-3	Xi'an River Green Agriculture Demonstration Project in She County	2,562	OCB Natl	Post	1S1E	2021 Q2	Works
Works-HS-3	Xinhua Village Green Agriculture Demonstration Project in Huangshan District	1,190	OCB Natl	Post	1S1E	2021 Q3	Works
Goods-HSC-1	Pine Forest Disease Prevention Project-monitoring and response system	930	OCB Natl	Post	1S1E	2021 Q1	Goods
Goods-HSC-2	Pine Forest Disease Prevention Project-Inspection and Prevention System	1,651	OCB Natl	Post	1S1E	2021 Q1	Goods

Goods, Works, and Non-Consulting Services							
Package No.	General Description	Estimated Value (€ x 1000)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
Goods-HSC-3	Pine Forest Disease Prevention Project-Disease control system	8,749	OCB Natl	Post	1S1E	2021 Q1	Goods
Goods-HSC-4	Pine Forest Disease Prevention Project-MIS	411	OCB Natl	Post	1S1E	2021 Q1	Goods
Goods-HSC-5	Smart River Monitoring System of Huangshan	2,566	OCB Natl	Prior	1S1E	2020 Q3	Goods (1 st goods contract)
Goods-HSC-6	Smart Environment Monitoring System in Qimen County	687	OCB Natl	Post	1S1E	2020 Q4	Goods
Goods-HSC-7-Lot 1	Smart EHS Management System in Huizhou District Industrial Park	1,907	OCB Natl	Post	1S1E	2021 Q2	Goods
Goods-HSC-7-Lot 2	Smart EHS Management System in She County Industrial Park	1,763	OCB Natl	Post	1S1E	2021 Q2	Goods
Goods-HSC-8	Huangshan MIS Top Layer System Project	483	OCB Natl	Post	1S1E	2021 Q2	Goods
Goods-HSC-9	Huangshan Smart EHS General System	387	OCB Natl	Post	1S1E	2021 Q2	Goods
Goods-HSC-10	Office Equipment Supply	131	OCB Natl	Post	1S1E	2020 Q3	Goods

Services							
Package No.	General Description	Estimated Value (€ x 1000)	Recruitment Method	Review	Type of Proposal	Advertisement Date	Comments
Serv-HSC-1	Study on Xinan River Eco-Compensation Evaluation System	392	QCBS	Prior	BTP	2020 Q4	Service
Serv-HSC-2	Huangshan Rural Wastewater Discharge Standard Study	104	CQS	Prior	BTP	2020 Q4	Service
Serv-HSC-3	Green Economic Development Strategic Study and Planning for Huangshan City	392	QCBS	Prior	BTP	2020 Q4	Service
Serv-HSC-4	Certification Study on Green Incentive Fund	392	QCBS	Prior	BTP	2021 Q2	Service
Serv-HSC-5	Project Management Supporting Consulting Service	1,652	QCBS	Prior	FTP	2020 Q3	Service
Serv-HSC-6	Huangshan Training for Capacity Strengthening	281	QCBS	Prior	BTP	2020 Q3	Service
Serv-HSC-7	Construction Supervision Service - Huizhou District	297	QCBS	Prior	BTP	2020 Q3	Service
Serv-HSC-8	Construction Supervision Service - Huangshan District	198	QCBS	Prior	BTP	2020 Q4	Service
Serv-HSC-9	Construction Supervision Service - Tunxi District -B	210	QCBS	Prior	BTP	2020 Q3	Service
Serv-HSC-10	Construction Supervision Service - Xiuning County	521	QCBS	Prior	STP	2020 Q3	Service

Services							
Package No.	General Description	Estimated Value (€ x 1000)	Recruitment Method	Review	Type of Proposal	Advertisement Date	Comments
Serv-HSC-11	Construction Supervision Service - Qimen County	216	QCBS	Prior	BTP	2020 Q4	Service
Serv-HSC-12	Construction Supervision Service - She County	709	QCBS	Prior	STP	2020 Q4	Service
Serv-HSC-13	Construction Supervision Service - Yi County	167	CQS	Prior	BTP	2020 Q4	Service
Serv-HSC-14	Green Incentive Fund Feasibility Study	392	QCBS	Prior	BTP	2020 Q3	Service
Serv-HSC-15	External Social and Resettlement Monitoring	274	QCBS	Prior	BTP	2020 Q3	Service
Serv-HSC-16	Project Experience Dissemination Program	392	QCBS	Prior	BTP	2022 Q4	Service
Serv-HSC-17	She County Household Pig Manure Management Study	157	CQS	Prior	BTP	2021 Q1	Service
Serv-HSC-18-20	Project Start-up Consultancy before Loan Implementation	150	ICS	Prior	N/A	2020 Q4	Service

1S1E = single-stage one-envelop, AC = Advanced Contracting, ADB = Asian Development Bank, BTP = Biodata Technical Proposal, CQS = Consultants' Qualification Selection, FTP = Full Technical Proposal, OCB Natl = open competitive bidding advertised nationally, QCBS = quality- and cost- based selection, RF = Retroactive Financing, STP = Simplified Technical Proposal.

Source: Asian Development Bank estimates.

3. List of Awarded and Completed Contracts

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

Goods, Works and Services					
Package No.	General Description	Contract Value (€)	Date of ADB Approval of Contract Award	Date of Completion	Comments

4. Non-ADB Financing

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

Goods, Works and Services				
General Description	Estimated Value (€x 1000)	Estimated Number of Contracts	Procurement /Selection Method	Comments
Project Supervision Service - Tunxi District	29	1	Domestic procedure	Service
Land Acquisition and Resettlement	483	7	Domestic procedure	Service
Project Feasibility Study	247	1	Domestic procedure	Service
Geological Survey	811	7	Domestic procedure	Service
Compulsory Review of Geological Survey Results	49	7	Domestic procedure	Service
Construction Design	2,897	7	Domestic procedure	Service

Goods, Works and Services				
General Description	Estimated Value (€x 1000)	Estimated Number of Contracts	Procurement /Selection Method	Comments
Compulsory Design Review	151	7	Domestic procedure	Service
Construction Cost Consulting	1,778	7	Domestic procedure	Service
Environmental Impact Assessment	64	1	Domestic procedure	Service
Construction Management	1,784	7	Domestic procedure	Service
Tendering Agency	355	1	Domestic procedure	Service

D. Consultant's Terms of Reference

102. The outline terms of reference for the consulting services packages are detailed in Appendix 2 of the PAM.

VII. SAFEGUARDS

A. Environment

103. **Institutional arrangements for the project environmental safeguards.** The project is classified by ADB as Category B for environment. The project environmental safeguard assessments and documents comprise: (i) an initial environmental examination (IEE) including an environmental management plan (EMP). The IEE and EMP cover all project components except one, a Green Investment Fund (under output 3), which will be implemented by HTIC; and (ii) an ESMS, for safeguard management for the Green Investment Fund. The IEE, EMP and ESMS have been prepared in compliance with ADB's Safeguard Policy Statement (2009). For all project matters relating to environmental safeguards, the IEE, EMP and ESMS form the basis of the official loan agreement between ADB and the executing agency.

104. **Content of the EMP.** The EMP (provided in Appendix 3 of this PAM and Appendix 1 of the IEE) 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 HMG, 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 SPS for environmental safeguards and the PRC's environmental laws and regulations. All project agencies are required to comply with the EMP.

105. **EMP implementation.** The EMP will be implemented in all phases of the project: design, pre-construction, construction, and operation. The HMG 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 SPS, and (iii) the IEE including the EMP. The executing agency, through the HPMO, holds final responsibility for implementation of and compliance with the EMP.

106. For finalization of the preliminary engineering designs, and preparation of the detailed engineering designs for the project, the HPMO will forward the EMP to the engineering and

environmental design institutes. The HPMO and implementing agency environment officers and start-up environment safeguard specialist 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 HPMO 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) domestic EIAs, and the project IEE including 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.

107. **Personnel.** The EMP will be coordinated by the following personnel: (i) one full-time and qualified HPMO environment officer, who will be appointed by the HMG. The officer will be responsible for overall coordination of the EMP; (ii) seven full-time implementing agency environment officers (one per project county or district), 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 HPMO environment officer. The HPMO and implementing agency environment officers will be supported in their roles by national environmental safeguard specialists engaged under the loan consulting services, as follows: (i) an environmental safeguard specialist as part of the “start-up” consulting services, to provide interim support to the HPMO before the loan implementation consultants are recruited; and (ii) a loan implementation environment consultant (LIEC), as part of the loan consulting services. These consultants will support the HPMO and implementing agency environment officers 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. Terms of reference for all environment safeguard positions for the project are provided in Appendix 2 of the PAM and Appendix 1 of the EMP.

108. **Capacity building.** The 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 HPMO, implementing agencies, contractors, and construction supervision companies.

109. **Procedures for feedback and adjustment of the EMP, including in the event of non-compliance.** Based on site inspections and monitoring reports, the HPMO 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 HPMO and implementing agency environment officers, start-up environment safeguard specialist, 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 HPMO 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, 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.

110. 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.

111. Institutional arrangements for GIF environmental safeguards. Pursuant to ADB's Safeguard Policy Statement (2009), Green Investment Fund may not be applied to the activities described in ADB's Prohibited Investment Activities List set forth in Appendix 4-F. In compliance with ADB's Safeguard Policy Statement (2009), environmental and social safeguards for all activities supported under GIF will be subject to an environmental and social management system (ESMS). The Huangshan Trust Investment Company (HTIC) is the implementing agency for GIF and will be responsible for establishment and implementation of the ESMS. An advanced draft ESMS template ((provided in the Appendix 2 of the IEE and Appendix 5 of this PAM)) has been prepared and will form the basis for the final draft ESMS document to be prepared by HTIC. The final draft ESMS will be subject to review and endorsement by the HMG and ADB.

B. Land Acquisition and Involuntary Resettlement

112. Category and impacts. The project is classified as category B for involuntary resettlement. In total, the project involves 72.31 mu of permanent land occupation (4.63 mu state-owned land and 67.68 mu collective owned land), affecting 200 households with 830 persons. A total of 60 m² of non-residential house will be affected, involving 1 household with 4 persons. No household will have significant impacts from permanent land acquisition or relocation. A total of 316.43 mu land will be used temporarily, including 219.39 mu state-owned land and 97.04 mu collective land.

113. Resettlement plan. A resettlement plan has been prepared in accordance with ADB's Safeguard Policy Statement (2009) and relevant laws and regulations of the PRC. The resettlement plan includes adequate measures of compensation, resettlement and rehabilitation for affected people. Surveys and consultations were undertaken with affected people in preparation of the resettlement plan during project preparation. Affected people will be further consulted for updating and implementation of the resettlement plan during the project implementation. A grievance redress mechanism has been established and incorporated into the resettlement plan. The resettlement plan also includes measures of (i) the capacity building of the executing and implementing agencies to implement the resettlement plan in compliance with ADB requirements; and (ii) internal and external monitoring and reporting on the resettlement plan implementation.

114. Updating resettlement plan. The resettlement plan 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.

115. Institutional arrangement for implementation of the resettlement plan. HMG will be the executing agency and will supervise, coordinate, and manage the implementation of the resettlement plan. A project leading group (PLG) has been established in HMG, and a project management office (PMO) has been established under the PLG in HMG. Implementing agencies

(IAs) will be the local governments of the seven districts and counties. Local Natural Resources Bureaus are responsible for land acquisition compensation and resettlement, and She County Housing Administration Bureau for the non-residential house compensation in She County. The affected township governments and village committees will participate in and support the land acquisition and resettlement activities.

116. Capacity Building for implementation of the resettlement plan in compliance with ADB requirements. The executing and implementing agencies have the capacity to implement domestically funded projects. Their capacity will be strengthened to implement the resettlement plan in compliance with ADB requirements through several measures, including: (i) executing and implementing agencies will each appoint focal social safeguard staff, (ii) project implementation support consultants will include social safeguard specialists, (iii) staff of executing and implementing agencies will be trained on social safeguard measures, (iv) a resettlement start-up consultant will provide training on ADB's relevant policy requirements and will assist the implementing agencies to update and finalize the resettlement plan, and (iv) an external monitoring agency will be recruited for external monitoring.

117. Resettlement plan implementation schedule. According to the project construction schedule, the resettlement implementation plan has been prepared and included in the resettlement plan. The overall resettlement schedule for the project is developed as the following table. The specific implementation time may be properly adjusted due to the deviation of the overall project progress.

Table 11: Implementation Schedule for Resettlement

No.	Task	Target	Agencies in charge	Time	Remarks
1	Information disclosure				
1.1	RIB	Affected townships and villages	Huangshan and district/county PMOs	Aug 2019	
1.2	Disclosure of the draft RP on ADB's website	Stakeholders	ADB	Aug 2019	
2	RP update and resettlement budget approval				
2.1	DMS	Affected townships and villages	IA, Huangshan and district/county PMOs	May 2020	
2.2	Updating the RP based on the DMS, and disclosing the updated RP to APs	Affected townships and villages	IA, Huangshan and district/county PMOs	May 2020	
2.3	Submission of the updated RP to ADB for review and approval		Huangshan and district/county PMOs	May 2020	
2.4	Updated RP budget approval (compensation rates)	resettlement budget	District/county governments, PMOs	June 2020	
3	LA announcement				
3.1	Disclosing the updated RP	Affected townships and villages	District/county governments, PMOs	Aug 2020	
3.2	Releasing the LA announcement	Affected townships and villages	District/county governments	Oct 2020	
4	Compensation agreement				
4.1	Entering into LA compensation	Affected townships and villages	District/county municipal administration	Dec 2020	

No.	Task	Target	Agencies in charge	Time	Remarks
	agreements and paying compensation		offices, village committees		
5	Livelihood restoration measures				
5.1	Payment of compensation for young crops and attachments	Affected HHs	District/county municipal administration offices, township governments	Jan 2021	
5.2	Implementation of restoration programs	Affected villages	Township governments	Jan 2021 – Mar 2026	
5.3	Implementation of training program	Affected villages	District/county labor and social security bureaus	Apr 2021 – Mar 2026	
5.4	Hiring APs under the Project	Affected villages	District/county PMOs, labor and social security bureaus, contractor	Apr 2021 – Mar 2026	
6	Capacity building of resettlement agencies				
6.1	Training of Huangshan PMO staff	17 person-times	Huangshan PMO	May 2020	
6.2	Training of district/county PMO staff	90 person-times	Huangshan PMO	May 2020	
7	M&E				
7.1	Establishing an internal monitoring mechanism	As per the RP	Huangshan PMO	Oct 2020	
7.2	Internal monitoring reporting	Semiannual	Huangshan and district/county PMOs	From Jan 2021	
7.3	Appointing an external M&E agency	One	Huangshan PMO	Oct 2020	
7.4	Baseline survey	Affected townships and villages	External M&E agency	Jan 2021	
7.5	External monitoring reporting	Semiannual	External M&E agency	Jan 2021	1 st report (incl. baseline survey)
				Jul 2021	2 nd report
				Jan 2022	3 rd report
				Jul 2022	4 rd report
				Jan 2023	5 th report
				Jul 2023	6 th report
				Jan 2024	7 th report
			Jul 2024	8 th report	
7.6	Completion report		Huangshan and district/county PMOs, municipal administration offices	Jul 2025	
8	Public consultation	District/county municipal administration offices		Ongoing	
9	Grievance redress	District/county municipal administration offices		Ongoing	
10	Disbursement of compensation fees				

No.	Task	Target	Agencies in charge	Time	Remarks
10.1	- To district/county municipal administration offices	Initial funds	District/county governments	Aug 2020	
10.2	- To township governments	Initial funds	District/county municipal administration offices	Oct 2020	
10.3	- To Affected HHs	Initial funds	Township governments	Jan 2021	
11	Commencement of civil construction				
11.1	The Project	District/county municipal administration offices		Apr 2021	

RIB= resettlement information booklet, RP= resettlement plan, DMS= detailed measurement survey, AP= affected person, LA= land acquisition, PMO= project management office, IA= implementing agency, M&E= monitoring and evaluation.

118. **Resettlement monitoring.** Provisions of both internal and external monitoring are included in the RP. With assistance of project management support consultants, the PMO will prepare and submit semiannually the internal monitoring reports to ADB together with the progress reports. Furthermore, PMO will employ an external resettlement monitoring institute or firm to (i) monitor and evaluate resettlement progress and results; and (ii) submit semiannual monitoring reports to ADB during resettlement implementation.

C. Ethnic Minorities/Indigenous Peoples Safeguard

119. **Indigenous peoples.** The project does not involve impacts on ethnic minority villages or communities that would trigger ADB's Safeguard Policy Statement requirements on indigenous peoples. There are only a few ethnic minority individuals living dispersedly in five counties among the seven project counties/districts. The scattered ethnic minority individuals in the project area are not expected to have differential impacts; and they will enjoy the project benefits as residents in the project area. Therefore, the project is classified as category C on indigenous peoples according to ADB's Safeguard Policy Statement (2009); and no action plan needs to be prepared for ESMS.

D. Environmental and Social Management System for the Green Investment Fund

120. An ESMS (provided in the Appendix 2 of IEE and Appendix 5 of the PAM) has been prepared for the GIF (under output 3 of the project) by the Huangshan PMO and HTIC, supported by the TRTA consultants and ADB team. The Green Investment Fund will not fund any activities that: (i) involve involuntary land acquisition impacts; (ii) involve demolition of residential or private commercial buildings; (iii) involve involuntary resettlement which meet the definition of ADB "Category A" or "Category B" for resettlement; (iv) have impacts on vulnerable ethnic minorities ("Category A" or "Category B"); and (v) any legacy issues of involuntary resettlement or ethnic minorities from past activities or existing facilities. HPMO and HTIC committed that these requirements will be met during the screening of identified subprojects in accordance with the procedures stipulated in the ESMS; and adequate resources will be allocated to ensure the implementation, monitoring and reporting of ESMS for the Green Investment Fund.

121. **Content of the ESMS and safeguards selection criteria.** The ESMS template describes (i) institutional framework of the ESMS, including legislative and policy framework, roles and responsibilities of each specified position, and subproject selection criteria; (ii) activities that the GIF will or will not support (including activities listed under ADB's prohibited investment activity

list); (iii) implementation steps for the ESMS; (iv) integration of the ESMS into existing business procedures in HTIC; (v) establishment and implementation of a grievance redress mechanism; and (vi) capacity building and training for HTIC to implement the ESMS. For environment safeguards, activities that will not be supported by GIF include: (i) activities which may cause significant and irreversible impacts to the environment i.e. meet the definition of ADB “Category A” for environment; (ii) are located in or next to a designated water source protection zone, protected area, cultural heritage site, or critical natural habitat; (iii) involve large-scale landscape alteration e.g. quarrying, or terracing on slopes greater than 25°. For social safeguards, activities that will not be supported by GIF include: (i) involve involuntary land acquisition impacts; (ii) involve demolition of residential or private commercial buildings; (iii) involve involuntary resettlement which meet the definition of ADB “Category A” or “Category B” for resettlement safeguards; and (iv) have impacts on vulnerable ethnic minorities (“Category A” or “Category B” for indigenous peoples safeguards). HTIC is required to ensure that these requirements are met during the screening of newly identified subprojects in accordance with the procedures stipulated in the ESMS.

122. **Establishment of the ESMS.** Prior to the transfer of any loan proceeds to HTIC, HTIC shall issue a formal Presidential Directive to integrate the ESMS into HTIC business procedures and submit this directive to HMG and ADB at least three months prior to establishing GIF. HTIC shall adhere to the guidelines in the ESMS and ensure that all screening, categorization and assessment of equity investment applications specified in the ESMS is conducted before final approval of any investments. HMG and HTIC will ensure that all participating applicants receiving funds from GIF will follow the requirements listed in the ESMS.

123. Before HTIC makes its first investment in a project county or district, HMG shall ensure that HTIC, before requesting a withdrawal under the onlending agreement for such investment, submits to ADB, through the PMO, an application for approval of such investment.

124. **ESMS personnel.** HTIC will recruit at least one qualified environment officer and one qualified social officer. These officers will lead the establishment of the ESMS and work closely with the HTIC fund managers, applicants, and qualified investees, to integrate the ESMS into existing business procedures and for daily implementation of the ESMS procedures for the safeguard screening, categorization, and management of approved equity investments. Draft terms of reference for the HTIC environment officer and social officer positions are in the Appendix 6 of ESMS.

125. **Implementation procedures.** HTIC will ensure that each Qualified Project meets the requirements of the ESMS i.e.: screening procedures have been completed; the proposed activities meet the ESMS criteria; and the proposed designs seek to maximize environmental and social benefits. To support the design process, the HTIC environmental officer and social officer and applicant will consult with relevant government bureaus. The HTIC environment officer and/or social officer will also work with the PMO environmental officer and social officer, and loan implementation consultants as necessary, for technical feedback and support. All Qualified Projects shall comply with ADB's Safeguards Policy Statement. The HTIC and qualified investees shall submit to PMO, ADB, and/or HTIC all records, and documents as may be requested from time to time.

E. Grievance Redress Mechanism

126. A project-specific grievance redress mechanism (GRM) has been developed in compliance with SPS requirements to address environmental, health, safety, and social concerns

associated with ADB-funded projects. The GRM complements and builds upon existing PRC mechanisms for environmental complaints, including the national environmental complaint hotline. The GRM is designed to achieve the following objectives: (i) provide channels of communication for communities to raise concerns about environmental and social-related grievances which might result from the project; (ii) prevent and mitigate adverse environmental and social impacts to communities caused by project construction and operation; and (iii) build trust and respect and promote productive relationships between the project agencies and local villages and communities. The GRM is accessible to all members of the villages and communities, including women, youth, minorities and poverty-stricken villagers and residents. Multiple points of entry are available, including face-to-face meetings, written complaints, telephone conversations, e-mail, and social media. The details of the GRM, including a time-bound flow chart of procedures, are described in the EMP.

127. Specific GRM procedures have been incorporated into the EMP, resettlement plan and ESMS. The complaint channels are slightly different for environmental and social issues, but the PMO will maintain an integrated system to document, follow-up, and report on all cases. Before construction, the district/county PMOs and municipal administration offices will notify the project design and impacts to the APs. The environment and social officers of the HPMO and seven SPMOs in the three districts and four counties will be the lead coordinators for GRM implementation. At the beginning of construction, the district/county PMOs and municipal administration will determine the project site, floor area, etc. with the affected village committees during a field visit. For issues of great public concern (if any), the district/county PMOs and municipal administration will further improve the project design. All project agencies and staff will be trained in the GRM and will take an active role in supporting these officers when necessary.

F. Other

128. **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). HTIC will ensure that the investments are in compliance with applicable national laws and regulations and will apply the prohibited investment activities list (Appendix 4-F) to subprojects financed by ADB.

VIII. GENDER AND SOCIAL DIMENSIONS

A. General

129. **Gender.** The project's gender category is *some gender elements*, following ADB's Guidelines for Gender Mainstreaming Categories of ADB Projects (2012). The project will ensure women will participate and benefit equitably under each output. Women are expected to benefit from increased employment, improved living environment, and better quality of life. A gender action plan (GAP) has been prepared based on gender analyses. The GAP includes the following measures: (i) fair and equitable participation of women in project design and implementation, with at least 40% women participants; (ii) separate sanitation facilities for female workers; (iii) participation of women in training and knowledge dissemination; (iv) training and capacity building of staff of the EA and IAs to implement gender and social measures; and (v) priority jobs for women, with at least 30% during construction of the subprojects and 40% during the operation. Key gender targets are also included in the design and monitoring framework. The executing and implementing agencies will ensure GAP implementation, monitoring, and reporting.

130. **Poverty and Social.** The project is classified as *general intervention* for poverty reduction. A poverty and social analysis was undertaken based on intensive stakeholder consultations and socioeconomic surveys. It indicated that the project will provide socioeconomic development and poverty reduction opportunities for residents including the poor and low-income people by increasing their access to (i) jobs during project construction and operation; (ii) new jobs in green enterprises; and (iii) a better living environment. A total of 319,607 residents of the seven project districts and counties, including 254,341 urban and 65,266 rural residents, will directly benefit from the project. Other residents in Huangshan will also benefit indirectly from the improved environment. The project will create 1,204 jobs during project construction and 546 jobs during operation. The HMG prepared a social development action plan based on the poverty and social analysis, with specific targets for the poor and low-income people. Consultations were undertaken with residents and other stakeholders during the project preparation. A consultation and participation plan for project implementation stage has been included in the PAM. The executing and implementing agencies will ensure implementation, monitoring, and reporting on social and poverty measures.

B. For Green Investment Fund

131. HTIC shall and shall cause the investees to ensure that contractors and service providers engaged in subprojects under GIF will implement relevant provisions of gender action plan and social development action plan, including: (i) give equal pay for equal work regardless of gender, ethnicity or social group; (ii) give priority to women in the employment and training opportunities generated under the subprojects; (iii) maximize the employment of local people who meet the job and efficiency requirements for subproject construction, operation and maintenance; (iv) provide workers with adequate on-the-job and safety training; (v) disseminate information on sexually transmitted diseases (including HIV/AIDS) to subcontractors/employees and local communities surrounding the subproject construction sites; (vi) implement HIV/AIDS awareness and prevention training for sub-contractors/employees; (vii) provide necessary measures to ensure the safety and health of its sub-contractors/employees; and (viii) observe local customs concerning acceptable behavior towards the local population.

132. HTIC shall and shall cause the investees to ensure that the core labor standards and the PRC's applicable laws and regulations are complied with during subproject implementation and that specific provisions are included in bidding documents and contracts financed by the ADB Loan under GIF requiring that the contractors, among other things: (a) comply with the PRC's applicable labor law and regulations and incorporate applicable workplace occupational safety norms; (b) do not use child labor; (c) do not discriminate workers in respect of employment and occupation; (d) do not use forced labor; and (e) do not restrict workers from developing any legally permissible means of expressing their grievances and protecting their rights regarding working conditions and terms of employment.

Table 12: Gender Action Plan

Actions	Target/Indicators	Responsible Agencies	Time-frame	Budget Source
A. Output 1: Urban point source pollution management facilities upgraded				
<p>A.1. Increase women's access to sanitation services by upgrading urban sewage and stormwater drainage system.</p> <p>A.2. Protect lives and properties of women from floods through riverbank rehabilitation, landscaping improvement, and flood control measures in Yi County and Huangshan District.</p> <p>A.3. Ensure women representatives attend consultations on detailed designs of relevant project components and public hearings on water tariff proposals.</p> <p>A.4. Ensure women's access to job opportunities during construction and operation stages.</p>	<ul style="list-style-type: none"> • Drainage system upgraded for 241,778 people, with 49% women • Riverbank rehabilitation, landscaping improvement and flood control measures implemented for 13,244 people, including 49% women • 200 representatives of beneficiaries per project county or district, including 40% women, attended consultations and tariff hearings • 465 employment positions created during construction (180 skilled and 285 unskilled) with 30% women • 226 employment positions created during operation (88 skilled and 138 unskilled) with 40% women <p>Baseline: 0</p>	PMOs, implementing agencies, and contractors (supported by HRSSB, design institute, and consultants)	2020–2026	Project budget
B. Output 2: Rural point and non-point source pollution control facilities and systems enhanced				
<p>B.1. Increase women's access to rural water, sanitation and environment services by constructing water supply pipes, onsite wastewater treatment stations, sewage pipes, walkways, parking lots, public toilets, etc.</p> <p>B.2. Address needs of women in non-point source pollution control through programs of soil test formulated fertilization, application of organic fertilizer and solar energy powered insecticidal lamps, construction of rural production roads and tourism facilities, pine forest disease prevention, etc.</p> <p>B.3. Ensure women representatives attend consultations on detailed design of relevant project components.</p> <p>B.4. Ensure women benefit from job opportunities during construction and operation stages.</p>	<ul style="list-style-type: none"> • Rural environment infrastructure constructed for 47,682 people, with 49% women • Rural nonpoint pollution control measures implemented for 6,903 people, with 50 women • 200 representatives of beneficiaries per project county or district, with 40% women, attended consultations on detailed design • 288 positions created during construction (104 skilled and 184 unskilled) with 30% women • 140 positions created during operation (49 skilled and 91 unskilled) with 40% women <p>Baseline: 0</p>	PMOs, implementing agencies, and contractors (supported by HRSSB, design institute, and consultants)	2020–2026	Project budget
C. Output 3: Green financing mechanisms piloted				
<p>C.1. Ensure women representatives attend consultations on detailed design on green financing mechanisms</p> <p>C.2. Promote women in leadership positions in SMEs benefitting from green finance.</p> <p>C.3. Ensure that green finance and eco-compensations benefit women and men equitably.</p>	<ul style="list-style-type: none"> • 200 representatives of beneficiaries per project county or district, including 40% women, attended consultations on detailed designs of green finance and eco-compensation mechanism • At least six SME subprojects supported under the first batch of equity financing under the GIF, including at least 30% women in management and decision-making staff position of SMEs to be selected under the GIF 	PMOs, HTIC, and contractors (supported by HRSSB, design institute, and consultants)	2020–2026	Project budget

Actions	Target/Indicators	Responsible Agencies	Time-frame	Budget Source
C.4. Ensure women's access to job opportunities during construction and operation of activities under green finance and eco-compensation scheme.	<ul style="list-style-type: none"> •SMEs to be selected for the green investment fund have at least 30% women in management and decision-making positions •€2.8 million sustainable green incentive fund established, and compensation provided to participating 4,500 farmers, cooperatives, and other stakeholders, including 40% women •251 positions created (126 skilled and 125 unskilled) during construction, with 40% women •100 positions created (50 skilled and 50 unskilled) during operation, with 40% women Baseline: 0			
D. Output 4: Capacity for ecological system and project management strengthened				
<p>D.1. Ensure women participate in the design, construction and operation of monitoring and management systems, including smart water conservancy management system, smart environment monitoring system, smart environment, health, and safety management system, management information system support, etc.</p> <p>D.2. Technical support activities, including studies on river eco-compensation, green economic development strategy, etc. include a gender perspective.</p> <p>D.3. Ensure women's access to job opportunities during construction and operation stages.</p>	<ul style="list-style-type: none"> •50 beneficiaries per project county/district, including 40% women, participated in designs of monitoring and management systems •Xin'an River eco-compensation evaluation study, green farming certification, tea farming eco-compensation study, rural wastewater discharge standard study, and pig manure management study are completed, with a gender perspective on relevant studies •200 positions created (160 skilled and 40 unskilled) during construction, with 30% women •80 positions created (64 skilled and 16 unskilled) during operation, with 40% women Baseline: 0	PMOs, implementing agencies, and contractors (supported by HRSSB, and social consultants)	2020–2026	Project budget
E. All Outputs: Compliance with labor laws and core labor standards and project implementation management support				
<p>E.1. Social and gender specialists are included in project implementation support team to guide GAP implementation</p> <p>E.2. Assign social and gender focal staff in PMOs, implementing agencies, responsible for GAP implementation.</p> <p>E.4. Provide training for PMOs and implementing agencies on: (i) ADB gender policy; (ii) GAP implementation and monitoring;</p> <p>E.5. Ensure zero tolerance to SEAH by establishing reporting mechanisms, training, and awareness raising for contractors.</p> <p>E.6. Separate toilets are provided to women workers.</p> <p>E.7. Sex-disaggregated data collected during implementation.</p>	<ul style="list-style-type: none"> •Social and gender specialists recruited. •One social and gender focal staff in each PMO and implementing agency appointed to implement the GAP •100% staff in the PMOs and implementing agencies receive training on the GAP and GAP implementation and monitoring •Proportion of women staff in all training is at least 40% •100% contractors comply with and report on requirements on SEAH •100% women employees have access to separate toilets •Project monitoring system collected sex-disaggregated data Baseline: 0	PMOs, implementing agencies, and contractors (supported by social consultants)	2020–2026	Project budget and relevant local gov't budget

ADB = Asian Development Bank, GAP = gender action plan, GIF = green investment fund, HRSSB = Human Resources and Social Security Bureau, HTIC = Huangshan Trust Investment Company, PMO= project management office, SEAH = sexual exploitation, abuse, and harassment, SME = small- and medium-sized enterprise.

Source: Asian Development Bank

Table 13: Social Action Plan

Actions	Target/Indicators	Responsible Agencies	Time-line	Budget Source
A. Output 1: Urban Point Source Pollution Management Facilities Installed				
<p>A.1 Ensure public participation and access to sanitation services by upgrading urban sewage and stormwater drainage system</p> <p>A.2 Protect lives and properties of the public from floods through riverbank rehabilitation, landscaping improvement and flood control measures in Yi County and Huangshan District</p> <p>A.3 Ensure public representatives attend consultations on detailed designs of relevant project components and public hearings on urban water tariff proposals.</p> <p>A.4 Ensure the urban poor are entitled to the public assistance program, namely given exemption partly from any tariff increase, and public assistance program is expanded to near-poor households</p> <p>A.5 Provide public awareness education on waste disposal, water conservation, sewage water disposal and water/river protection in local communities</p> <p>A.6 Ensure access of residents to job opportunities during construction and operation stages.</p>	<p>Targets:</p> <ul style="list-style-type: none"> • Urban drainage system upgraded for 241,778 people, including 20% poor and/or low-income people • Riverbank rehabilitation, landscaping improvement and flood control measures implemented for 13,244 people, including 20% poor and/or low-income people • 200 representatives of beneficiaries per project county/district, including 20% poor and/or low-income people, attended consultations on detailed designs of relevant project components and public hearings on urban water tariff proposals • 100% of urban poor and near-poor families covered by public assistance programs on tariff support • 300 representatives of beneficiaries per project county/district, including 20% poor and/or low-income people, attended public awareness education on waste disposal, water conservation, sewage water disposal and water/river protection • 465 job opportunities (180 skilled and 285 unskilled) during construction and 226 job opportunities (88 skilled and 138 unskilled) during operation, including 20% provided to poor and/or low-income people with priority <p>Baseline: 0</p>	PMOs, IAs, and contractors (supported by HRSSB, CAB, PADO, design institute, and consultants)	2020-2026	Project budget
B. Output 2: Rural Point and Non-point Source Pollution Control Facilities and Systems Enhanced				
<p>B.1 Ensure public participation in and access to rural environment infrastructures and service by constructing water supply pipes, onsite wastewater treatment stations, sewage pipes, landscape walkway, parking lots, public toilets, etc.</p> <p>B.2 Address needs of the public in nonpoint pollution control through soil test formulated fertilization, application of organic fertilizer and solar energy powered insecticidal lamps, construction of rural production roads and tourism facilities, pine forest disease prevention, etc.</p> <p>B.3 Ensure public representatives attend consultations on detailed designs of relevant project components and public hearings on rural water tariff proposals.</p>	<p>Targets:</p> <ul style="list-style-type: none"> • Rural environment infrastructures improved for 47,682 people, including 20% poor and/or low-income people • Rural nonpoint pollution control measures implemented in rural areas for 6,903 people, including 20% poor and/or low-income people • 200 representatives of beneficiaries per project county/district on average, including 20% poor and/or low-income people, attended consultations on detailed designs of relevant project components and public hearings on rural water tariff proposals • 100% of rural poor and near-poor families covered by public assistance programs on tariff support • 300 representatives of beneficiaries per project county/district on 	PMOs, IAs, and contractors, (supported by CAB, PADO, HRSSB, design institute, and consultants)	2020-2026	Project budget

Actions	Target/Indicators	Responsible Agencies	Time-line	Budget Source
B.4 Ensure the rural poor are entitled to the public assistance program, namely given exemption partly from any tariff increase, and public assistance program is expanded to near-poor households B.5 Conduct trainings on organic farming skills and tourism reception knowledge to the public B.6 Ensure access of the residents to job opportunities during construction and operation stages.	average, including 20% poor and/or low-income people, attended trainings on organic farming skills and tourism knowledge •288 job opportunities (104 skilled and 184 unskilled) during construction and 140 job opportunities (49 skilled and 91 unskilled) during operation, including 20% provided to poor and/or low-income people with priority Baseline: 0			
C. Output 3: Green Financing Mechanisms Piloted				
C.1 Ensure public representatives attend consultations on detailed design of green finance and eco-compensation mechanism. C.2 Ensure the poor and low-income people involve in and benefit from green finance and eco-compensation scheme C.3 Increase public awareness on green finance and eco-compensation mechanism through various means, including poster, calendar and brochure, public account of Wechat APP, etc. C.4 Ensure access of the residents to job opportunities during construction and operation stages.	Targets: •200 representatives of beneficiaries per project county/district on average, including 20% poor and/or low-income people, attended consultations on detailed designs of green finance and eco-compensation mechanism •Green finance and eco-compensation scheme implemented for 9,000 people, including 20% poor and/or low-income people •500 representatives of beneficiaries per project county/district on average, including at least 20% poor and/or low-income people, participated in dissemination of green finance and eco-compensation mechanism •251 job opportunities (126 skilled and 125 unskilled) during construction and 100 job opportunities (50 skilled and 50 unskilled) during operation, including 20% provided to poor and/or low-income people with priority Baseline: 0	PMOs, HTIC, and contractors, (supported by CAB, PADO, HRSSB, design institute, and consultants)	2020-2026	Project budget,
D. Output 4: Capacity for ecological system and project management strengthened				
D.1 Ensure public participate in the design, construction and operation of monitoring and management systems, including smart water conservancy management system, smart environment monitoring system, smart EHS management system, MIS supporting system, etc. D.2 Ensure public participate in the consultation of technical support activities, including studies on river eco-compensation, rural wastewater discharge standard, green economic development strategic, etc. D.3 Ensure access of the residents to job opportunities during construction and operation stages.	Targets: •50 beneficiaries per project county/district, including 20% poor and/or low-income people, participated in the design, construction and operation of monitoring and management systems •100 representatives of per project county/district, including 20% poor and/or low-income people, participated in the public consultation of technical support activities •200 job opportunities (160 skilled and 40 unskilled) during construction and 80 job opportunities (64 skilled and 16 unskilled)	PMOs, IAs, and contractors, (supported by CAB, PADO, HRSSB, design institute, and social consultants)	2020-2026	Project budget

Actions	Target/Indicators	Responsible Agencies	Time-line	Budget Source
	during operation, including 20% provided to poor and/or low-income people with priority Baseline: 0			
E. All Outputs: Compliance with labor laws and core labor standards				
E.1 Ensure contractors comply with labor laws and core labor standards, including no child labor, minimum wages, equal pay to equal work, and occupational health and safety E.2 Provide public education on health and HIV/AIDS, STIs, and sexual harassment prevention E.3 Ensure contractor construction personnel are involved in HIV/AIDS and STI publicity activities E.4 Provide separate toilets and sanitation facilities to workers	Targets: <ul style="list-style-type: none"> • 1,750 workers (construction and operation) receive training on labor rights, with at least 20% poor and/or low-income people • 1,750 workers (construction and operation) receive training on public safety and health knowledge, with at least 20% poor and/or low-income people • 100% of workers have access to separate toilets and sanitation facilities Baseline: 0	PMOs, IAs, and contractors, (supported by CDPC, HRSSB and social consultants)	2020-2026	Project budget, and relevant local government budget
F: For All Outputs: Project implementation management support				
F.1 Ensure social and gender specialists are included in project implementation support team to guide the implementation of SDAP and provide training to the PMOs, IAs and town governments. F.2. Assign social and gender focal staff in PMOs, IAs and project towns to ensure the effective implementation of SDAP F.3 Provide training for PMOs and IAs on: (i) ADB social development policies; (ii) SDAP implementation and monitoring; and (iii) social issues on pollution control, wastewater, and green agriculture and the importance of social inclusion in all project components. F.4 Collect data disaggregated by income status F.5 Establish effective grievance redress mechanisms and inform stakeholders	Targets: <ul style="list-style-type: none"> • Social and gender specialists are recruited to guide and assist in implementing SDAP activities • At least one social and gender focal person in each PMO and IA is appointed to undertake the SDAP activities • All staff in the PMOs and IAs receive training on SDAP implementation and monitoring • Disaggregated data by income status collected during project implementation • All local villages and/or residents know about the grievance redress mechanism. Baseline: 0	PMOs, IAs, and contractors (supported by ACWF, HRSSB, CAB, PADO and consultants)	2020-2026	Project budget

ACWF =All-China Women's Federation, ADB = Asian Development Bank, AIDS = acquired immune deficiency syndrome, CAB = Civil Affairs Bureau, CDPC = centers for disease prevention and control, GAP = gender action plan, HIV = human immunodeficiency virus, IA= Implementing agent, PADO = Poverty Alleviation and Development Office, HRSSB=human resources and social security bureau, DI= Design Institute, SDAP= social development action plan, PMO= project management office, STI = sexually transmitted infections.

Source: Asian Development Bank.

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING, AND COMMUNICATION

A. Project Design and Monitoring Framework

DESIGN AND MONITORING FRAMEWORK

Impact the Project is Aligned with Sustainable economic growth and environmental improvement in the Yangtze River Economic Belt achieved (Yangtze River Economic Belt Development Plan, 2016–2030) ^a			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
Outcome Economic and environmental conditions in the upstream of the Xin'an River improved	By 2028: a. 95% of urban population provided access to wastewater treatment service (2019 baseline: 90%) b. 130,000 people benefiting from rural investments (2019 baseline: 0) (RFI A) c. 28,000 ha of land improved through climate-resilient infrastructure and sanitation services (2019 baseline: 0) d. 5,000 ha of farming land shifted to green farming with pesticide and fertilizer use control (2019 baseline: 1,666.7 ha of farming land) e. Water quality at the Xin'an River interprovincial section meets the eco-compensation phosphorus index ^b of ≤ 1 (2019 baseline: 1)	a–c. HMG annual reports d. HMG project completion report e. Anhui and Zhejiang provinces' cross-provincial eco-compensation annual evaluation reports	The HMG changes priorities on green development and ecological improvement
Outputs 1. Urban point source pollution management facilities upgraded	By 2026: 1a. 176 km urban trunk, secondary, and tertiary wastewater sewers installed or rehabilitated (2019 baseline: 0 km) 1b. 71.1 km stormwater drainage pipes installed in urban areas in Huangshan (2019 baseline: 0 km) 1c. 9.9 km of river embankments constructed for increased flood protection (2019 baseline: 0 km) 1d. 465 jobs created during construction (180 skilled and 285 unskilled) with 30% women (2019 baseline: Not applicable) 1e. 226 jobs created during operation (88 skilled and 138 unskilled) with 40% women (2019 baseline: Not applicable)	1a–1e. Project reports (monthly, quarterly, semiannual, annual)	Hesitance of urban households to connect to wastewater systems
2. Rural point and nonpoint source pollution control facilities and systems enhanced	By 2026: 2a. 85 decentralized wastewater treatment systems with a minimum capacity of 2 cubic meters per day installed and 14,700 connections for rural households to the wastewater sewer systems installed (2019 baseline: 0) 2b. 100 km of rural water supply pipes installed or rehabilitated in rural areas; 3,250 connections for households to piped water supply installed and connected, with subsidized connections for 380 poor and vulnerable households (2019 baseline: 0 km)	2a–2f. HMG project completion report	

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
	<p>2c. Green farming practice adopted on 548 ha of farmland (2019 baseline: 0 ha)</p> <p>2d. Pine forest disease prevention measures implemented in 70,000 ha of forest in the Xin'an</p>		
	<p>River Basin area and 900,000 pine trees immunized (2019 baseline: 0)</p> <p>2e. 288 jobs created during construction (104 skilled and 184 unskilled workers) with 30% women (2019 baseline: 0)</p> <p>2f. 140 jobs created during operation (49 skilled and 91 unskilled) with 30% women (2019 baseline: 0)</p>		
3. Green financing mechanisms piloted	<p>By 2026:</p> <p>3a. At least six SME projects supported under the first batch of equity financing under the green investment fund, including women's representation of at least 30% in management and decision-making staff positions in all SMEs, selected under the green investment fund (2019 baseline: 0)</p> <p>3b. €2.8 million sustainable green incentive fund established, and compensation provided to 4,500 farmers, including 40% women (2019 baseline: 0)</p> <p>3c. 30% women in management and decision-making positions of SMEs to be selected under the green investment funds (2019 baseline: Not applicable) (RFI B)</p> <p>3d. 251 jobs during construction (126 skilled and 125 unskilled) and 100 jobs during operation (50 skilled and 50 unskilled) created, including 40% women (2019 baseline: Not applicable)</p>	<p>3a–3d. Project reports (semiannual) and HMG project completion report</p> <p>3a. Gender scorecards for selection of projects to be developed under the project</p>	
4. Capacity for ecological system and project management strengthened	<p>By 2026:</p> <p>4a. Smart river monitoring MIS, EHS management in industrial parks, smart environmental monitoring MIS in Qimen county, and pine forest monitoring MIS are installed (women's participation included) (2019 baseline: Not applicable)</p> <p>4b. Information management top layer design and smart EHS general platform are developed and operational for the data resource bureau of the HMG (2019 baseline: Not applicable)</p> <p>4c. Xin'an River eco-compensation evaluation study, green farming certification, tea farming eco-compensation study, rural wastewater discharge standard study, and pig manure management study are completed, with a gender perspective^c on relevant studies (2019 baseline: Not applicable)</p> <p>4d. Information shared with the downstream Qiandao Lake area in Zhejiang Province provided through river quality MIS data sharing (2019 baseline: None)</p>	<p>4a–4b. and 4d. Consultant study reports, and project completion report</p> <p>4c. Sex-disaggregated data and reports to be collected under the project on farmers led by women and practices used</p>	

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
	4e. 300 project staff and beneficiaries (at least 50% of whom are women) report enhanced knowledge and skills on ecological system and water resource management, water and environmental monitoring, data sharing, and project management (2019 baseline: None)	4e. Consultant training reports and participants' survey	
Key Activities with Milestones 1. Urban point source pollution management facilities upgraded 1.1 Conduct stakeholder consultations, with at least 40% women's participation (Q1 2020–Q2 2021) 1.2 Undertake full analysis of other sources of pollution, including their transport and effect on the river, to determine the impact on water quality objectives to be calculated per pollution source (Q3 2020–Q4 2022) 1.3 Develop design and bidding documents; conduct tenders; and carry out construction of sewage collection systems and a centralized treatment system in the urban areas (Q3 2020–Q2 2026) 2. Rural point and nonpoint source pollution control facilities and systems enhanced 2.1 Conduct stakeholder consultations with at least 40% women participation (Q3 2020–Q4 2022). 2.2 Recruit consultants; design and implement a comprehensive system for managing nonpoint source pollution in rural areas (Q3 2020–Q2 2023) 2.3 Develop designs and bidding documents; conduct tenders; and carry out construction of decentralized sewage treatment systems and green infrastructure facilities in rural towns and villages (Q3 2020–Q2 2026) 2.4 Plan, design, procure, and install forest prevention systems (Q3 2021–Q2 2026) 2.5 Promote environment-friendly (clean) agricultural production practices (Q3 2021–Q2 2026) 3. Green financing mechanisms piloted 3.1 Define, establish, pilot, and operationalize green investment fund (Q3 2020–Q4 2023) 3.2 Define, establish, pilot, and operationalize green incentive fund within Huangshan municipality (Q2 2021–Q4 2026) 3.3 Identify, conduct due diligence, and invest in about six green SMEs from the green investment fund (Q4 2020–Q4 2026) 3.4 Identify farmers, potential farmers' cooperatives, and SMEs; formulate procedures; and implement green incentive fund, including proactive and inclusive measures for women in leadership positions on boards, employment, and other project benefits (Q3 2021–Q2 2026) 4. Capacity for ecological system and project management strengthened 4.1 Develop and install improved river water and environmental monitoring MISs, and a pine forest monitoring MIS, including software and hardware acquisition (Q3 2020–Q4 2025) 4.2 Develop and install a smart EHS management MIS for industrial parks, including software and hardware acquisition (Q1 2021–Q2 2026) 4.3 Improve the EA and IAs' capacity to implement the project (Q2 2021–Q2 2026) 4.4 Share knowledge with other municipalities and developing member countries through trainings and workshops (Q3 2021–Q2 2026)			
Project Management Activities Provide overall support for the project's final design and implementation, including support for capacity development and training of the staff of the HMG, the Huangshan PMO, district and county PMOs, and Huangshan Trust and Investment Corporation on ADB's project management procedures, technical design and implementation, and safeguard and gender actions supervision and monitoring			
Inputs ADB: €90.09 million (ordinary capital resources loan) German development cooperation through KfW: €50.00 million (loan, not administered by ADB) Government of the People's Republic of China: €49.97 million			
Assumptions for Partner Financing Not applicable			

ADB = Asian Development Bank, EHS = environmental health and safety, ha = hectare, HMG = Huangshan Municipal Government, km = kilometer, MIS = management information system, PMO = project management office, Q = quarter, SMEs = small and medium-sized enterprises.

RFI A: People benefitting from increased rural investment. Expected: 130,000.

RFI B: Women represented in decision-making structures and processes. Expected: 30%.

^a Government of the People's Republic of China. 2016. Outline of the Yangtze River Economic Belt Development Plan, 2016–2030. Beijing.

^b Under the eco-compensation scheme between Anhui and Zhejiang provinces, the central government and the two provincial governments set up an eco-compensation fund, with water quality subjected to periodic assessment at the interprovincial section to determine whether (i) Zhejiang province should compensate Anhui province to defray the ecological protection cost; or (ii) Anhui province should compensate Zhejiang province to pay for additional

water treatment cost, in case the water quality fails to meet agreed standards. From 2012 to 2017, the phosphorus index (measured by total phosphorus, total nitrogen, ammoniacal nitrogen, and permanganate indices) for water quality compensation index in the Xin'an River was in the range of 0.833–0.880.

^c This gender perspective identifies gender impacts on people's opportunities and constraints to benefit equally in a given context.

Source: ADB estimates.

B. Monitoring

1. Project performance monitoring

133. To monitor the progress of the project in achieving the planned outcome and outputs, HPMO will establish a project performance management system (PPMS) before the project implementation starts (before the loan effectiveness) and will maintain it 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.

134. 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) updating and implementation of the resettlement plan; (iv) implementation of the EMP; (v) implementation of SGAP; and (vi) compliance with loan covenants (policy, financial, economic, sector, and others).

135. HPMO agreed and confirmed that they will (i) establish the PPMS before the loan effectiveness; (ii) recruit the loan implementation consultants before the loan effectiveness to facilitate the project start-up and provide consulting service as described in Appendix 2; (iii) confirm that targets are achievable; and (iv) develop recording, monitoring, and reporting arrangements.

136. With inputs from the IAs and other stakeholders, HPMO will prepare semi-annual project progress reports. Disaggregated baseline data for output and outcome indicators gathered during project preparation will be updated and reported in the quarterly reports and after each ADB review mission. At the start of project implementation, HPMO, IAs, and ADB will develop integrated PPMS procedures to generate data systematically on the inputs and outputs, as well as the indicators to be used to measure the project's impact and outcome considering the project scope.

2. Compliance monitoring

137. During project implementation, ADB and HPMO will closely monitor the compliance of all the covenants under the project and will take necessary remedial actions for any noncompliance. The compliance status will be reported in the quarterly progress reports by the HPMO and will be reviewed during project review missions.

138. **Legal Covenants.** HMG shall ensure that in the event of (i) any change in ownership or control of the project facilities; or (ii) any sale, transfer, or assignment of the shares of IAs is anticipated, HMG will consult with ADB at least 6 months prior to the implementation of such change. HMG shall cause IAs to further ensure that such changes are carried out in a lawful and transparent manner.

139. **Counterpart funding.** HMG shall provide the details of the sources of the counterpart funding as well as provide corresponding commitment letters. The total cost includes physical and price contingencies, and interest during construction.

140. **Financial management.** HMG shall establish and maintain sound financial management systems in accordance with ADB's guidelines on the financial management and analysis of projects, including the establishment of separate project accounts and the maintenance of minimum balances to ensure smooth cash flow and the timely settlement of project construction liabilities and future debt servicing.

141. **Governance and anticorruption.** ADB's Anticorruption Policy (1998, as amended to date) were explained to and discussed with the HMG, HPMO and IAs. Specific policy requirements and supplementary measures are described elsewhere in this PAM.

3. Safeguards monitoring

142. **Environmental safeguard monitoring.** 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 the loan implementation consultant firm; and (iii) compliance monitoring to be conducted by the start-up environment safeguard specialist and continued by the LIEC, to ensure the EMP is being implemented. Monitoring shall comply with the PRC standards for environmental monitoring. ADB will oversee the compliance on the basis of semiannual environmental monitoring reports provided by the HPMO and review missions.

143. **Internal environmental monitoring.** During construction, the HPMO environment officer, IA 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 HPMO and IA environment officers, based on their direct observations at work sites; and (ii) monthly reports by the CSCs, submitted to the implementing agencies and HPMO.

144. **External monitoring.** As a category B project for environment, independent external environmental monitoring is not required. Instead, the external environmental monitoring will be conducted by the loan implementation consulting firm. The firm will have the relevant national certifications and capacity to undertake the external monitoring specified in the EMP, or, will subcontract this monitoring to another qualified firm. Monitoring will be conducted throughout construction and during the first year of operation. Semiannual monitoring reports will be prepared by the firm and submitted to the HPMO and implementing agencies.

145. **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.

146. **Environment safeguard reporting and disclosure.** The HPMO 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 HPMO prepare the reports and submit them to ADB. ADB will review and disclose the reports on the ADB website.

147. 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.

148. ESMS Monitoring. (i) *Daily monitoring by HTIC.* The HTIC environment officer and social officer will establish a HTIC database to document and monitor implementation of the ESMS steps for safeguard screening, categorization, approvals, and management of applications and approved equity investments. For approved equity investments that have safeguard requirements and conditions, the HTIC environment and/or social officer, together with the HTIC fund managers and relevant local bureau, will make occasional site visits to meet with the qualified investee and assess the extent of compliance with the safeguard conditions. (ii) *Monitoring by PMO.* The PMO environment officer and social officer, supported by the loan implementation environment consultant and social consultant, will coordinate with the HTIC environment and social officers to receive updates on ESMS progress and advise on any issues (e.g., non-compliance of a qualified investee with safeguard conditions), and help coordinate with relevant local bureaus, as needed. (iii) *Monitoring by ADB.* Progress for implementation of the ESMS will be monitored through progress reports and review missions (see “compliance monitoring”).

149. Land Acquisition and Resettlement. Internal and external monitoring of resettlement plan implementation will be conducted. Monitoring methodologies are specified in the resettlement plan. The HPMO and implementing agencies assisted by the project management consultants will carry out internal monitoring and reporting to ensure compliance with the provisions of the RP. The HPMO, implementing agencies, and consultants for project management supports will develop a set of supervision milestones in accordance with the RP to ensure timely and effective implementation of resettlement activities. The PMO will submit internal monitoring reports semiannually to ADB together with the progress reports.

150. An external monitoring agency acceptable to ADB will be engaged by the HPMO prior to commencement of land acquisition. The external monitoring agency will conduct external M&E semiannually during the implementation of land acquisition and resettlement, and conduct follow-up evaluation semiannually for two years after the completion of land acquisition and resettlement. The cost of the external resettlement M&E will be funded from the ADB loan. External resettlement M&E reports will be submitted semi-annually to ADB and a resettlement completion report will be prepared at the end of project.

4. Gender and social dimensions monitoring

151. Monitoring indicators for the GAP and SDAP will be incorporated into the PPMS. The PMOs and implementing agencies will be responsible for establishing and coordinating regular monitoring and evaluation.

152. The regular project progress reports to ADB will include, at least semiannually, reporting on GAP and SDAP progress. Assistance will be provided to the executing agency and implementing agencies by the project consultant who will help to set up effective monitoring systems and work with the focal points and implementing agencies to ensure implementation of the GAP and SDAP. The project's consultants will assist the PMO and implementing agencies to collect data for qualitative analysis to assess the effectiveness of the GAP and SDAP. This will include an end-of-project survey of a small number of sample beneficiaries and/or focus group discussions with beneficiaries to obtain qualitative information on the improvements to their lives as a result of the project.

C. Evaluation

153. In addition to regular monitoring, ADB and HMG will jointly review project performance at least once a year. 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 resolution. ADB and HMG will undertake a midterm review to assess implementation status and take appropriate measures—including modification of scope and implementation arrangements, and reallocation of loan proceeds, as appropriate—to achieve the project impact and outcome.

D. Reporting

154. The HMG will provide ADB with (i) semi-annual progress reports in a format consistent with ADB's project performance reporting system; (ii) consolidated annual reports 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 (iii) a project completion report within 6 months of physical completion of the project. To ensure that project will continue to be both viable and sustainable, project accounts and the audited project financial statement together with the associated auditor's report, should be adequately reviewed.

155. HTIC will prepare a semiannual progress reports in a format acceptable to ADB and submit these reports within 30 days of the end of each semi-annual period. These reports will provide (i) a narrative description of progress in project implementation; (ii) any changes to the implementation schedule; (iii) problems or difficulties encountered; (iv) work to be carried out in the next 6 months; and (v) compliance with ESMS. The progress report will also report summary statement of GIF RFA and any new investments approved. The template progress report can be accessed in Appendix 4-G.

E. Stakeholder Communication Strategy

156. Project information will be communicated through public consultation, information disclosure mechanism in ADB's and government's websites, meetings, interviews, focus group

discussions and community consultation meetings in accordance with ADB's requirements of information disclosure policy.

157. **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.

158. **Involuntary resettlement.** All of the affected villages/households were involved in the project impact and socioeconomic survey. Through meetings, interviews, focus group discussions, public consultation workshops, and community consultation meetings; local representatives participated in the planning, and their concerns have been integrated into the RP. The RP has also been posted on the ADB website. Resettlement information booklets were distributed to affected households. The booklets contain information such as the affected project areas, implementation progress of and procedures for land acquisition and relocation, compensation standards for land acquisition and house demolition, livelihood restoration strategy. Each implementing agency includes a full-time resettlement and social officer for supervision of implementation, continued public consultation, monitoring of progress, and response to grievances. The grievance redress procedures have been established and explanations have been included in the resettlement information booklets.

159. **Social and gender.** Consultations with communities were conducted and will be continued during the implementation of the SDAP, and GAP, not only to inform people about project components or activities, but also to enable people to ask questions, make suggestions, state preferences, and/or express concerns. Special attention will be paid to the participation of women, the poor and/or low-income people and other vulnerable groups. Public hearings will be held for any proposed adjustments in the water tariff, with attendance of adequate representation of the poor/low-income people and women, etc. Information from the social monitoring reports will be disclosed periodically.

160. **Public disclosure.** ADB, the HMG including the HPMO, and implementing agencies will disclose relevant project information to the public and interested parties. This includes the information regarding the overall project and environment and social safeguards. The information disclosure measures for different stakeholders are described in the Table below.

161. **Specific activities for GIF.** In order to implement the stakeholder communication strategy for GIF, the following activities have or will be taken:

- (i) Opportunities to access project funds to be openly and widely advertised within and around Huangshan area using a variety of media selected to reach the targeted enterprises most likely to benefit from the Funds.
- (ii) HXIC and limited partner(s) of the Fund will ensure that local communities affected by the project are consulted before each investment's approval under the provisions of ESMS, and after subproject implementation, to identify, assess, and remedy any residual concerns.

- (iii) Within 2 months from the loan effectiveness, the HTIC will commence disclosure of all key project-related information, including the scope, financial and institutional arrangements of the project.

162. A consultation and participation plan (CPP) has been prepared for the concerned stakeholders within the project areas as required by ADB to ensure inclusiveness, transparency, and meaningful consultation and participation of concerned stakeholders for the Project. The purpose of this plan is to engage the stakeholders in meaningful consultation and decision-making process; inform them about the project and consult them on various issues relevant to the project/subcomponents and activities during project design and implementation. Consultation and participation serves as a venue for the key stakeholders (i.e., government agencies, project beneficiaries, and women) to be informed about the project, clarify and express feedbacks, issues and concerns, and suggestions; learn how they will be benefited by the projects; participate in decision-making and take action and/or be involved during the design, project implementation and operation/maintenance stages. The plan is in Table 14 below.

Table 14: Consultation and Participation Plan

Stakeholders	Objective of their participation	Type of Participation	Participation Methods and Responsibility		Timeline		Budget source
			Method	Who will be responsible	Start	End	
Government agencies/ bureaus/ units responsible for implementing the project/subprojects (Local Development and Reform Bureaus, Health Commissions, Housing & Urban-Rural Construction Bureaus, Human Resources and Social Security Bureaus, Civil Affairs Bureaus, Women's Federations, Poverty Alleviation and Development Offices, etc.).	<p>To inform about the project activities, implementation schedule/arrangements, agencies responsible for project implementation.</p> <p>To provide information relevant policies applicable to the project including ADB policies on safeguard, gender, and other relevant aspects.</p> <p>To enable concerned agencies/IAs to express their needs/concerns and/or clarify matters to ensure that the project activities are implemented in a timely manner and in accordance with the ADB policies and guidelines.</p>	Information sharing, consultation meetings, seeking/incorporating feedback in decision making, and coordinating responsibilities	Meeting Workshop	HMG/IAs/PM Os Consultants	2020	2026	Project budget
Agencies responsible for implementing the RP/IEE,	To define the roles of each agency during implementation of relevant plans, solicit their support, and harmonize the implementation of	Information sharing, consultation meetings, seeking/incorporating feedback in decision	Meeting Workshop	HMG/IAs/PM Os Consultants	2020	2026	Project budget

Stakeholders	Objective of their participation	Type of Participation	Participation Methods and Responsibility		Timeline		Budget source
			Method	Who will be responsible	Start	End	
GAP, and SDAP (Natural Resources Bureaus, Agriculture and Rural Bureaus, Ecology and Environment Bureaus, township governments, etc.)	<p>relevant plans with the existing programs/plans of the government agencies/bureaus.</p> <p>To enable the concerned agencies/IAs to express their needs/concerns and/or clarify matters to ensure that the relevant plans are implemented in a timely manner and in accordance with the ADB policies or approved plans.</p>	making, and coordinating responsibilities					
Project beneficiaries/residents in the project area including affected persons/HHs, women, farmers, village committees and other stakeholders.	<p>To inform beneficiaries/households on how they could access project benefits (i.e., employment/jobs, public awareness, training, community participation, and other activities), and seek inputs for decision-making in project cycle (design, implementation and monitoring).</p> <p>To provide information to households/individuals that would experience potential negative impacts (i.e., land acquisition/resettlement,) or experience positive project impacts according to relevant social and safeguard plans prepared for the project.</p> <p>To engage residents/communities in detailed design of relevant project activities (i.e., training/seminars, public</p>	Information sharing, consultation meetings, seeking/incorporating feedback in decision making, and coordinating responsibilities	Meeting, FGD, public consultation	HMG/IAs/PM Os Consultants	2020	2026	Project budget

Stakeholders	Objective of their participation	Type of Participation	Participation Methods and Responsibility		Timeline		Budget source
			Method	Who will be responsible	Start	End	
	awareness, consultations, mobilization of cleaners/river guards, community volunteers, etc.) according to relevant plans for the project.						
Community-based organizations such as: - farmers groups, women federations, etc.; contractors	<p>To inform and seek participation of representatives of community-based organizations on issues/matters concerning water supply, river embankment improvement, solid waste and wastewater treatment/management, ecological conservations, green space construction, etc.</p> <p>To seek their inputs in decision-making and project implementation, and monitoring.</p> <p>To encourage contractors to hire local people including women, and the poor/low- income people</p>	Information sharing, consultation meetings, seeking/incorporating feedback in decision making, and coordinating responsibilities	Meeting, FGD, public consultation	DCG/PMO IAs, consultants	2020	2025	Project budget
Women	<p>To ensure inclusiveness of women and that they are able to benefit from the project</p> <p>To ensure women's participating in consultation meetings on detailed design and tariff setting, training and or capacity building activities; and ensure women's access to project related jobs according to relevant plans for the project.</p>	Information sharing, consultation meetings, seeking/incorporating feedback in decision making, and coordinating responsibilities	Meeting, FGD, consultation	HMG/IAs/PMOs; Consultants (assisted by local women's federations)	2020	2025	Project budget

ADB = Asian Development Bank, EA = executing agency, FGD = focus group discussion, GAP = gender action plan, HPMO=Huangshan project management office; HH = household, HMG = Huangshan Municipal Government, IA = implementing agency, IEE = initial environment examination, LGU = local government unit, PMO = project management office, RP = resettlement plan, SDAP =social development action plan, TOR = terms of reference.

X. ANTICORRUPTION POLICY

163. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project.²⁶ 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.²⁷

164. To support these efforts, relevant provisions are included in the loan agreement and the bidding documents for the project.

XI. ACCOUNTABILITY MECHANISM

165. 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.²⁸

XII. RECORD OF CHANGES TO THE PROJECT ADMINISTRATION MANUAL

166. 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.

Particular	Description of Change	Date
Disbursement Arrangements for ADB Funds	Through a minor change memo, para. 68 of PAM was revised to remove the requirement of including, in the withdrawal application, a statement from Huangshan Municipal Government, which confirms that all listed equity investments satisfy the terms and conditions specified in the onlending agreement between the government and the Huangshan Trust and Investment Corporation.	17 January 2023

²⁶ Anticorruption Policy: <https://www.adb.org/documents/anticorruption-policy>.

²⁷ ADB's Integrity Office web site: <https://www.adb.org/site/integrity/main>.

²⁸ Accountability Mechanism. <https://www.adb.org/site/accountability-mechanism/main>.

APPENDIX 1: DETAILED ACTIVITIES OF ALL SUBPROJECTS

No.	Subprojects	Construction content	Corresponding Packages
Output 1: Urban point source pollution management facilities installed			
<i>A-Urban Drainage System Upgrade</i>			
1A-1	Sewage and Stormwater Sewer Upgrade Project in Huizhou District	1) install 28.04km of sewage pipes (open cut); 2) install 3.14km of stormwater drainage pipes (open cut); 3) construct one wastewater pump station; 4) construct 21.27km of stormwater ditches; 5) construct 60,000 m ² of porous pavement on sidewalk, 3000 ecological tree pits, and 400 gutter inlets during road surface restoration.	Works-HZ-1
1A-2	Sewage and Stormwater Sewer Upgrade Project in Huangshan District	1) install 3.25km of sewage interception main (open cut); 2) install 1.87km of stormwater drainage pipes (open cut); 3) construct 5,250 m ² of porous pavement on sidewalk, 525 ecological tree pits, and 70 gutter inlets during road surface restoration.	Works-HS-4
1A-3	Sewage and Stormwater Sewer Upgrade Project in Xiuning County	1) renovate 4.38km of sewage main pipes along Binjiang Rd (pipe-jacking); 2) install 12.37km of sewage pipes (open cut); 3) install 3.39km of stormwater drainage pipes (open cut); 4) construct 6,870 m ² of porous pavement on sidewalk, 687 ecological tree pits, and 92 gutter inlets during road surface restoration	Works-XN-1, Works-XN-2
1A-4	Sewage and Stormwater Sewer Upgrade Project in Yi County	1) renovate 4.3km of sewage interceptor along Hexi Rd (pipe-jacking); 2) install 1.75km of sewage pipes (open cut); 3) construct 525 ecological tree pits.	Works-YX-1
1A-5	Sewage and Stormwater Sewer Upgrade Project in She County	1) renovate 9.22km of sewage pipes (open cut); 2) install 20.23km of sewage pipes (open cut); 3) install 25.45km of stormwater drainage pipes (open cut); 4) install 1.43km of stormwater pipe culverts (open cut); 5) construct 45,000 m ² of porous pavement on sidewalk, 4,500 ecological tree pits, and 1,018 gutter inlets during road surface restoration	Works-SX-1, Works-SX-2, Works-SX-3, Works-SX-4
1A-6	Sewage and Stormwater Sewer Upgrade Project in Qimen County	1) renovate 10.22km of sewage pipes (open cut); 2) install 6.65km of sewage pipes (open cut); 3) install 14.51km of stormwater drainage pipes (open cut); 4) clean-up 2.42km of stormwater pipe culverts; 5) construct 51,792 m ² of porous pavement on sidewalk, 3,960 ecological tree pits, and 580 gutter inlets during road surface restoration	Works-QM-1, Works-QM-2, Works-QM-3
<i>B-River Rehabilitation</i>			

No.	Subprojects	Construction content	Corresponding Packages
1B-1	Zhang River Rehabilitation Project in Yi County	1) construct river revetment in section from Jiudong Bridge to Dongmen Bridge (1.1 km); 2) ecological landscaping improvement along Zhang River (3,200m ²) and construction of 1.52km walkway.	Works-YX-2
1B-2	Caocun River Rehabilitation Project in Huangshan District	Rehabilitate and upgrade a 3.85 km section of flood control channel that starts from downstream of Dashankeng Reservoir and ends at the confluence point of Caocun River and Xinhua River.	Works-HS-2
Output 2: Rural point and non-point source pollution control facilities and systems enhanced			
<i>A-Rural Environment Infrastructure Improvement</i>			
2A-1	Village Environment Improvement Project in Xiuning County	For 32 natural villages: 1) install 41.42km of water supply pipes; 2) construct 27 onsite wastewater treatment stations; 3) construct 2 wastewater pumping stations; 4) install 67.11km of sewage pipes; 5) construct 16,848m ² of landscape walkway; 6) construct 3,000m ² of parking lot; 7) construct 6 landscape pavilions and 10 lookouts.	Works-XN-3, Works-XN-4, Works-XN-5, Works-XN-6, Works-XN-7
2A-2	Village Environment Improvement Project in Huizhou District	For 8 natural villages: 1) construct 13 onsite wastewater treatment stations; 2) install 5.67km of sewage pipes;	Works-HZ-2
2A-3	Village Environment Improvement Project in Tunxi District	For 54 natural villages: 1) construct 4 onsite wastewater treatment stations; 2) install 50.8km of sewage pipes; 3) construct 22 wastewater pump stations.	Works-TX-1, Works-TX-2
2A-4	Xinhua Village Environment Improvement Project in Huangshan District	For 7 natural villages: 1) construct 16 onsite wastewater treatment stations; 2) install 8.9km of sewage pipes; 3) construct 15,000m ² of walkway; 4) road greening of 3,000m ² ; 5) construct 800m ² of parking lots; 6) construct 2 tourism toilets.	Works-HS-1
2A-5	Xitou Village Environment Improvement Project in She County	For 20 natural villages: 1) construct 25 onsite wastewater treatment stations; 2) install 39km of sewage pipes; 3) install 59.68km of water supply pipes; 4) construct 4,800m ² of walkway; 5) landscape development of 450m ² ; 6) road greening of 3,000m ² and landscape of 6,000m ² ; 7) construct 600m ² of parking lots.	Works-SX-4, Works-SX-5
2A-6	Environmental Infrastructure Improvement	A total of 10 villages and towns are involved: Construct 8,452 m ² of parking lots and other supporting facilities for eco-tourism development,	Works-SX-2

No.	Subprojects	Construction content	Corresponding Packages
	along Xin'an River in She County	including walkways, observation platforms, tourism toilets, landscape development, tourists rest stations, retaining walls, solid waste collection bins, etc.	
B - Non-point source pollution control			
2B-1	Xin'an River Green Agriculture Demonstration Project in She County	<ol style="list-style-type: none"> 1) improve the agricultural infrastructure and tourism reception facilities in Nanping Village Characteristic Agricultural Park (2000 mu), Takeng Citrus Demonstration Park (3000 mu) and Miantan Loquat Demonstration Park (1500 mu) in Huicheng Town, She County; 2) promote soil test formulated fertilization, application of organic fertilizer and solar energy powered insecticidal lamps, etc. 	Works-SX-3
2B-2	Xinhua Village Green Agriculture Demonstration Project in Huangshan District	<ol style="list-style-type: none"> 1) upgrade the agricultural infrastructure in Baishabao Lei Bamboo Ecological Demonstration Park (1000 mu), Xinchang Lei Bamboo Ecological Demonstration Park (700 mu) and Xinhua Oil Tea Ecological Demonstration Park (120 mu); 2) construct 650m main road and 5.24km walkway within the parks for daily agriculture activities and sightseeing; 3) construct tourism facilities, including parking lots, tourism toilets, lookouts, etc. 4) promote soil test formulated fertilization, application of organic fertilizer and solar energy powered insecticidal lamps, etc. 	Works-HS-3
2B-3	Pine Forest Disease Prevention Project	<ol style="list-style-type: none"> 1) long-distance video monitoring and unmanned aerial vehicle monitoring of pinewood, and personnel training; 2) procurement of quarantine inspection equipment and pulverisers; 3) tree trunk injection for healthy pine trees (900,000 tree-time) and chemical control of pine wilt by applying environmentally friendly chemicals (70,000 hm²); 4) development of an information management system for pine wilt control in Huangshan. 	Goods-HSC-1, Goods-HSC-2, Goods-HSC-3, Goods-HSC-4
Output 3: Green financing mechanisms piloted			
3-1	Green Investment Fund	The Fund targets sustainable companies and partners which needs capital for investing into projects supporting the green agenda of Huangshan Municipality.	N.A.
3-2	Green Incentive Fund (eco-compensation)	<ol style="list-style-type: none"> 1) select 20,000 mu of main polluted areas for development of pilot green tea plantations; 2) establish technical standard for green production in tea gardens; 3) establish "green" tea production certification system; 	N.A.

No.	Subprojects	Construction content	Corresponding Packages
		4) evaluate the production, cost, revenue, ecological benefits and compensation standard for green production in tea gardens; 5) build good brand and establish green marketing system; 6) project experience dissemination.	
Output 4: Capacity for ecological system and project management strengthened			
<i>A-Monitoring and Management System</i>			
4A-1	Smart River Monitoring System of Huangshan	1) develop an intelligent water resources management network; 2) develop an intelligent cloud service center; 3) develop an intelligent water resources application integration system; 4) develop standard and regulation system, safeguard system and operation and maintenance safeguard system.	Goods-HSC-5
4A-2	Smart Environment Monitoring System in Qimen County	1) an eco-environmental monitoring network; 2) a basic database of eco-environment; 3) a comprehensive evaluation system of eco-environment; 4) multiple monitoring platforms, including environmental quality monitoring platform, pollution source automatic monitoring platform, etc.	Goods-HSC-6
4A-3	Smart EHS Management System in Huizhou District Industrial Park	Construction of Internet of Things system, application support platform, data support system, standards and specifications, integrated business application system, etc.	Goods-HSC-7-Lot 1
4A-4	Smart EHS Management System in She County Industrial Park	Construction of Internet of Things system, application support platform, data support system, standards and specifications, integrated business application system, etc.	Goods-HSC-7-Lot 2
4A-5	Huangshan MIS Top Layer System Project	MIS/GIS database, communications, and programs at Huangshan Municipal Smart Management System to support overall smart city management system.	Goods-HSC-8
4A-6	Huangshan Smart EHS General System	A GIS and program for environmental, health and safety (EHS) administration, management, monitoring, and emergency response systems for industrial parks and factories.	Goods-HSC-9
<i>B-Technical Support</i>			
4B-1	Study on Evaluation of Xin'an River Eco-compensation	1) study and establish statistical indicators of eco-compensation; 2) propose accounting methods of compensation standards; 3) study the compensation benefits evaluation; 4) Hiring individual consultants: international project management and rural wastewater specialist, social specialist and environmental specialist.	Serv-HSC-1, Serv-HSC-15, Serv-HSC-16, Serv-HSC-18
4B-2	Rural Wastewater Discharge Standard Study	Research on sewage discharge standard in rural areas.	Serv-HSC-2

No.	Subprojects	Construction content	Corresponding Packages
4B-3	Green Economic Development Strategic Study and Planning for Ecological Huangshan City	Strategic study for green development in Huangshan	Serv-HSC-3
4B-4	Greener Tea Production Eco-compensation Certification Program	Research on the standard certification system of green tea plantations.	Serv-HSC-4
4B-5	She County Household Pig Manure Management Study	Pilot study for household pig manure management	Serv-HSC-17
4B-6	Green Incentive Fund Feasibility Study	Feasibility study for the implementation of Green Incentive Fund	Serv-HSC-14
<i>C-Project Management</i>			
4C-1	Project Management Consulting Service	<ol style="list-style-type: none"> 1) Project implementation supporting consulting service. 2) External social and resettlement compliance monitoring 3) Dissemination of project experiences 4) Project Start-up Consultancy before Loan Implementation 	Serv-HSC-5, Serv-HSC-15, Serv-HSC-16, Serv-HSC-18
4C-2	Huangshan Training for Capacity Strengthening	<ol style="list-style-type: none"> 5) trainings provided by project implementation supporting consultants; 6) project management trainings provided by ADB; 7) study tours. 	Serv-HSC-6
4C-3	Office Equipment Supply	<ol style="list-style-type: none"> 1) Project Information Management System: covering contract management, budget management, cost management, fund management, risk management, progress management, quality management, safety management, etc. 2) office supplies such as computers, printers and photocopiers in project management offices. 	Goods-HSC-10
4C-4	Construction Supervision Service	Recruitment of agencies for construction supervision.	Serv-HSC-7, Serv-HSC-8, Serv-HSC-9, Serv-HSC-10, Serv-HSC-11, Serv-HSC-12, Serv-HSC-13

APPENDIX 2: OUTLINE TERMS OF REFERENCE FOR CONSULTING SERVICES

1. 12 consulting services are financed by the Asian Development Bank (ADB) to complete the following purposes: (i) project start-up and implementation support; (ii) capacity building; (iii) external social and resettlement monitoring; (iv) external environmental monitoring; (v) construction supervision; (vi) studies.

2. The project management office (HPMO) on behalf of EA (HMG) and IAs will be responsible for engaging the consulting service contract packages in accordance with ADB's Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time). The consulting firm will be selected for the project implementation support and capacity development by (i) inviting simple technical proposals; and (ii) using the quality- and cost-based selection method.

3. In addition to the consulting services financed by the loan, domestically funded consulting services will be recruited by the EA and IAs. The HPMO will recruit a procurement agent to provide bidding support including preparation of bidding documents, invitation for bids and bid evaluation reports, while the IAs will engage domestic design institutes to carry out preliminary and detailed engineering designs.

Summary of Consulting services

No.	Subproject	Estimated Value (€ x 1000)	International Expert (Person-month)	National Expert (Person-month)
4B-1	Study on Eco-compensation Evaluation of Xin'an River Basin	392	8 PM	20 PM
4B-2	Rural wastewater Discharge Standard Study	104	3 PM	6 PM
4B-3	Green Economic Development Strategic Study and Planning for Ecological Huangshan City	392	10 PM	20 PM
4B-4	Green Tea Eco-Compensation Certification System Study	392		50 PM
4B-5	She County Household Pig Manure Management Study	157	TBD	TBD
4B-6	Green Incentive Fund Feasibility Study	392	10 PM	31 PM
4C-1	Project Implementation Supporting Consulting Services	1,652	39 PM	144 PM
4C-2	Training for Capacity Strengthening	281	2 PM	4 PM
4C-3	Construction supervision service	2,317		588 PM
4C-4	External Social and Resettlement Monitoring	274		40 PM
4C-5	Project Experience Dissemination Program	392		11 PM
4C-6	Project Start-up Consultancy before Loan Implementation	150	Project management and rural wastewater specialist (4PM)	Social specialist (5 PM), Environmental specialist (5 PM)

PM = Person Month, TBD = To Be Determined.

Indicative Terms of Reference for 4B-1 Study on Eco-Compensation Evaluation of Xin'an River Basin

A. Background

1. Huangshan is a prefecture-level municipality in the southern part of Anhui Province, with a population in 2018 of 1.48 million. It comprises three urban districts and four counties and has an area of 9,807 km². Xin'an River, originating in Huangshan Municipality, is the main drinking water source for 10 million urban and rural residents in downstream areas in Zhejiang Province. Rapid economic development, urbanization, intensive agriculture production, and the growth of tourism in the area have increased both environmental and ecological pressures across the Xin'an River Basin. Both point sources (urban and rural sewage) and non-point sources (agriculture-based and run-off) have impaired the water safety in Xin'an River.

2. The Anhui Huangshan Xin'an River Ecological Protection and Green Development Project (the project) aims to demonstrate water pollution reduction in the Xin'an River Basin through improving urban and rural wastewater management, reducing soil erosion and agriculture-related non-point source pollution, and strengthening financing mechanisms, capacities, and public awareness.

3. This document sets out the tentative TOR for the consulting services to undertake a study on the eco-compensation evaluation of Xin'an River Basin to promote the effective application of eco-compensation mechanism within Xin'an River Basin and other areas with similar conditions in China. The executing agency for the project is the Huangshan Municipal Government (HMG). The direct client for the consulting services is the Huangshan Municipal project management office (HPMO) established in the Huangshan Municipal Development and Reform Commission (HDRC).

B. The Objectives and Overall Scope of Services

4. HMG has set up its sustainable economic development objectives in implementation of ecological protection, green development, and rural vitalization strategies. The consulting service of eco-compensation evaluation of Xin'an River Basin is to study and establish statistical indicators of eco-compensation, propose accounting methods of compensation standards, and evaluate the compensation benefits.

C. Implementation Arrangements

5. The consulting service will be carried out by a team of consultants through a firm. A minimum of 8 person-months of international and 20 person-months of national specialists will be required. The consulting services will be financed by the Asian Development Bank (ADB), and the consulting firm will be recruited by HPMO according to Procurement Regulations for ADB Borrowers - Goods, Works, Nonconsulting and Consulting Services (2017, as amended from time to time).²⁹ The consulting firm will be selected by (i) inviting full technical proposals; and (ii) using the quality- and cost-based selection (QCBS) method, with a quality–cost weighting ratio of 90:10. The consulting services are expected to start in July 1, 2020 and finish in June 30, 2021.

²⁹Checklists for actions required to contract consultants by method available in e-Handbook on Project Implementation at: <http://www.adb.org/documents/handbooks/project-implementation/>.

D. Reporting Requirements

6. The consultant team will produce (i) an inception report within 4 weeks after mobilization, (ii) a draft study report 9 months after mobilization, and (iii) a final study report at the end of the consulting services. The inception, draft and final reports will be subject to reviews by ADB and HPMO. The comments received from ADB and HPMO, and selected key experts who would be invited as reviewers should be incorporated and addressed in the final report. All reports are to be written in English and translated into Chinese. One soft and two printed copies of each report are to be submitted to ADB (English version only) and HPMO (both Chinese and English versions).

E. Key Expertise Required

7. The proposing entities will determine the number and the nature of experts which they will require to achieve the objectives of the consulting service in accordance with their proposed approach and methodology. However, ADB requires a minimum of one international and two national experts.

8. **Eco-compensation economist and team leader (international, 8 person-months).** The specialist should have (i) a post-graduate degree in finance, economics, business, or related field; (ii) at least 10 years of professional experience in technical and/or international cooperation projects (ADB preferred), including management and leadership responsibility; (iii) experience in eco-compensation analysis and application; (iv) demonstrated capacity to present results of complex analysis in concise and logical manner; (v) demonstrated ability to supervise a team of experts working remotely; and (vi) fluency in English. Work experience in the PRC will be an advantage. Specific tasks will include the following:

- (i) carry out a comprehensive review and assessment of existing eco-compensation schemes, policies and regulations in Xin'an River Basin and the implementation status of any ongoing eco-compensation related projects and incentive programs;
- (ii) conduct a comprehensive review of international- and domestic-level eco-compensation;
- (iii) identify the fiscal and institutional barriers for the implementation of comprehensive eco-compensation;
- (iv) develop the evaluation criteria/principles for ecosystem value;
- (v) establish a set of performance indicators for evaluation of ecosystem value;
- (vi) based on the analysis of policies, regulations, planning and existing best practices, establish the eco-compensation standards that would be applied in Huangshan Municipality;
- (vii) assist HPMO in promoting the implementation of established eco-compensation evaluation system; and
- (viii) lead the preparation of required report, including assign work to the consulting team members; consolidate the inputs from consulting team members; and finalize the inception, draft and final reports for submission to ADB and HPMO for review and approval.

9. **Ecosystem evaluation and management specialist (national, 10 person-months).** The specialist should have (i) a postgraduate degree in ecosystem management, environmental management, or a relevant field; (ii) 10 or more years of research and policy experience in ecosystem evaluation, ecosystem management, and environmental planning; and (iv) fluency in both Chinese and English. Specific tasks will include the following:

- (i) assist the team leader in carrying out a comprehensive review and assessment of existing eco-compensation schemes, policies and regulations in Xin'an River Basin and the implementation status of any ongoing eco-compensation related projects and incentive programs;
- (ii) conduct a comprehensive review of international- and domestic-level ecosystem evaluation in eco-compensation through literature review;
- (iii) assist in establishing a set of performance indicators for evaluation of ecosystem value after discussing with key stakeholders;
- (iv) assist HPMO in promoting the implementation of established eco-compensation evaluation system; and
- (v) assist the team leader in preparing required reports; and
- (vi) undertake other tasks assigned by the team leader, as needed.

10. Payments for ecosystem services specialist (national, 10 person-months). The specialist should have (i) a post-graduate degree in finance, economics, business, or related field; (ii) at least 10 years of professional experience in technical and/or international cooperation projects (ADB preferred); (iii) experience in analysis of industry stakeholders, market structure, and trends; particularly on payment of ecosystem services would be an advantage; and (iv) fluency in both Chinese and English. Specific tasks will include the following:

- (i) assist the team leader in carrying out a comprehensive review and assessment of existing eco-compensation schemes, policies and regulations in Xin'an River Basin and the implementation status of any ongoing eco-compensation related projects and incentive programs;
- (ii) review existing methods for determination of eco-compensation standards and select feasible methods to be applied in the study;
- (iii) assist the team leader in establishing the eco-compensation standards that would be applied in Huangshan Municipality;
- (iv) assist HPMO in promoting the implementation of established eco-compensation evaluation system; and
- (v) assist the team leader in ensuring the timely implementation of the TA activities, including (a) collecting data through surveys and interviews with key stakeholders; and (b) organizing the inception, interim, and final workshops, to deliver quality and timely outputs, including developing a detailed implementation schedule; and coordinating the assigned tasks with the concerned consulting team members;
- (vi) assist the team leader in preparing required reports; and
- (vii) undertake other tasks assigned by the team leader, as needed.

Indicative Terms of Reference for 4B-2 Rural Wastewater Discharge Standard Study

A. Background

1. Huangshan is a prefecture-level municipality in the southern part of Anhui Province, with a population in 2018 of 1.48 million. It comprises three urban districts and four counties and has an area of 9,807 km². Xin'an River, originating in Huangshan Municipality, is the main drinking water source for 10 million urban and rural residents in downstream areas in Zhejiang Province. Rapid economic development, urbanization, intensive agriculture production, and the growth of tourism in the area have increased both environmental and ecological pressures across the Xin'an River Basin. Both point sources (urban and rural sewage) and non-point sources (agriculture-based and run-off) have impaired the water safety in Xin'an River.

2. The Anhui Huangshan Xin'an River Ecological Protection and Green Development Project (the project) aims to demonstrate water pollution reduction in the Xin'an River Basin through improving urban and rural wastewater management, reducing soil erosion and agriculture-related non-point source pollution, and strengthening financing mechanisms, capacities, and public awareness.

3. This document sets out the TOR for consulting services to undertake a study for rural wastewater discharge standard in Huangshan City to ensure its ecological protection at affordable costs. The executing agency for the project is the Huangshan Municipal Government (HMG). The direct client for the consulting services is the Huangshan Municipal project management office (HPMO) established in the Huangshan Municipal Development and Reform Commission (HDRC).

B. Objectives and Overall Scope of Works

4. HMG has set up its sustainable economic development objectives in implementation of ecological protection, green development, and rural vitalization strategies. The Anhui Xinan River Ecological Protection and Green Development Project includes a component of design, finance, construction and commissioning of decentralized wastewater treatment systems (DWTF) in 121 rural villages. The sustainable operation and management (O&M) of DWTF is critical to ensure the investment effective and efficient, while the effluent standard of DWTF is a core factor to affect the process selection, capital cost, and O&M costs. The consulting service of rural wastewater (RWW) discharge standard study is to assess current DWTF process technologies, capital costs and O&M costs, and cost recovery mechanism, compare international good practices, and study affordability and willingness to pay to recommend optimized affordable effluent discharge standards at various environmental criteria.

C. Major Outputs and Activities

5. The consulting service will be carried out by a team of consultants through a firm. A total of 3 person-months of international and 6 person-months of national specialists will be required. The consulting services will be financed by the Asian Development Bank (ADB), and the consulting firm will be recruited by the HPMO according to Procurement Regulations for ADB Borrowers - Goods, Works, Non-consulting and Consulting Services (2017, as amended from time to time).³⁰ The consulting firm will be selected by (i) inviting simple technical proposals; and

³⁰Checklists for actions required to contract consultants by method available in e-Handbook on Project Implementation at: <http://www.adb.org/documents/handbooks/project-implementation/>.

(ii) using the quality-based selection (QBS) method. The consulting services are expected to start in July 1, 2020 and finish in July 1, 2021.

6. The outputs of the consulting service will include:

7. Output 1: Assessment of current conditions of rural wastewater treatment processes, treatment efficiency, and effluents, and their capital and O&M costs including land footprint, operators' skills, sludge generation and disposal costs;

8. Output 2: Investigation of Huangshan ecological and environmental capacities to clean up DWTF effluents at various locations such as water resource protection zones, mountainous villages, low land with high groundwater table, adjacent to wetland, etc; and local economic development and financial affordability of the county/district governments, township governments and villagers.

9. Output 3: Review of national and provincial policies, regulations, and development plans, and political action plans on RWW management, especially subsidy policies, cost-sharing and cost recovery strategies, and local practice and current DWTF effluent criteria adopted in Huangshan and Anhui Province;

10. Output 4: Introduction of international good practice and summarizing experiences and lessons learnt worldwide;

11. Output 5: Study of DWTF effluent standards and cost impacts based on site locations to recommend various discharge standards for various villages in Huangshan City and cost recovery mechanism and possible tariffs.

D. Consultant's Services

12. The following specialists will be required but the consulting firm should propose their best team consisting of relevant required expertise with the minimal specialists:

13. Rural Wastewater Specialists (Team leader International, 3 person-months, national 6 person months)

The RWW specialists should have at least 15 years working experiences in both developed and developing countries (international specialist) and with qualifications of at least Master's degree in civil engineering, municipal engineering, environmental engineering or relevant disciplines. The specialists shall have professional engineer's qualifications internationally (International specialist) and nationally (national consultant). The specialists will:

- (i) Undertake site visits, surveys of local DWTFs, investigations, data collections, and all analyses and studies;
- (ii) prepare the inception, draft, and final reports;
- (iii) organize review workshops and present findings and recommendations;
- (iv) coordinate with ADB and HPMO/IAs on carry out the study;
- (v) assure the quality of the works.

Indicative Terms of Reference for 4B-3 Green Economic Development Strategic Study and Planning for Huangshan Ecological City

A. Background

1. Huangshan is a prefecture-level municipality in the southern part of Anhui Province, with a population in 2018 of 1.48 million. It comprises three urban districts and four counties and has an area of 9,807 km². Xin'an River, originating in Huangshan Municipality, is the main drinking water source for 10 million urban and rural residents in downstream areas in Zhejiang Province. Rapid economic development, urbanization, intensive agriculture production, and the growth of tourism in the area have increased both environmental and ecological pressures across the Xin'an River Basin. Both point sources (urban and rural sewage) and non-point sources (agriculture-based and run-off) have impaired the water safety in Xin'an River.

2. The Anhui Huangshan Xin'an River Ecological Protection and Green Development Project (the project) aims to demonstrate water pollution reduction in the Xin'an River Basin through improving urban and rural wastewater management, reducing soil erosion and agriculture-related non-point source pollution, and strengthening financing mechanisms, capacities, and public awareness.

3. This document sets out the TOR for consulting services to undertake a strategic study and planning for green economic development in Huangshan City to ensure its ecological protection while achieve sustainable economic development. The executing agency for the project is the Huangshan Municipal Government (HMG). The direct client for the consulting services is the Huangshan Municipal project management office (HPMO) established in the Huangshan Municipal Development and Reform Commission (HDRC).

B. The Objectives and Overall Scope of Works

4. HMG has set up its sustainable economic development objectives in implementation of ecological protection, green development, and rural vitalization strategies. The consulting service of green economic development strategy study and planning is to assess current conditions and competitiveness of industrial and agriculture sectors, investigate natural and social resources, review national and provincial policies, regulations, and development plans, introduce international best practice, summarize experiences and lessons learnt, identify development opportunities, and formulate the next 5 year (2021–2025) and 15 year (2021–2035) development strategic plans. The jurisdictions of the study will cover whole Huangshan City including 3 districts and four counties.

C. Major Outputs and Activities

5. The consulting service will be carried out by a team of consultants through a firm. A total of 10 person-months of international and 20 person-months of national specialists will be required. The consulting services will be financed by the Asian Development Bank (ADB), and the consulting firm will be recruited by the HPMO according to Procurement Regulations for ADB Borrowers - Goods, Works, Non-consulting and Consulting Services (2017, as amended from time to time).³¹ The consulting firm will be selected by (i) inviting full technical proposals; and (ii)

³¹Checklists for actions required to contract consultants by method available in e-Handbook on Project Implementation at: <http://www.adb.org/documents/handbooks/project-implementation/>.

using the quality- and cost-based selection (QCBS) method, with a quality–cost weighting ratio of 90:10. The consulting services are expected to start in July 1, 2020 and finish in July 1, 2021.

6. The outputs of the consulting service will include:

7. Output 1: Assessment of current conditions and competitiveness of all sectors in Huangshan City including manufacturing industries, IT industries, tea industries, agriculture, tourism sector, and service sectors to identify strengths and weakness;

8. Output 2: Investigation of Huangshan natural and social resources including ecological resources (Green Mountain and Green Water), heritage resources, agriculture resources, human resources, tourism resources, and industrial resources and propose resource development and utilization plans;

9. Output 3: Review of national and provincial policies, regulations, and development plans, and political action plans to streamline of the socialist-economic characteristics and comparison studies on developed economic development models and modernization process;

10. Output 4: Introduction of international best practice and summarizing experiences and lessons learnt worldwide;

11. Output 5: Analysis and identification of development opportunities, and develop a 5 year (2021 – 2025) and 15 year (2021-2035) development strategic plans for HMG to cover at least the following sectors: (i) industrial development strategic plan; (ii) agriculture development strategic plan; (iii) tourism development strategic plan; (iv) IT sector development strategic plan; (v) social development strategic plan; (vi) service sector development strategic plan; (vi) rural development strategic plan; and (vii) overall master plan for Huangshan Green Economic Development Strategic Plan.

D. Consultant's Services

12. The following specialists will be required but the consulting firm should propose their best team consisting of relevant required expertise:

13. **Economists (Team Leader International, 10 person-months, National 20 person months)**

The economists should have at least 15 years working experiences in both developed and developing countries (international) and with qualifications of at least a Masters degree in economics. The specialists will:

- (vi) Manage the study team as team leader (international);
- (vii) prepare the inception, draft, and final reports including all deliverables;
- (viii) carry out site visits, data collection, and any surveys required;
- (ix) review national and provincial/city policies and regulations, development plans, and relevant strategies for green development in various industries and sectors;
- (x) conduct comparative studies of developed economies and developing countries to identify the pathways to realize green development;
- (xi) assess the capacity of HMG and institutional settings on their strengths and weakness;

- (xii) assess Huangshan various sectors and resources to identify opportunities and opportunity costs;
- (xiii) organize review workshops; and
- (xiv) introduce international best practices.

Indicative Terms of Reference for 4B-4 Green Incentive Fund Certification System Study

A. Background

1. Huangshan is a prefecture-level municipality in the southern part of Anhui Province, with a population in 2018 of 1.48 million. It comprises three urban districts and four counties and has an area of 9,807 km². Xin'an River, originating in Huangshan Municipality, is the main drinking water source for 10 million urban and rural residents in downstream areas in Zhejiang Province. Rapid economic development, urbanization, intensive agriculture production, and the growth of tourism in the area have increased both environmental and ecological pressures across the Xin'an River Basin. Both point sources (urban and rural sewage) and non-point sources (agriculture-based and run-off) have impaired the water safety in Xin'an River.

2. The Anhui Huangshan Xin'an River Ecological Protection and Green Development Project (the project) aims to demonstrate water pollution reduction in the Xin'an River Basin through improving urban and rural wastewater management, reducing soil erosion and agriculture-related non-point source pollution, and strengthening financing mechanisms, capacities, and public awareness.

3. This document sets out the tentative terms of reference (TOR) for the consulting services to establish and implement green tea certification system under the pilot Green Incentive Fund. The executing agency for the project is the Huangshan Municipal Government (HMG). The direct client for the consulting services is the Huangshan Municipal Project Management Office (HPMO) established in the Huangshan Municipal Development and Reform Commission (HDRC).

B. Objectives and Scope of Works

4. The green incentive fund is designed to provide incentives to tea farmers to adopt green farming practice. The compensations to farmers' adaption of green farming measures shall be quantified and realize the goal of changing farmers' farming behavior. The independent certification system is to be developed to verify and certify the green farming measures taken as the bases for government's subsidy. The certification body would be the third party or the second party consisting of tea farmers, tea processing and marketing enterprises, consumers, tea production technical centers, local governments, and other stakeholders. For a successful implementation of the fund, the certification system will be developed during the feasibility study while implemented during the 5-year executing period. Ultimately the certification will be conducted by an international reputable certification organization to ensure the green tea farming and products recognized by the customers.

C. Deliverable Requirements

5. The consultant team will produce (i) an inception report within 4 weeks after mobilization, (ii) a draft report on certification system 6 months after mobilization, and (iii) a final report within 12 months. The inception, draft and final reports will be subject to reviews by ADB and HPMO. The comments received from ADB and HPMO, and selected key experts who would be invited as reviewers should be incorporated and addressed in the final report. All reports are to be written in English and Chinese. One soft and two printed copies of each report are to be submitted to ADB (English version only) and HPMO (both Chinese and English versions). On a yearly basis, the team should organize and facilitate the verification process to ensure the subsidies quantified

and delivered to tea farmer in a timely manner. Before end of the service, an international reputable certification organization should be identified and certificate should be obtained.

D. Implementation schedules

6. The schedule for the certification system design and implementation is arranged at the following table.

Implementation schedule with milestones

Major Activities	Major Output	Expected Completion Date
Call for bidding and recruiting of the design team	A design team with competent capacity	August 2020
Tea farm assessment and stakeholder interview	Non-point source pollution mitigation assessment: main pollutant reduction estimation and main technical measures and practices	October 2020
Certification Scheme Development	Ecological tea-farming certification scheme: institution and personnel, inspection and certification protocol,	May 2021
Pilot implementation	Conduct the certification process every year for 5 years	June 2026
Revision and competition of the Scheme	A complete Eco-compensation Scheme	June 2026

E. Required expertise

7. The certification system should be developed and implemented by an experienced team to fulfill the objectives and provide the outputs identified in the proposal. The assignment will require the following consultants as follows.

8. **Eco-compensation specialist (national 10 person-months):** The specialist will have a master's degree in environmental economics or relevant qualification and at least 10 years of work experience in eco-compensation management or related fields, and be familiar with regulation and policies in agricultural sector in PRC. The specialist will (i) analyze the international and national experiences on eco-compensation designing and implementation; (ii) conduct quantitative analysis for tea farming costs and market prices; (iii) establishment the certification, rewarding and delivery procedures for tea farmers; (iv) implementation of certification for whole fund period on a yearly basis; and (v) join the field visit, interview and meetings if necessary.

9. **Tea specialists (national 12 person-months):** The specialists will have a graduate degree in tea, or a relevant discipline; and at least 10 years of work experience in tea production and processing in Huangshan region. The specialists will: (i) develop green farming technologies and measures package in ecological tea farm in line with local conditions. The technologies and measures include but are not limited to agronomic, biological, physical, chemical, and engineering practices which help to reduce agro-chemical application and the discharge of TN, TP and pesticides; (ii) provide support for the ecological tea farm standard development, certification scheme and rewarding and compensation delivery mechanism; and (iii) join the field visit, interview and meetings if necessary.

10. **Agricultural certification specialist (national, 12 person-months):** The specialist will have a graduate degree in quality management, or a relevant discipline; and at least 10 years of work experience in quality management system, organic agricultural certification or good

agricultural practice. The specialists will: (i) develop ecological tea farm certification scheme, including the institution, inspection and certification rules and protocol; (ii) establishment the certification, rewarding and delivery procedures for tea farmers. (iii) implementation of certification for whole fund period on a yearly basis; and (iv) identify and facilitate with international reputable certification body to secure the international green certificate if possible.

11. **Financial specialist (national, 8 person-months):** The specialist will have at least 10 years of working experiences in financial management and with qualifications of at least graduate degree in financial management, or a relevant discipline. The specialists will: (i) carry out site visits, data collection and analysis; (ii) financial analysis on the proposed ecological team farm certification scheme, including the financial feasibility and sustainability; (iii) propose any recommendations on the certification scheme to enhance the financial sustainability.

12. **Non-point source pollution management specialist (national, 8 person-months):** The specialist will have at least 10 years of working experiences in rural wastewater management and with qualifications of at least graduate degree in environmental engineering, or a relevant discipline. The specialists will: (i) carry out site visits, data collection, and any surveys required; (ii) assess the non-point source pollution mitigation measures; (iii) estimate the reduction of main pollutant from tea gardens; and (iv) introduce international best practice on the agriculture non-point pollution control and feasible technical measures.

F. Budget

13. The budget for the Green Incentive Fund design is CNY 3 million including provisions of the testing and certification costs by reputable international certification body.

Indicative Terms of Reference for 4B-5 She County Household Pig Manure Management Pilot Study

A. Background

1. Huangshan is a prefecture-level municipality in the southern part of Anhui Province, with a population in 2018 of 1.48 million. It comprises three urban districts and four counties and has an area of 9,807 km². Xin'an River, originating in Huangshan Municipality, is the main drinking water source for 10 million urban and rural residents in downstream areas in Zhejiang Province. Rapid economic development, urbanization, intensive agriculture production, and the growth of tourism in the area have increased both environmental and ecological pressures across the Xin'an River Basin. Both point sources (urban and rural sewage) and non-point sources (agriculture-based and run-off) have impaired the water safety in Xin'an River.

2. The Anhui Huangshan Xin'an River Ecological Protection and Green Development Project (the project) aims to demonstrate water pollution reduction in the Xin'an River Basin through improving urban and rural wastewater management, reducing soil erosion and agriculture-related non-point source pollution (NSP), and strengthening financing mechanisms, capacities, and public awareness.

3. This document sets out the tentative terms of reference (TOR) for the consulting services to undertake a study on She County household pig farming manure management pilot study to promote the effective NSP population control within She County. The executing agency for the project is the Huangshan Municipal Government (HMG). The direct client for the consulting services is the Huangshan Municipal project management office (HPMO) established in the Huangshan Municipal Development and Reform Commission (HDRC).

4. Farmers in She County have long tradition to raise pigs at household backyards for making homemade gammons and bacons which are traditional festival foods in Huizhou region. Even today, there are approximately 34,700 households to raise 81,000 pigs, or 2.4 pigs a household. As a pig can produce 5 kg dung a day, the annual pig manure at She County would be 147,825 tons. The pig manures are composted and then used as organic fertilizers. However, the current practice for pig manure collection and composting are not professionally designed nor conducted. Uncontrolled pig manure handling causes contamination of runoff and discharge into Xinan River and threatens Xin'an River water quality.

B. The Objectives and Overall Scope of Services

5. The consulting service is to study and pilot effective measures for household pig manure collection, composting, and application in order to achieve the NSP control in Xinan River Basin. The study also includes a pilot project to design, build, and operate pig manure disposal facilities at 3 typical villages located within 1 km from Xinan River or its tributaries for one year to demonstrate sound approach for pig manure management and evaluate the NSP deduction effects. The budget is CNY 1,200,000 including professional remuneration costs (CNY 900,000) and 3 village pilot projects (CN Y300,000).

C. Implementation Arrangements

6. The consulting service will be carried out by a team of consultants through a firm. The consulting services will be financed by the Asian Development Bank (ADB), and the consulting firm will be recruited by HPMO according to Procurement Regulations for ADB Borrowers - Goods,

Works, Non-consulting and Consulting Services (2017, as amended from time to time).³² The consulting firm will be selected by (i) inviting simplified technical proposals; and (ii) using the quality-based selection (QBS) method. The consulting services are expected to start in July 1, 2020 and finish in June 30, 2021.

D. Reporting and Pilot Project Requirements

7. The consultant team will produce (i) an inception report within 4 weeks after mobilization, (ii) a design report within 2 months after mobilization, (iii) a final study report at the end of the consulting services, and 3 pilot projects at 3 villages. The inception, draft design, and final reports will be subject to reviews by ADB and HPMO. The comments received from ADB and HPMO, and selected key experts who would be invited as reviewers should be incorporated and addressed in the final report. All reports are to be written in English and in Chinese. The pilot projects will be designed, procured (supply of materials and equipment), and managed by the consultants with assistance from pig farming households. The hog houses renovation, composting sites, composting applications, etc. will be provided by the selected villages and farmers at no cost to the consultants. The villagers shall also contribute to all supports such as labors and local transportations required to renovate hog house, build and operate composting facilities, and transport and apply the composts to designed pilot crop or tea fields.

8. The detailed outputs will include:

- (a) detailed designs of pilot projects including drawings, technical specifications, operation procedures, etc. for the whole process of the pig manure management from hog house renovation until application of pig manure in farming fields.
- (b) evaluation of detailed processes and effectiveness of pilot results of hog house renovation, pig manure collection, composting process and application of pig manure to farming fields.
- (c) evaluation of effectiveness of NSP efforts by application of pig manure management practice.
- (d) review of national, provincial and local policies, regulations, plans, and compliances for household pig raising and develop a compliance auditing template.
- (e) conduct monthly auditing for 3 pilot projects during the consulting services.
- (f) develop a practical manual for application of proven technologies, designs, operations, and trouble shooting for whole process of pig manure management.
- (g) conduct training and dissemination of the successful experiences of pig manure management.
- (h) design a quantitative eco-compensation program to compensate the pig raising households at output-based results if they adopt the effective pig manure management practice.

E. Key Expertise Required

9. The consultants will determine the inputs, the number, and the specialties of experts which they will require to achieve the objectives of the consulting service in accordance with their proposed approach and methodology.

³²Checklists for actions required to contract consultants by method available in e-Handbook on Project Implementation at: <http://www.adb.org/documents/handbooks/project-implementation/>.

Indicative Terms of Reference for 4B-6 Green Incentive Fund Feasibility Study

A. Background

1. Huangshan is a prefecture-level municipality in the southern part of Anhui Province, with a population in 2018 of 1.48 million. It comprises three urban districts and four counties and has an area of 9,807 km². Xin'an River, originating in Huangshan Municipality, is the main drinking water source for 10 million urban and rural residents in downstream areas in Zhejiang Province. Rapid economic development, urbanization, intensive agriculture production, and the growth of tourism in the area have increased both environmental and ecological pressures across the Xin'an River Basin. Both point sources (urban and rural sewage) and non-point sources (agriculture-based and run-off) have impaired the water safety in Xin'an River.

2. The Anhui Huangshan Xin'an River Ecological Protection and Green Development Project (the project) aims to demonstrate water pollution reduction in the Xin'an River Basin through improving urban and rural wastewater management, reducing soil erosion and agriculture-related non-point source pollution, and strengthening financing mechanisms, capacities, and public awareness.

3. This document sets out the tentative terms of reference (TOR) for the consulting services to undertake a feasibility study on the Green Incentive Fund to promote the effective application of green tea farming eco-compensation mechanism within Huangshan City. The executing agency for the project is the Huangshan Municipal Government (HMG). The direct client for the consulting services is the Huangshan Municipal Project Management Office (HPMO) established in the Huangshan Municipal Development and Reform Commission (HDRC).

B. The Objectives and Overall Scope of Services

4. HMG has set up its sustainable economic development objectives in implementation of ecological protection, green development, and rural vitalization strategies. The consulting service of feasibility study is to design rewarding and eco-compensation mechanism that is targeted to encourage tea gardens to actively adopt green farming practice, including identification of eligible activities for rewarding, establishing an evaluation mechanism to assess contributions made by farmers to ecological improvement, and the operational mechanism of the system.

5. The Green Incentive Fund design will work on the following aspects: Evaluation of current tea farming in Huangshan: The evaluation will quantify the application rate of fertilizer (chemical and organic) and pesticides in tea production, and estimate the room (or potential) for reduction. The labor, material, capital and all other inputs and tea output will be analyzed. Climate, land, geography, soil, erosion and runoff, biological community and other natural factors will be investigated. This work aims to identify the region/watershed with high risk of non-point source pollution in tea farming, where will be screened as the region and tea farm for project pilot and implementation.

6. Analysis and assessment of technical support system for tea production in Huangshan: The tea farm, processing and marketing enterprises, tea farmer, tea management office, agro-technical extension center, commercial agro-technical supplier, tea technicians, and tea farming production materials (fertilizer and pesticide supplier) will be visited and interviewed, to examine the technical and behavioural bottlenecks, influencing factors and workable measures in current

technical support system for tea production, especially on reduction on agro-chemical application and improvement of tea safety.

7. Development of eco-tea farm standard: Combined with baseline analysis, indicators and indicator value, such as i.e., agro-chemical application rate, TN, TP and main pesticides discharged, will be examined and integrated into ecological tea farm standard. This work on one hand, provide the basis for quantification of Green Incentive Fund performance, and on the other hand, the standard should be in line with local natural, social and economic conditions; otherwise, the standard will not be workable and not be accepted by the tea farmers. For tea farming in Huangshan, existing tea gardens may be at different level of garden management and may employ different tea farming techniques, it is much necessary to classify different tea gardens into different categories and accordingly, their baseline operation and farming technology selection will also be different. Tea gardens with different development status or under different categories may have different priority to achieve the green tea garden standards (e.g. some may need more efforts to build retaining pond or buffer bushes, some may need more efforts to reduce use of chemical fertilizers, etc.), in this case farmers are allowed to choose their own strategies to improve their tea farming operations. These differences will be well considered in the scoring/evaluation standard to assess their efforts and contribution to the goal of the overall project.

8. Build-up of technical support system for ecological tea-gardening: Technical support is the key for ecological tea-gardening. In the design/study, how to encourage the active involvement of current governmental, commercial and farmer technician's technical support should be well examined and designed.

9. Set-up of ecological tea farm certification scheme: The third-party certification, such as ISO 9000/14000, Good Agricultural Practice (GAP), Green Food or Organic Agriculture, are currently being operated in the world and PRC. They are typical commercial and for-profit certification activities and can't be directly applied in current eco-compensation scheme. In the proposed Green Incentive Fund, experiences and framework of the third-party certification scheme will be learned and borrowed. Participatory certification, which invites the farmer and consumer, is another certification system transferring the credits and trust, will also be combined. The ecological tea farm certification scheme will consist the stakeholders of government, tea production/processing enterprises, tea farmer, consumer, expert and others. Inspectors, certification committee, and certification protocol, tea and water sampling and analysis will be main components of the certification scheme.

10. Creation of result-based rewarding or compensation delivery mechanism: The rewarding or compensation mechanism is influenced by economic development status, tea farming cost and benefit, pollution level, willingness to pay by polluter/consumer and also other social factors. The mechanism will be determined based on an intensive technical, economic and social analysis at several rounds of exercise, with the participation of different stakeholders.

Construction of ecological brand and marketing support pathways: For the marketing of quality tea with low ecological and environmental pollution, consumers should be educated via various feasible public reaching and advertisement channels, which will also be designed and constructed with conventional supermarket, e-commerce and exhibition events

11. Institutional management and schedule arrangement: In the Green Incentive Fund design, institutional management will be set-up by consultation with relevant stakeholders, with full considering of the successful scheme implementation. During the TrTA phase, it is found that current government departments, or tea technical extension station or center, has limited human

and time resources for the implementation of the scheme. It is suggested by HPMO and agricultural departments that tea enterprise, may act as the implementation organization for the scheme. During the scheme design, qualification, role, responsibilities of the implementation organization (IO), i.e., tea enterprises, will be determined.

C. Implementation Arrangements

12. The consulting service will be carried out by a team of consultants through a firm. A minimum of 10 person-months of international and 31 person-months of national specialists will be required. The consulting services will be financed by the Asian Development Bank (ADB), and the consulting firm will be recruited by HPMO according to Procurement Regulations for ADB Borrowers - Goods, Works, Non-consulting and Consulting Services (2017, as amended from time to time).³³ The consulting firm will be selected by (i) inviting full technical proposals; and (ii) using the quality- and cost-based selection (QCBS) method, with a quality–cost weighting ratio of 90:10. The consulting services are expected to start in July 1, 2020 and finish in September 30, 2021.

13. The schedule for the Green Incentive Fund design is arranged at the following table.

Implementation schedule with milestones

Major Activities	Major Output	Expected Completion Date
Call for bidding and recruiting of the design team	A design team with competent capacity	July 2020
Tea farm assessment and stakeholder interview	Non-point source pollution mitigation assessment: main pollutant reduction estimation and main technical measures and practices	October 2020
Ecological Tea Farm Standard Development	Ecological Tea Farm Standard: indicators, indicator value, quantification methods	October 2020
Certification Scheme Development	Ecological tea-farming certification scheme: institution and personnel, inspection and certification protocol,	November 2020
Rewarding/compensation Delivery Mechanism Development	Result-based Rewarding/compensation Delivery Mechanism	December 2020
Pilot implementation of the Scheme	Revision suggestions to the draft ecological tea-farming Standard, certification Scheme, and rewarding/compensation delivery Mechanism	May 2021
Revision and competition of the Scheme	A complete Green Incentive Fund	December 2021

D. Reporting Requirements

14. The consultant team will produce (i) an inception report within 4 weeks after mobilization, (ii) a draft study report 6 months after mobilization, and (iii) a final study report at the end of the consulting services. The inception, draft and final reports will be subject to reviews by ADB and HPMO. The comments received from ADB and HPMO, and selected key experts who would be invited as reviewers should be incorporated and addressed in the final report. All reports are to

³³Checklists for actions required to contract consultants by method available in e-Handbook on Project Implementation at: <http://www.adb.org/documents/handbooks/project-implementation/>.

be written in English and translated into Chinese. One soft and two printed copies of each report are to be submitted to ADB (English version only) and HPMO (both Chinese and English versions).

E. Lessons Learnt

15. In the PRC, agriculture is becoming a major source of water pollution as pollutants from industry and municipal sources are been under well control. Due to the heavy use of chemicals in agriculture, PRC is faced with a severe food safety issue, and also the pollution of ecological environment, such as air, soil and water.

16. The PRC still has to feed its 1.4 billion population using the limited farmland resources. Food production is still one of the most important ecological services and needs to be a top priority. Thus, land use change such as transforming of intensively managed farmland to fallow, may only be applied to a small fraction of farmlands. Farmer's employment with access to farmland should be given a high priority as this is a complicated social issue with multi-functions.

17. Currently operated eco-compensation programs are at macro-level and mainly designed for large area, at least at prefectural administrative level with land area. The policies and mechanisms are more at macro level of financial or taxation policies and systems, without touching the micro level of farmer's households, which are the key role of farming operation and dominant player for non-point source pollution control. The financial or taxation policies and system implemented are still conventional economic tools, without a full consideration of marketing economic.

18. Farmer's active and full participation is the determining factor for the eco-compensation. In the most eco-compensation program/projects operated in China, a top-down approach has been mostly adopted and for farming operation, farmer's initiative was very less motivated. Farmers' involvement can be through farmer's cooperative/association in which farmers can actively express their concerns and join the decision-making process. Development and pollution control oriented local policies, incentives and practices should be mobilized and utilized in the project through ADB involvement.

19. Farming activities' outcome on non-point source pollution control can be checked, monitored and verifiable through appropriate approaches, such as self-claiming, on-site inspection and monitoring, sampling and analysis and etc.

20. Environmental sound farming practices and robust technologies should be provided and accepted by farmers for the ecological service improvement and pollution mitigation. As current governmental technical support system in China are lack of personnel resources and not timely provided to farmers, commercial and private technical extension service may play an important role for the technical support.

21. Compensation system, or rewarding method, should be designed with well consideration of improved ecological service or reduced environmental pollution, and also other indicators such as farmer's technical readiness, farmer's economic status and etc., with an intensive dialogue among stakeholders and technical support from the experts. A pilot implementation of eco-compensation is much needed, by which experiences and lessons can be gained and farmer's enthusiasm and confidence can be also increased.

22. A better understanding of the actual farmers' behavior change is needed. Providing free organic compost was never going to work, therefore more focus needs to be between the design of the eco-comp mechanism and the change required by the farmer to improve the environment.

F. Key Expertise Required

23. The design/study of the scheme should be undertaken by an experienced team to fulfill the objectives and provide the outputs identified in the proposal. The assignment will require the following consultants as follows.

24. **Agro-environmental Protection Specialist (international 10 person-months):** The specialist (team leader/deputy team leader) should have post-graduate degrees preferably in ecology/environmental sciences or agronomy related field, or ecosystems services/approach and with specialization in environmental protection in agricultural sector and a minimum 15 years of experience in designing, research and development, and technical extension in the PRC. The specialist will apply innovative approaches and concepts pertaining to non-point source pollution management, including agro-chemical management. The specialists will have the overall responsibility for the quality of the Scheme outputs and coordinating with government agencies and other specialists in the team. Specifically, the specialists will (i) prepare and coordinate the implementation of the workplan; (ii) assess tea farming and the potentiality of non-point source pollution reduction and, to identify the possible technical measures and practices for TN, TP and pesticides control; (iii) organize to develop ecological tea farm standard with indicators and criteria; (iv) pilot implementation of the proposed scheme; (v) prepare the final Green Incentive Fund for tea farming in Huangshan; and (vi) coordinate the overall scheme design with governments, tea farmers, tea enterprises and collaboration with team members.

25. **Eco-compensation Specialist (National 5 person-months) and Environmental Economist specialist (National 3 person-months):** The specialists will have a master's degree in environmental economics or relevant qualification and at least 10 years of work experience in eco-compensation management or related fields, and be familiar with regulation and policies in agricultural sector in PRC. The specialists will (i) analyze the international and national experiences on eco-compensation designing and implementation; (ii) conduct economic analysis for tea farming in Huangshan; (iii) establishment the rewarding and compensation delivery mechanism for tea farm and incentive to change the farming behavior; (iv) pilot implementation of the Green Incentive Fund and revise the scheme concerning of the lessons/findings from the pilot implementation; and (v) join the field visit, interview and meetings if necessary.

26. **Tea specialist (National 5 person-months) organic/nature-based background:** The specialists will have a graduate degree in tea, or a relevant discipline; and at least 10 years of work experience in tea production and processing in Huangshan region. The specialists will: (i) develop green farming technologies and measures package in ecological tea farm in line with local conditions. The technologies and measures include but are not limited to agronomic, biological, physical, chemical, and engineering practices which help to reduce agro-chemical application and the discharge of TN, TP and pesticides; (ii) provide support for the ecological tea farm standard development, certification scheme and rewarding and compensation delivery mechanism; and (iii) join the field visit, interview and meetings if necessary.

27. **Soil and fertilization specialist (National 5 person-months):** The specialists will have a graduate degree in soil and plant nutrition sciences, or a relevant discipline; and at least 10 years of work experience in soil test and fertilization for tea on research, technical extension and management. The specialists will: (i) develop STFF and other appropriate fertilization scheme,

which maintain the tea yield and reduce the total N and P fertilizer inputs; (ii) develop the measuring and quantification method for TN and TP reduction as non-point source pollution from tea farming; (iii) provide support for the ecological tea farm standard development, certification scheme and rewarding and compensation delivery mechanism; and (iv) join the field visit, interview and meetings if necessary.

28. **Plant protection specialist (National 5 person-months):** The specialists will have a graduate degree in plant protection sciences, or a relevant discipline; and at least 10 years of work experience in pest and insect control, pesticides application in Huangshan region. The specialists will: (i) develop IPM and other appropriate pest control scheme, which maintain the tea yield and reduce the total pesticides inputs; (ii) develop the measuring and quantification method for pesticides reduction as non-point source pollution from tea farming; (iii) provide support for the ecological tea farm standard development, certification scheme and rewarding and compensation delivery mechanism; and (iv) join the field visit, interview and meetings if necessary.

29. **Agricultural certification specialist (National 5 person-months):** The specialists will have a graduate degree in quality management, or a relevant discipline; and at least 10 years of work experience in quality management system, organic agricultural certification or good agricultural practice. The specialists will: (i) develop ecological tea farm certification scheme, including the institution, inspection and certification rules and protocol; (ii) provide support for the ecological tea farm standard development, certification scheme and rewarding and compensation delivery mechanism; and (iii) join the field visit, interview and meetings if necessary.

30. **Social and institution arrangement specialist (National 3 person-months):** The specialists will have a graduate degree in social sciences, agricultural technical extension or a relevant discipline; and at least 10 years of work experience in rural development, poverty alleviation and ecological protection using participatory approach. The specialists will: (i) conduct social survey and work with economics specialist on the development of rewarding and compensation delivery mechanism; (ii) provide support for the ecological tea farm standard development, certification scheme and rewarding and compensation delivery mechanism; and (iii) join the field visit, interview and meetings if necessary.

G. Budget

31. The budget for the Green Incentive Fund design is CNY 3 million. The costs will cover 1) Remuneration for consultant, about CNY 1.78 million; 2) Rewarding and compensation for the pilot for 600 mu in 2 villages 0.3 million (at CNY500/mu per year); 3) Tea, soil and water sampling and analysis, CNY 0.25 million; 4) Traveling cost, CNY 0.1 million; 5) Training, meeting, and other contingency: CNY 0.57 million.

Indicative Terms of Reference for 4C-1 Project Implementation Supporting Consulting Services

A. Background

1. Huangshan is a prefecture-level municipality in the southern part of Anhui Province, with a population in 2018 of 1.48 million. It comprises three urban districts and four counties and has an area of 9,807 km². Huangshan is a famous tourist destination in the PRC, largely due to scenic values. The Xin'an River originates in Huangshan Municipality and flows eastward through Zhejiang Province. Rapid economic development, urbanization, intensive agriculture production, and the growth of tourism are increasing the environmental pressures in the Xin'an River Basin.

2. The Anhui Huangshan Xin'an River Ecological Protection and Green Development Project (the project) aims to demonstrate water pollution reduction in the Xin'an River Basin through improving urban and rural wastewater management, reducing soil erosion and agriculture-related non-point source pollution, and strengthening financing mechanisms, capacities, and public awareness.

3. This document sets out the terms of reference for consulting services needed to ensure the smooth implementation of the project. The executing agency for the project is the Huangshan Municipal Government (HMG). The direct client for the consulting services is the Huangshan Municipal project management office (HPMO) established in the Huangshan Municipal Development and Reform Commission (HDRC).

B. Overall Scope of Work

4. The consultants will provide the HPMO and the implementing agencies with project management support, including support for project performance management, design review, procurement and contract management, construction management, environmental and social safeguards implementation, and financial management.

C. Implementation Arrangements

5. The consulting services for project implementation support will be carried out by a team of consultants through a firm. A total of 30 person-months of international and 144 person-months of national consulting services will be required. The consulting services will be financed by the Asian Development Bank (ADB), and the consultants will be recruited by the HPMO according to Procurement Regulations for ADB Borrowers - Goods, Works, Non-consulting and Consulting Services (2017, as amended from time to time).³⁴ The consulting firm will be selected by (i) inviting full technical proposals; and (ii) using the quality- and cost-based selection (QCBS) method, with a quality–cost weighting ratio of 80:20. The consulting services are expected to start in July 1, 2020 and finish in June 30, 2026.

D. Reporting Requirements

6. The consultant team will produce (i) an inception report within 4 weeks after commencement of the consulting services, (ii) a semiannual report by July 15 of each year; (ii) an annual report by January 15 of each year, (iii) draft final report six months before project closure,

³⁴Checklists for actions required to contract consultants by method available in e-Handbook on Project Implementation at: <http://www.adb.org/documents/handbooks/project-implementation/>.

and (iii) a final report at the end of the consulting services. The inception, semiannual, annual, and draft final reports will be subject to tripartite reviews by ADB, the HPMO, and the consultants. All reports are to be written in English and translated into Chinese. One soft and two printed copies of each report are to be submitted to ADB (English version only) and the HPMO (both Chinese and English versions).

7. The inception report will present an approach for the consulting services, including a work plan and an implementation schedule. The semiannual, annual, draft final, and final reports will present activities conducted by the consultants, effects of the consulting services, issues encountered, and recommendations to improve project management.

E. Other Requirements

8. The consultant team will provide a fully qualified interpreter to work with the consultants on a full-time basis and support the ADB missions. The consultant will help PMO to prepare the procedures for operation of the Green Incentive Fund: (i) include in the guidance manual for Green Incentive Fund a list of safeguard measures to ensure compliance with PRC and ADB requirements for environmental and social safeguards. This will include: (a) clear description of the types of activities the fund will and will not support (i.e. exclusion of category A or B on environment, involuntary resettlement and indigenous peoples); (b) the project assurance on safeguards for the Green Incentive Fund, including that no activities involving category A or B on environment, involuntary resettlement and indigenous peoples will be supported under the incentive fund.

F. Scope of Services

9. For each of the international and national consultant positions, (i) possession of a related degree, qualification, and/or memberships of related academic societies; and/or past participation in related training courses; (ii) experience in similar positions for loan, grant, or TA projects; and (iii) experience in implementing projects in the People's Republic of China (PRC); are required.

a. Project Management Specialist and Team Leader (International, 24 person-months)

10. The specialist will:

- (i) coordinate all project management support activities as team leader;
- (ii) finalize the approach for project management support;
- (iii) prepare the inception, semiannual, annual, draft final, and final reports;
- (iv) assist the HPMO and the implementing agencies in preparing, implementing, monitoring, and evaluating the overall project and subprojects;
- (v) assist the HPMO in preparing the project progress reports in a format provided by ADB;
- (vi) assess the need for capacity development of the staff of the HPMO and the implementing agencies; and plan, design, organize, and implement seminars, workshops, training, and/or study tours for project management, financial management, disbursement arrangements, implementation, monitoring, and evaluation of resettlement, gender development, and environmental management, and project monitoring and evaluation;
- (vii) assist the HPMO in preparing a project completion report on the execution and initial operation of the project, including its cost, the performance of HMG of its obligations under the project agreement, and the accomplishment of the purposes of the project;

- (viii) undertake design reviews for rural wastewater projects and sewers and stormwater management projects;
- (ix) develop bidding documents with design institutes for civil works and goods supply contracts;
- (x) conduct quality assurance and review of payment certificates for quality and payment controls for PMO managed contracts;
- (xi) monitor compliance with the loan covenants, assess key implementation issues, and make recommendations for improvement; and
- (xii) conduct any other necessary work for smooth and appropriate implementation of the project.

b. Construction Management Specialist and Deputy Team Leader (National, 48 person-months)

11. The specialist will:

- (i) assist the team leader in developing comprehensive project implementation plans and procedures for monitoring and controlling overall project and activities;
- (ii) conduct technical review and provide expert comments on engineering detailed design in accordance with the design codes and standards;
- (iii) conduct routine site visits and provide technical inputs to construction planning, supervision and monitoring for quality control of the subproject construction;
- (iv) collect all necessary information and prepare the reports required under loan and project covenants;
- (v) undertake design reviews for rural wastewater projects and sewers and stormwater management projects;
- (vi) develop bidding documents with design institutes for civil works and goods supply contracts;
- (vii) conduct quality assurance and review of payment certificates for quality and payment controls for IAs' managed contracts;
- (viii) identify detailed capacity development needs for sustainable infrastructure services and governance;
- (ix) conduct evaluation of construction work and project implementation upon completion of the sub-projects and the project as whole, stressing on quality control and cost control in particular;
- (x) assist IAs in conducting the analysis and experience reviewing, and in capacity strengthening in quality control and cost control.
- (xi) Undertake project completion report.
- (xii) undertake any other necessary work assigned by the team leader.

c. Procurement and Contract Management Specialist (National, 24 person-months)

12. The specialists will:

- (i) review the procurement plan; and after consultation with the HPMO and the IAs, revise as needed;
- (ii) set schedule for obtaining technical specifications from the design institute;
- (iii) review of business sections in the bidding documents;
- (iv) review of bid evaluation reports;
- (v) coordinate with the national procurement agency (hired by the HPMO);

- (vi) monitor the HPMO's procurement activities under the project, and assist the HPMO in preparing, updating, and implementing the procurement plan;
- (vii) conducting contract management during the project implementation, including monitoring construction progress, preparing progress reports, reviewing the contractor's claims for payments, coordinating project implementation among contractors and various stakeholders, and coordinating daily operational tasks;
- (viii) providing expert inputs, review and justification for contract variation and preparing necessary documentations in accordance with the Government and ADB requirements, if necessary;
- (ix) capacity development (including training of trainers, etc.) in procurement and contract management with the long-term objective of institutionalizing a strong procurement and contract management function within the EA/HPMO; and
- (x) undertake any other necessary work assigned by the team leader.

d. Wastewater and Water Specialist (International, 4 person-month; National, 8 person-months)

13. The specialists will:

- (i) review wastewater and water related technical sections in the design documents;
- (ii) review technical specifications and BOQ in the bidding documents in aspect of wastewater and water design;
- (iii) assist the Design Institute in optimizing the design documents of wastewater and water sectors to ensure high design quality and investment control;
- (iv) participate in bid evaluation, if necessary;
- (v) review of the contractor's construction program and provision of technical support for on-site construction technology;
- (vi) provide training on water supply, wastewater management, and other related knowledge, if needed; and
- (vii) undertake any other necessary work assigned by the team leader.

e. Green Agriculture Specialist (International, 4 person-month; National, 10 person-months)

14. The specialists will:

- (i) review green agriculture related technical sections in the design documents;
- (ii) review technical specifications and BOQ in the bidding documents in aspect of green agriculture design;
- (iii) assist the Design Institute in optimizing the design documents of green agriculture to ensure high design quality and investment control;
- (iv) participate in bid evaluation, if necessary;
- (v) review the technical standard of green production in tea gardens and assist in completion of the technical standard;
- (vi) review the design of green tea production certification system and provide comments for improvement;
- (vii) assist in the experience dissemination of green tea production;
- (viii) provide training on green agriculture application and other related knowledge, if needed; and
- (ix) undertake any other necessary work assigned by the team leader.

f. Eco-Compensation Specialist (International, 4 person-month; National, 10 person-months)

15. The specialists will:

- (i) review international eco-compensation schemes to abstract useful experience for the project design;
- (ii) review the eco-compensation design and provide suggestions for improvement of its feasibility and sustainability;
- (iii) work with the Green Agriculture Specialist to ensure the quality of Green Incentive Fund designed under the project;
- (iv) provide training on eco-compensation and other related knowledge, if needed; and
- (v) undertake any other necessary work assigned by the team leader.

g. ICT Specialist (International, 3 person-month; National, 10 person-months)

16. The specialists will:

- (i) review ICT technical sections in the design documents;
- (ii) review technical specifications and BOQ in the bidding documents in aspect of ICT design;
- (iii) assist the Design Institute in optimizing the ICT design documents to ensure high design quality and investment control;
- (iv) participate in bid evaluation, if necessary;
- (v) assist in debugging of MIS systems, if necessary;
- (vi) provide training on ICT application and other related knowledge, if needed; and
- (vii) undertake any other necessary work assigned by the team leader.

h. Environmental Specialist (National, 12 person-months)

17. The specialists will:

- (i) assist the HMG and the IAs to implement the project environmental management plan (EMP);
- (ii) assist the HPMO and the executing agency to supervise contractors to ensure that all activities comply with the domestic laws and regulations, the EMP, and the ADB Safeguard Policies Statement (2009)
- (iii) assist the HPMO and the executing agency in monitoring environmental processes by collecting and updating basic data, and work closely with the HPMO, the executing agency and external environmental monitoring agencies.
- (iv) review the external monitoring and evaluation report prepared by the external environmental monitoring agency and ADB's comments on the report;
- (v) assist the HPMO in monitoring the implementation of the EMP, evaluate key implementation issues, develop remedial measures, and take follow-up actions;
- (vi) provide support to assess capacity development needs; as well as plan, design, organize and implement workshops, symposia, training and/or study activities in project implementation and environmental monitoring and evaluation;
- (vii) provide assistance to the project management specialist to prepare inception report, semiannual reports, annual reports, draft final report and final report; and
- (viii) undertake other necessary tasks assigned by the team leader.

i. Resettlement Specialist (National, 10 person-months)

18. The specialist will:

- (i) assist the HPMO, the implementing agencies, and the design institutes in updating the resettlement plan approved by ADB, following the ADB formats based on the detailed designs; disclosing it to the affected persons prior to ADB's approval; and obtaining ADB's approval;
- (ii) assist HMG and the implementing agencies in implementing the land acquisition and resettlement in accordance with the resettlement plan,
- (iii) assist the HPMO and the implementing agencies in supervising the contractors to ensure their compliance with the requirements of the resettlement plan, applicable laws and regulations, and ADB's Safeguard Policy Statement (2009);
- (iv) assist the HPMO and the implementing agencies in supervising the processes of resettlement by collecting and updating basic data; and closely coordinating between the HPMO, the implementing agencies, and an external resettlement monitor;
- (v) review the external monitoring and evaluation (M&E) reports prepared by the external resettlement monitoring agency and ADB's comments on the reports;
- (vi) assist the HPMO in monitoring the compliance with the resettlement plan, assessing the key implementation issues, formulating remedial measures, and conducting the follow-up actions;
- (vii) provide support to the project management specialist for assessing the needs for capacity development; and planning, designing, organizing, and implementing seminars, workshops, training, and/or study tours for the implementation and M&E of the resettlement;
- (viii) provide support to the project management specialist for preparing the inception, semiannual, annual, draft final, and final reports; and
- (ix) undertake any other necessary work assigned by the team leader.

j. Social Development Specialist (National, 6 person-months)

19. The specialist will

- (i) assist HMG and the implementing agencies in implementing the social development action plan (SDAP), and the gender action plan (GAP) prepared during project preparation;
- (ii) assist the HPMO and the implementing agencies in supervising the contractors to ensure compliance with requirements of the GAP and the SDAP; and applicable laws and regulations;
- (iii) monitor the compliance with the GAP and the SDAP; assess the degree of impacts and key implementation issues; explain key issues to the HPMO and the implementing agencies; and assist them in conducting the follow-up actions to address the key issues;
- (iv) provide support to the project management specialist for assessing the needs for capacity development; and planning, designing, organizing, and implementing seminars, workshops, training, and/or study tours for the implementation and M&E of the GAP and the SDAP;
- (v) provide support to the project management specialist for preparing the inception, semiannual, annual, draft final, and final reports; and
- (vi) undertake any other necessary work assigned by the team leader.

k. Financial Management Specialist (National, 6 person-months)

20. The specialist will:

- (i) review background documents, including the financial analysis of the project undertaken during project preparation;
- (ii) assist the HPMO and the implementing agencies in preparing and implementing a financial management system;
- (iii) assist the HPMO and the implementing agencies in preparing the withdrawal applications and improving the efficiency by streamlining the preparation of withdrawal applications;
- (iv) conduct financial analysis at the midterm of project implementation, and at physical completion of the project, including financial sustainability analysis to assess the fiscal sustainability debt repayment capacity of HMG as a whole;
- (v) provide support to the project management specialist for assessing the needs for capacity development; and planning, designing, organizing, and implementing seminars, workshops, training, and/or study tours for financial analysis, as necessary;
- (vi) undertake accounting oversight, internal control, funds flow, financial reporting, audit planning;
- (vii) support the capacity building of financial and accounting staff;
- (viii) provide support to the project management specialist for preparing the inception, semiannual, annual, draft final, and final reports; and
- (ix) undertake any other necessary work assigned by the team leader.

21. The consultant team will also be responsible for undertaking the external environmental monitoring and evaluation to ensure that the project will be implemented in conformity with the People's Republic of China (PRC) laws and regulations and the Asian Development Bank's (ADB's) Safeguard Policy Statement (2009) requirements on environmental management. The estimated budget for external environmental monitoring is 2.57 million CNY.

22. In general, the scope for external environmental monitoring and evaluation includes:

- (i) Conduct independent review on the performance of environmental management under the ADB loan project, identify issues and propose corrective actions;
- (ii) Conduct monitoring on the environmental compliance and document findings of the monitoring result; at least conduct field survey four times each year.
- (iii) Review the EMP compliance and EMP monitoring (sampling and analyzing) reports;
- (iv) Identified adverse environmental impacts during implementation, if any, compare with predicted impacts, assess the effectiveness of mitigation measures, and propose remedial or corrective measures if necessary;
- (v) Review public consultation conducted and GRM handling, if any;
- (vi) Provide reporting to HPMO with acceptable format and quality; and
- (vii) To recommend corrective actions to address environmental compliance as needed.

Indicative Terms of Reference for 4C-2 Training for Capacity Strengthening

A. Background

1. Huangshan is a prefecture-level municipality in the southern part of Anhui Province, with a population in 2018 of 1.48 million. It comprises three urban districts and four counties and has an area of 9,807 km². Xin'an River, originating in Huangshan Municipality, is the main drinking water source for 10 million urban and rural residents in downstream areas in Zhejiang Province. Rapid economic development, urbanization, intensive agriculture production, and the growth of tourism in the area have increased both environmental and ecological pressures across the Xin'an River Basin. Both point sources (urban and rural sewage) and non-point sources (agriculture-based and run-off) have impaired the water safety in Xin'an River.

2. The Anhui Huangshan Xin'an River Ecological Protection and Green Development Project (the project) aims to demonstrate water pollution reduction in the Xin'an River Basin through improving urban and rural wastewater management, reducing soil erosion and agriculture-related non-point source pollution, and strengthening financing mechanisms, capacities, and public awareness.

3. This document sets out the tentative terms of reference (TOR) for the consulting services to strengthen the capacity of project agencies in rural wastewater management, green agriculture application and management, eco-compensation implementation, and green investment fund operation. The executing agency for the project is the Huangshan Municipal Government (HMG). The direct client for the consulting services is the Huangshan Municipal project management office (HPMO) established in the Huangshan Municipal Development and Reform Commission (HDRC).

B. The Objectives and Overall Scope of Services

4. HMG has set up its sustainable economic development objectives in implementation of ecological protection, green development, and rural vitalization strategies. To reduce both point and non-point source pollutions within Xin'an River Basin and promote green development, a total of 84 onsite wastewater treatment facilities will be constructed in 121 villages for rural wastewater treatment, and a Green Incentive Fund for tea farming and a Green Investment Fund focusing on investment of green development sector will be established in Huangshan Municipality under the project. The training program for capacity strengthening is to provide capacity building support to HPMO and implementing agencies in 7 districts/counties through organization of national and international study tours. International successful experience of eco-compensation and green investment fund implementation and national successful experience of rural wastewater management and green agriculture application will be introduced to the client.

C. Implementation Arrangements

5. The consulting service will be carried out by a team of consultants through a firm. A minimum of 2 person-months of international and 4 person-months of national training specialists will be required. The consulting services will be financed by the Asian Development Bank (ADB), and the consulting firm will be recruited by HPMO according to Procurement Regulations for ADB Borrowers - Goods, Works, Nonconsulting and Consulting Services (2017, as amended from time

to time).³⁵ The consulting firm will be selected by (i) inviting simple technical proposals; and (ii) using the quality- and cost-based selection (QCBS) method, with a quality–cost weighting ratio of 90:10. The consulting services are expected to start in October 1, 2020 and finish in June 30, 2026.

D. Reporting Requirements

6. The consultant team will produce (i) an inception report within 4 weeks after mobilization; (ii) a study tour report 2 weeks after each tour; (iii) a final report at the completion of the consulting service. The inception, study tour, and final reports will be subject to reviews by ADB and HPMP. The comments received from ADB and HPMP should be incorporated and addressed in the final report. All reports are to be written in English and in Chinese.

7. The detail outputs will include:

- (i) On-the-job training for eco-compensation implementation, green investment fund operation, rural wastewater management and green agriculture promotion;
- (ii) Two international study tours: mainly for eco-compensation implementation and green investment fund operation experiences (5 days each tour);
- (iii) Four national study tours: mainly for rural wastewater treatment and green agriculture application experiences (4 days each tour).

8. The training tours and on-the-job training will be led by the training specialists to develop detailed training plans, identify trainees and trainers, coordinate with various organizations for visits, organize and facilitate the training activities, review of training contents, and assess training outputs and outcomes. The training targets will provide various trainings for about 500 staff of EA/IAs. The training costs of the capacity strengthening are estimated USD250,000. The total budget of the capacity strengthening would be USD350,000.

E. Key Expertise Required

9. The proposing entities will determine the number and the nature of experts which they will require to achieve the objectives of the consulting service in accordance with their proposed approach and methodology. However, ADB requires a minimum of one international specialist and one national specialist.

10. **Training Specialist (international, 2 person-months).** The specialist shall have graduate degree or above and over 10 years of experience in green economic development. Experience in eco-compensation or green investment fund operation would be preferred. Specific tasks will include the following:

- (i) assess the capacity development demand of project agencies;
- (ii) provide on-the-job training for project agencies on eco-compensation and green investment fund implementation;
- (iii) based on the project needs and best knowledge, identify destinations for international study tours;
- (iv) develop study tour agenda and submit to HPMP for approval;
- (v) liaise with foreign agencies for organization of the international study tours;

³⁵Checklists for actions required to contract consultants by method available in e-Handbook on Project Implementation at: <http://www.adb.org/documents/handbooks/project-implementation/>.

- (vi) work as the facilitator to participate the international study tours;
- (vii) prepare inception report, study tour report and final report, and submit to HMPO and ADB for approval.

11. **Training Specialist (national, 4 person-months).** The specialist shall have graduate degree or above and over 8 years of experience in green agriculture. He/she shall be familiar with existing green agriculture practices in China. Specific tasks will include the following:

- (i) assess the capacity development demand of project agencies;
- (ii) provide on-the-job training for project agencies on green agriculture promotion;
- (iii) based on the project needs and best knowledge, identify destinations for national study tours for learning successful experience of green agriculture promotion and management;
- (iv) develop study tour agenda and submit to HMPO for approval;
- (v) liaise with local agencies for organization of the study tours;
- (vi) work as a facilitator to participate the national study tours;
- (vii) prepare inception report, study tour report and final report, and submit to HMPO and ADB for approval.

Indicative Terms of Reference for Package 4C-3 Construction Supervision Consulting Services

A. Background

1. Huangshan is a prefecture-level municipality in the southern part of Anhui Province, with a population in 2018 of 1.48 million. It comprises three urban districts and four counties and has an area of 9,807 km². Huangshan is a famous tourist destination in the PRC, largely due to scenic values. The Xin'an River originates in Huangshan Municipality and flows eastward through Zhejiang Province. Rapid economic development, urbanization, intensive agriculture production, and the growth of tourism are increasing the environmental pressures in the Xin'an River Basin.

2. The Anhui Huangshan Xin'an River Ecological Protection and Green Development Project (the project) aims to demonstrate water pollution reduction in the Xin'an River Basin through improving urban and rural wastewater management, reducing soil erosion and agriculture-related non-point source pollution, and strengthening financing mechanisms, capacities, and public awareness.

3. This document sets out the terms of reference for construction supervision consulting services needed to ensure the construction quality, progress and cost well controlled to achieve the contractual goals. The implementation agencies for the project is County/District Government. The direct clients for the consulting services are the IAs' project management office (PMO) established at each county/district governments.

B. Objective of the Service

4. The consulting services for construction supervision will be carried out by a team of consultants through a firm. A total of 588 person-months of national consulting services will be required. The consultants will (i) provide the IAs with the construction supervision of civil works in accordance with the regulations and construction contracts; (ii) assist the client in day-to-day execution of the project; and (iii) assist in monitoring social and environmental indicators. The consultants will act as the Project Supervisor defined in the conditions of the contract. The standard Ministry of Finance (MOF) contract version 2015 is enclosed with the TOR for further reference to the roles of the construction supervision Engineer. The consulting services are expected to start in July 1, 2020 and finish in July 1, 2026.

C. Scope of Service

5. The Construction Supervision Consultant will:

- (i) administrate civil works contracts signed between the Client and Contractor(s) to play the role of "the Project Supervisor" as specified in the civil works contracts;
- (ii) check and ensure conformance of all bank guarantees of the Contractor with contract conditions and track their validity by notifying the Client two months before expiration and request the Contractors to extend/update guarantees if necessary, as per the contract;
- (iii) be responsible for checking and acceptance of insurance policies of contractors, as well as control of terms of such policies and ensuring their full coverage as per the contract;

- (iv) ensure that all works comply with the approved engineering designs and technical specifications, agreed schedule and contract price, terms and conditions of the contracts, standard engineering practice, and ADB's safeguards policies;
- (v) manage and issue instructions to contractors;
- (vi) supervise and monitor implementation of the Environmental Management Plan by contractors;
- (vii) monitor implementation of the land acquisition and resettlement (LARP);
- (viii) make engineering decisions in consultation with the Client; and
- (ix) advise the Client on work progress, quality control, and implementation issues, if any.

D. Reporting Requirements

6. The consultant team will produce (i) an inception report within 30 days after commencement of the consulting services; (ii) the Construction Supervision Contracts Administration Manual within 60 days after contract commencement; (iii) monthly progress reports by the 7th day of the following month; (iv) a final report at the end of the consulting services; and (v) other construction supervision related reports as required by the Client. All reports are to be written in Chinese. One soft and two printed copies of each report are to be submitted to the PMOs at district/county level.

E. Qualification and Tasks

7. For each of the national consultant positions, (i) possession of a related degree, qualification, and/or memberships of related academic societies; and/or past participation in related training courses; (ii) experience in similar positions for loan, grant, or TA projects; and (iii) experience in implementing projects in the People's Republic of China (PRC); are required. Main tasks to be completed by each team member are listed as follows:

8. Project Manager/Chief Supervision Engineer (60 person-months)

- (i) lead the review of the detailed engineering design, including technical specifications (including bill of quantities), drawings, and construction methods. Propose modifications, if necessary;
- (ii) review and approve contractor's work program, implementation schedule, methodology, and safety plan, and supervise the progress of construction works. Inform the Client of any delay or potential delays in the work schedule of the contract, and take necessary actions to prevent potential delays;
- (iii) issue notice-to-proceed to contractors for sections that have complied with the applicable provisions of the environment management plan (EMP);
- (iv) issue notices to the contractor on any non-compliance with environmental mitigation measures, as set out in the contract documents;
- (v) issue notices to contractors for defects or deficiencies, and issue instruction for the removal or notify on improper performance of the works;
- (vi) review, approve within his competency, and issue variation orders (scope, cost, materials, time);
- (vii) inspect project sites for work progress and quality;
- (viii) certify payments for the works against the relevant bill of quantities and issue the interim payment certificates, the final payment certificate and other certificates, including delivery-acceptance certificates, as required under the civil works contract;
- (ix) coordinate and supervise the work of field teams in supervising and approval of construction following contract conditions;

- (x) inspect jointly with Client the completed works and assist in formal taking over and review and approve or prepare as-built drawings and plans and provide reports confirming satisfactory completion of the contracts;
- (xi) inspect the completed work periodically during the defect liability period within the terms covering the consultant's agreement, prepare lists of deficiencies (if any), and carry out supervision of the remedial works, and issue defects liability certificates after the rectification of the notified defects by the contractors; and
- (xii) advise the Client with the day-to-day coordination and supervision of civil works construction, including implementation status and issues, and preparation of regular progress reports.

9. Deputy Project Manager/Technical Manager (2 positions, 60 person-months each)

- (i) review and evaluate detailed designs of sewerage system, rural wastewater treatment facilities and all ancillary structures, and recommend improvements;
- (ii) review and evaluate the hydrological and geotechnical reports and data and make appropriate technical recommendations;
- (iii) periodical supervision of sewerage system and rural wastewater treatment facilities construction;
- (iv) recommend for approval of the shop drawings for all structural works submitted by the Contractor;
- (v) monitor contractors' work performance against technical specifications and schedules;
- (vi) discuss with the PM and the client on any sewerage system and rural wastewater treatment facilities design/construction issues and recommend technical solutions/options;
- (vii) inspect material specifications and the actual material at the site for placement and workmanship during implementation to ensure conformity with plans and technical standards; and
- (viii) assist the Team Leader in all matters related to the implementation of the project scope, as required.

10. Quantity Surveyors (2 positions, 36 person-months each)

- (i) review the bill of quantities against the technical specifications provided by the Client, and recommend modifications, if required;
- (ii) control and measure the quantity of materials and workers at the construction site to minimize the amount of materials used, and make sure that the construction costs stay within budget;
- (iii) review contractors' interim and final payment certificates, and check quantities billed against measurements;
- (iv) prepare change orders and variation orders as required;
- (v) prepare and maintain quantity books, and up-to-date rates-list for materials and works;
- (vi) prepare and manage monthly financial reports;
- (vii) prepare disbursement schedule and maintain progress schedules and cash flow chart; and
- (viii) maintain current as-built drawings as the work progresses.

11. Quality Engineers (2 positions, 36 person-months each)

- (i) carry out day-to-day supervision of the Contractor's Quality Assurance system;
- (ii) supervise and monitor the contractor's testing on a day-to-day basis;
- (iii) verify whether the works and materials on site comply with material specifications;

- (iv) supervise the contractor's work, and certify that the completed work complies with the contract;
- (v) approve construction materials and sources of supply;
- (vi) approve material testing methods;
- (vii) recommend acceptance/rejection of the completed works and works in progress to the PM.

12. Environmental, Health and Safety Engineers (24 person-months)

- (i) set-up internal monitoring system on the project's environmental issues and project requirements;
- (ii) coordinate with relevant parties, including civil society organizations, on environment requirements of the project;
- (iii) closely monitor project sites against any unexpected environmental impacts;
- (iv) monitor contractors' compliance with EMP; and
- (v) advise the Client on environment problems and/or requirements and recommend mitigating measures.

13. Site supervision engineers (junior) (4 positions, 60 person-months each)

- (i) carry out daily site inspections to ensure compliance of the works, procedures and materials with approved work plans, specifications, and contract provisions;
- (ii) monitor contractors' work and certify that construction follow contract conditions;
- (iii) prepare daily logs, photographs, reports, and maintain records of as-built drawings, item quantity files, material testing results, inspections made, tests performed, and work executed;
- (iv) prepare and implement on-site procedures for quality assurance and quality control and safety;
- (v) prepare and submit daily reports to the PM/DPM; and
- (vi) carry out any other tasks assigned by the PM/DPM.

Indicative Terms of Reference for 4C-4 External Social and Resettlement Monitoring

A. Background

1. Huangshan is a prefecture-level municipality in the southern part of Anhui Province, with a population in 2018 of 1.48 million. It comprises three urban districts and four counties and has an area of 9,807 km². Huangshan is a famous tourist destination in the PRC, largely due to scenic values. The Xin'an River originates in Huangshan Municipality and flows eastward through Zhejiang Province. Rapid economic development, urbanization, intensive agriculture production, and the growth of tourism are increasing the environmental pressures in the Xin'an River Basin.

2. The Anhui Huangshan Xin'an River Ecological Protection and Green Development Project (the project) aims to demonstrate water pollution reduction in the Xin'an River Basin through improving urban and rural wastewater management, reducing soil erosion and agriculture-related non-point source pollution, and strengthening financing mechanisms, capacities, and public awareness.

3. This document is the indicative terms of reference for an external resettlement and social monitoring and evaluation (M&E) agency to ensure that the project will be implemented in conformity with the People's Republic of China's (PRC) laws and regulations and the Asian Development Bank's (ADB's) Safeguard Policy Statement (2009) requirements on involuntary resettlement and policies on social and gender aspects. The direct client for the consulting services is the Huangshan Municipal project management office (PMO) established in the Huangshan Municipal Development and Reform Commission (HDRC).

B. Implementation Arrangements

4. The external resettlement and social M&E will be carried out by a team of specialists through a competent external monitoring agency (EMA). The M&E will be financed by ADB, and the team of specialists will be recruited by the PMO according to ADB's Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time), through consultants' qualifications selection. The PMO and IAs will provide assistance to the EMA, particularly in the aspects of field survey, staffing, and logistics.

C. Reporting Requirements

5. The EMA will submit to ADB and PMO semiannual external resettlement and social M&E reports during the implementation of social safeguards and social dimensions for the project (for each report, a soft copy of the English version to ADB and soft copies of the English and Chinese versions to each of the PMO and IAs), 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. Format of the reports will be proposed by the EMA in the technical proposal. The EMA may seek guidance from ADB's relevant sourcebooks and from examples of reports on ADB website.

D. Scope of External Monitoring and Evaluation

7. The EMA will externally monitor the implementation of the resettlement plan as well as

GAP and SDAP; and report findings semiannually during the implementation of relevant social safeguard plans. 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 RP, GAP and SDAP to ensure they are implemented and complied with; (ii) advise PMO and IAs on the implementation of the RP, GAP and SDAP 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.

E. Specific Tasks of External Monitoring and Evaluation

8. The main tasks to be undertaken by EMA are described but not limited to the following:

E1: M&E of RP Implementation- Specific Tasks

9. The EMA will be engaged intermittently for the whole duration of RP implementation. The EMA will (i) conduct baseline survey (sex-disaggregated) of the affected persons (APs) and monitor to ensure implementation of the RP in compliance with ADB's safeguard policies; (ii) make specific and time-bound recommendations to resolve any issues or problems or potential issues or problems on implementation of RP, and advise to improve resettlement implementation to PMO and IAs; (iii) pay special attention to vulnerable groups, including women and the poor to assess whether they have participated and fully regained or improved their standard of living; (iv) submit the external resettlement and social monitoring reports simultaneously to PMO and ADB with high-quality acceptable to ADB every 6 months during project implementation; and (v) prepare resettlement due diligent reports, if necessary.

10. The details of work tasks are specified as follows:

(i) Baseline survey - the Agency will conduct baseline survey on APs, to obtain production and living standards (life, production and income levels) of APs as baseline material. Production and living standards survey conducted to track changes in production and living standards. Using follow-up survey of a representative sample, random interviews and field observations and other methods shall be used to take the necessary relevant information.

(ii) Regular monitoring and evaluation - During the implementation of the RP, the EMA will conduct semiannual monitoring and verification on resettlement, through on-site observation, follow-up survey of sample households, focus group discussions and key informant interviews, etc., so as to monitor the following activities:

- timely payment of compensation;
- skill training;
- support for vulnerable groups;
- infrastructure and special facilities reconstruction;
- production, resettlement and recovery;
- compensation for loss of land;
- compensation for loss of property;
- schedule of these activities;
- resettlement organization networks;
- use of collective land compensation fees and resettlement earnings; and
- employment income growth.

(iii) Public consultation – The EMA will monitor and evaluate the public consultations carried out by the IAs and concerned organizations.

(iv) Grievance redress - The EMA will visit the affected village groups periodically, RP implementing agencies and village/community committees that accept grievances to assess how well grievances have been handled. It will also meet complainants. The EMA will propose corrective measures and advice to the PMO for existing issues so as to make the resettlement process more effective. In addition, the EMA will verify the data and findings of internal monitoring reports.

(v) Monitoring Indicators - Baseline survey, follow-up monitoring and completion evaluation will include but not limited to the following points:

- a) For compliance of compensation payment and support provision
 - 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.
 - Whether compensation for affected structures is equal to materials and labor replacement cost according to standards and specification of the work; whether reused materials are not deducted or discounted; and whether assets are depreciated based on age.
 - Whether compensation for trees and/or crops takes into account market rates.
 - Whether compensation is fully paid to affected persons; either through single installment or multiple installments.
 - Whether other assistance as specified in the resettlement plan is provided to affected persons, as required.
- b) For compliance of information disclosure and community consultation
 - Whether project documents (resettlement information booklet and relevant documents) are disseminated to communities.
 - Whether information (results of detailed measurement survey, prices application, disbursement of payment) is promulgated at public places, and whether the process was effective.
 - 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.
 - 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.
- c) For relocation plan and implementation (if any)
 - Resettlement methods, participation in relocation planning, announcement of relocation plan, and support to relocated households.
- d) For compliance of LAR implementation for the relocated affected persons (if any)
 - 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.
 - Whether replacement housing was provided in a complete and timely manner.

- Any issues related to transitional housing and/or period.
 - Whether the new location has had any impact on the affected persons' livelihoods.
- e) For compliance of income restoration and support to livelihood stabilization
- Whether support to income restoration is adequately provided, and efficiency of the income restoration support (e.g., training, credit assistance).
 - How affected persons stabilize their life and production.
 - Problems that affected persons are facing during the income restoration and life stabilization.
 - Compensation and restoration of temporary land occupation.
- f) For compliance of the satisfaction of the affected persons
- Satisfaction of the determination of losses and compensation valuation.
 - Satisfaction of compensation payment and other assistance.
 - Satisfaction of information disclosure and consultation.
 - Satisfaction on life stabilization and income restoration support activities.
 - Satisfaction of resettlement site, relocation site, and completeness of facilities (if any).
- g) For compliance of grievance redress mechanism of the affected persons
- Degree of efficiency of the grievance redress mechanism (time, efficiency of resolution).
 - Results of complaint resolution at various levels.
 - Satisfaction of the grievance redress mechanism.

E2: M&E of SDAP and GAP Implementation- Specific Tasks

11. Main tasks on SDAP and GAP monitoring are described but not limited to the following:
- (i) Liaise with the social focal persons at PMO and IAs, monitor the appointments of town level focal points, as well as monitor and evaluate the implementation of the SDAP and GAP and other social measures;
 - (ii) Monitor social and poverty alleviation measures and ensure social and poverty targets in the project planning documents are achieved during the project implementation as stated in SDAP and GAP;
 - (iii) Monitor to ensure labor standards are upheld throughout project implementation;
 - (iv) Monitor to ensure that local residents affected directly and indirectly by the project have been meaningfully consulted during all times of project implementation, that women and vulnerable groups are consulted (meeting SDAP and GAP targets) and that all consultation processes are adequately documented;
 - (v) When necessary, monitor training to PMO, IAs, as well as concerned township authorities and village committees in the gender disaggregation of all project related activities and ensure that adequate records are kept in accordance with good implementation practice;
 - (vi) Monitor to ensure women and vulnerable households are offered opportunities to participate in employment and other benefits as stated in SDAP and GAP;
 - (vii) Monitor to ensure that women employed during construction and operation stages are offered appropriate facilities (e.g. separate toilets, bathrooms/ showers) which are considered adequate by women and conform to occupational health and safety requirements, as referenced in the SDAP and GAP;

- (viii) Monitor reporting and monitoring forms for IAs and PMO regarding SDAP and GAP targets and indicators and ensure regular monitoring on these;
- (ix) Verify internal monitoring reports on the progress of SDAP and GAP activities to be provided to the PMO and ADB;
- (x) Monitor social and gender indicators included in the DMF; and
- (xi) Perform any other tasks deemed necessary to externally monitor social safeguard issues and social dimension as they apply to the project.

G. Methodology of M&E

12. The EMA will apply both qualitative and quantitative methods during monitoring, including 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 annual questionnaire survey during project implementation for 50% 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, if any.
- e) Conduct final M&E of LAR implementation (prior to project completion) by conducting a sample survey on 50% 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, Province, City.
- b) Consult and discuss with different stakeholders 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, vulnerable households, and women's groups.

(iii) Site visits

- a) Conduct site visits to project sites to check 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.

H. Qualification Requirements

14. 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 Province and City 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 resettlement policies and procedures; and have previous experience in M&E of LAR for projects funded by ADB. The EMA should also have experience in undertaking similar projects in the PRC. Three (3) national specialist positions will provide consulting services to support extremal resettlement M&E. The key responsibilities are proposed but not limited to the following:

(i) Resettlement Specialist and Team Leader

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 and social resettlement M&E reports which include conclusions and recommendations; (vi) discuss findings with the PMO and IAs to reach agreement on follow-up actions; and (vii) participate in ADB review missions.

(ii) Social Evaluation Specialist

16. The specialist will undertake the following tasks: (i) monitor activities mentioned in the social and safeguard plans to ensure they are being carried out as approved by ADB; (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 resettlement specialist/team leader.

(iii) Field Surveyors

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

Indicative Terms of Reference for 4C-5 Project Experience Dissemination Program

A. Background

1. Huangshan is a prefecture-level municipality in the southern part of Anhui Province, with a population in 2018 of 1.48 million. It comprises three urban districts and four counties and has an area of 9,807 km². Xin'an River, originating in Huangshan Municipality, is the main drinking water source for 10 million urban and rural residents in downstream areas in Zhejiang Province. Rapid economic development, urbanization, intensive agriculture production, and the growth of tourism in the area have increased both environmental and ecological pressures across the Xin'an River Basin. Both point sources (urban and rural sewage) and non-point sources (agriculture-based and run-off) have impaired the water safety in Xin'an River.

2. The Anhui Huangshan Xin'an River Ecological Protection and Green Development Project (the project) aims to demonstrate water pollution reduction in the Xin'an River Basin through improving urban and rural wastewater management, reducing soil erosion and agriculture-related non-point source pollution, and strengthening financing mechanisms, capacities, and public awareness.

3. This document sets out the tentative terms of reference (TOR) for the consulting services to disseminate the environmental protection and green development experience gained from the project to other municipalities/provinces to achieve sustainable economic development. The executing agency for the project is the Huangshan Municipal Government (HMG). The direct client for the consulting services is the Huangshan Municipal project management office (HPMO) established in the Huangshan Municipal Development and Reform Commission (HDRC).

B. The Objectives and Overall Scope of Services

4. HMG has set up its sustainable economic development objectives in implementation of ecological protection, green development, and rural vitalization strategies. The project experience dissemination program is to provide feasible and sustainable green development approaches for other regions in China, including innovative stormwater management, rural wastewater management, integrated ICT application for smart environmental management, Green Incentive Fund for tea farming, as well as green investment fund design and implementation.

C. Implementation Arrangements

5. The consulting service will be carried out by a team of consultants through a firm. A total of 11 person-months of national specialists will be required. The consulting services will be financed by the Asian Development Bank (ADB), and the consulting firm will be recruited by HPMO according to Procurement Regulations for ADB Borrowers - Goods, Works, Non-consulting and Consulting Services (2017, as amended from time to time).³⁶ The consulting firm will be selected by (i) inviting simple technical proposals; and (ii) using the quality-based selection (QBS) method. The consulting services are expected to start in July 1, 2025 and finish in June 30, 2026.

³⁶Checklists for actions required to contract consultants by method available in e-Handbook on Project Implementation at: <http://www.adb.org/documents/handbooks/project-implementation/>.

D. Reporting Requirements

6. The consultant team will produce (i) an inception report, including an implementation plan within 4 weeks after mobilization; (ii) dissemination and public education materials 3 months after mobilization; (iii) detailed agendas for seminars 3 months after mobilization; (iv) a draft final report to summarize all project experience disseminated and the activities undertaken under the program; (v) a final report incorporating ADB and HPMO's comments at the completion of the consulting service. All reports are to be written in English and translated into Chinese. One soft and two printed copies of each report are to be submitted to ADB (English version only) and HPMO (both Chinese and English versions).

7. The detail outputs will include:

- (i) preparation of a series of dissemination materials to introduce key project experience in innovative stormwater management, rural wastewater management, smart environmental management, Green Incentive Fund for tea farming, as well as green investment fund design and management. All dissemination materials will be published on the official website of Huangshan Municipal Government with public access;
- (ii) preparation of public education materials on (a) rural wastewater management to improve rural residents' understanding on the importance of rural wastewater treatment, key issues on facility operation and maintenance, efforts can be made by villagers; (b) Green Incentive Fund for tea farming to encourage tea farmers adopting green agriculture practices. The materials shall be written in a simple and understandable way for villagers and farmers;
- (iii) organization of seminars with participants from other municipalities within Yangtze River Basin to share the green development experience and lessons learnt. The themes shall include Green Incentive Fund for tea farming, green investment fund design, and others proposed by the HMPO, as needed.

E. Key Expertise Required

8. The proposing entities will determine the number and the nature of experts which they will require to achieve the objectives of the consulting service in accordance with their proposed approach and methodology. However, ADB requires a minimum of two national experts.

9. **Knowledge Management Specialist (national, 3 person-month).** The specialist shall have graduate degree or above and prior experience in preparing dissemination materials, organizing seminars, and other related activities for more than 10 years and fluency in English and Chinese is required. Experience in environmental management, or eco-compensation and green investment fund design would be preferred. Specific tasks will include the following:

- (i) discuss with HPMO to identify the client's demand and develop an implementation plan for the program;
- (ii) prepare the dissemination and public education materials based on the project documents provided by HPMO, and make revisions as needed to fit program needs;
- (iii) prepare seminar agendas and conference materials and obtain approval from HPMO;
- (iv) lead the organization of seminars; and
- (v) prepare and submit required reports to HPMO and ADB, etc.

10. **Project Assistant (national, 8 person-months).** The project assistant shall have prior experience in preparing dissemination materials, organizing seminars, and other related activities for more than 5 years and fluency in English and Chinese is required. He/she will assist the project manager in following tasks:

- (i) prepare the dissemination and public education materials based on the project documents provided by HPMO, and make revisions as needed to fit program needs;
- (ii) prepare material dissemination plan and assist the HPMO in implementing;
- (iii) prepare conference materials for the seminars;
- (iv) organize seminars in accordance with the approved agenda;
- (v) prepare invitations for seminars to participants;
- (vi) ensure provision of logistical and administrative support during seminars;
- (vii) assist the team leader in preparing required reports; and
- (viii) undertake other tasks assigned by the project manager, as needed.

Indicative Terms of Reference for 4C-6 Project Start-up Consultancy before Loan Implementation

1. Three national specialists will be hired through the individual consultant selection (ICS): international project management and rural wastewater specialist (4 person-months); social specialist (5 person-months); and environmental specialist (5 person-months). The indicative terms of reference for consulting services for the Package No. Serv-HSC-18: Project Implementation Start-Up Support are as follow:

A. Background

2. Huangshan is a prefecture-level municipality in the southern part of Anhui Province, with a population in 2018 of 1.48 million. It comprises three urban districts and four counties and has an area of 9,807 km². Huangshan is a famous tourist destination in the PRC, largely due to scenic values. The Xin'an River originates in Huangshan Municipality and flows eastward through Zhejiang Province. Rapid economic development, urbanization, intensive agriculture production, and the growth of tourism are increasing the environmental pressures in the Xin'an River Basin.

3. The Anhui Huangshan Xin'an River Ecological Protection and Green Development Project (the project) aims to demonstrate water pollution reduction in the Xin'an River Basin through improving urban and rural wastewater management, reducing soil erosion and agriculture-related non-point source pollution, and strengthening financing mechanisms, capacities, and public awareness.

4. This document sets out indicative terms of reference for consulting services needed to ensure the smooth implementation start-up of the project. The executing agency for the project is the Huangshan Municipal Government (HMG). The direct client for the consulting services is the Huangshan Municipal project management office (HPMO) established in the Huangshan Municipal Development and Reform Commission (HDRC).

B. Implementation Arrangements

5. The consulting services will be carried out by the following individual consultants: international project management and rural wastewater specialist (4 person-months); social specialist (5 person-months); and environmental specialist (5 person-months), with a total of 14 person-months. The consulting services will be financed by the Asian Development Bank (ADB), and the consultants will be recruited by the HPMO according to Procurement Regulations for ADB Borrowers - Goods, Works, Non-consulting and Consulting Services (2017, as amended from time to time).³⁷ The consultant will be selected using the individual consultant selection method. The consulting services are expected to start on October 1, 2019 and continue until June 30, 2020.

C. Reporting Requirements

6. During the assignment, each consultant will submit monthly reports (maximum of 2 pages) in Chinese to the HPMO. The reports will describe what was planned and accomplished, the problems and obstacles encountered, and what are planned for the following month.

³⁷Checklists for actions required to contract consultants by method available in e-Handbook on Project Implementation at: <http://www.adb.org/documents/handbooks/project-implementation/>.

7. At the end of the assignment, each consultant will submit a report on his/her activities to ADB and the HPMO (a soft copy of the English version to ADB and soft copies of the English and Chinese versions to the HPMO).

D. Scope of Services and Consultants' Inputs

8. The national project management and rural wastewater specialist (4 person-months) specialist will undertake the following tasks:

- (i) establish initial project management system including internal procedures of routine data filling and communication among the HMG, HPMO, IAs, and other agencies for required reporting on project progress and safeguards;
- (ii) prepare needed project implementation arrangement setup, operational procedures, work plan, and guide and facilitate the initial phase of project implementation;
- (iii) promote project implementation in the initial phase, and submit work reports to the HPMO;
- (iv) collect necessary information for reporting requirement of ADB including, semiannual implementation progress report, and PAM update for inception mission;
- (v) closely work with the HPMO, and directly support the IAs of each subproject;
- (vi) review and provide recommendations on the detailed design for rural wastewater management and sewer update subprojects to optimize the project design;
- (vii) provide guidance to design institutes to prepare bidding documents for civil works and work with PMO staff to develop RFP for consulting services;
- (viii) lead the start-up consultants' team and ensure the compliance with ADB guidelines and requirements for project implementation, particularly for the initial phase, including (a) project performance management system (PPMS); (b) procurement of goods and works, (c) disbursement and contract management; (d) construction planning, supervision and monitoring; (e) reporting requirements; and (f) safeguards management and monitoring.

9. The social specialist will undertake the following tasks: (5 person-months)

- (i) assist the HPMO, the IAs, and designated institute in updating the resettlement plan (RP), social development action plan (SDAP) and gender action plan (GAP) approved by ADB, following the ADB format and based on the detailed designs; disclosing them to the affected persons prior to ADB's approval; and obtaining ADB's approval of them;
- (ii) assist the HPMO and the IAs in establishing effective grievance redress mechanism (GRM), including procedures to ensure the documentation and reporting of complaints, follow-up actions, and results;
- (iii) provide training to relevant staff of the HPMO and the IAs so that they will understand ADB's policies and compliance requirements for land acquisition, resettlement, social development, and gender-inclusive measures, including record keeping;
- (iv) prepare or update the social related guidance documents, including procedures and forms;
- (v) assist in establishing an internal monitoring and reporting system;
- (vi) provide hands-on guidance in preparing the first social report;
- (vii) provide a written report for the project implementation consulting firm about the accomplished work in aspect of social management; and

- (viii) perform any other land acquisition, resettlement, and social related tasks during the start-up of the project.

10. The environmental specialist will undertake the following tasks: (5 person-months)

- (i) assist the HPMO, the IAs, and designated institute in updating the initial environmental examination (IEE), including the environmental management plan (EMP), and the environmental and social management system (ESMS) approved by ADB for the project, following the ADB format and based on the detailed designs; and obtaining ADB's approval;
- (ii) assist the HPMO and the IAs in establishing effective GRM, including procedures to ensure documentation and reporting of complaints, follow-up actions, and results;
- (iii) provide training to relevant staff of the HPMO and the IAs 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, EMP and ESMS;
- (iv) prepare or update environmental management related guidance manual, including the forms and templates;
- (v) provide hands-on guidance in preparing the first environmental report;
- (vi) provide a written report for the project implementation consulting firm about the accomplished work in aspects of environmental management; and
- (vii) perform any other environmental management related tasks during these phases of the project.

E. Consultant Qualifications

11. The consultants will have the following qualifications:

- (i) International project management and rural wastewater specialist: a master degree or higher in environmental engineering, civil engineering, project management, or related fields;
National social specialist: a university degree or higher in sociology, social impact assessment, or social development related fields;
National environmental specialist: a university degree or higher in environmental management, environmental science, or related fields;
- (ii) proficiency (reading, writing, speaking, comprehension skills) in English and Chinese;
- (iii) at least 15 years (international specialist) or 8 years (national specialists) of experience in implementing projects in the PRC that are funded by ADB or other international funding agencies; and
- (iv) relevant knowledge of specific ADB policies and guidelines for their expertise.

APPENDIX 3: ENVIRONMENT MANAGEMENT PLAN (EMP)

A. Objectives

1. This environmental management plan (EMP) is for the Anhui Huangshan Xin'an River Ecological Protection and Green Development Project (the project). The EMP is to be implemented in all phases of the project: design, pre-construction, construction, and operation. The EMP is to ensure project compliance with PRC environmental laws and ADB's Safeguard Policy Statement (SPS 2009). The EMP describes: the roles and responsibilities of all project agencies to implement this EMP; anticipated impacts and mitigation measures; inspection, monitoring, and reporting arrangements; training and institutional strengthening; grievance redress mechanism (GRM); and future public consultation.

2. In the engineering design stage, the Huangshan Municipal Project Management Office (HPMO) will pass this EMP to the design institutes for incorporating mitigation measures into the detailed engineering designs. The EMP will be updated at the end of the detailed design, as needed. To ensure that bidders will respond to the EMP's provisions, the HPMO and the IAs of the three districts and four counties will prepare and provide the specification clauses for incorporation into the bidding documents: (i) a list of environmental management requirements to be budgeted by the bidders in their bids; (ii) environmental clauses for contractual terms and conditions; and (iii) the project domestic EIA report and updated EMP.

B. Organizations and Their Responsibilities for EMP Implementation

3. The Huangshan Municipal Government (HMG) is the executing agency of the project. At the municipal-level, HMG has established the: (i) Huangshan Municipal Project Leading Group (HPLG), to provide policy guidance, overall oversight and coordination for the project. The group is chaired by the HMG executive vice mayor and comprised of officers from Huangshan Municipal Development and Reform Commission, Huangshan Finance Bureau, and other municipality bureaus; and (ii) HPMO, to manage, supervise and coordinate overall project implementation. The HPMO is established with membership of all key agencies and departments involved in project management and implementation. The project activities will be carried out at the city level or county or district level.

4. For the project activities at city level (e.g. capacity development and forest health protection), HPMO will be the implementing agency, except for the Green Investment Fund, which will be implemented by the Huangshan Trust Investment Company (HTIC). For subprojects to be implemented at the county or district level, the county or district governments will be the implementing agency. Each county or district government has set up an IA, which will be responsible for daily project implementation with guidance of HPMO. The project will have 8 implementing agencies: HTIC; and, the local governments of the three districts and four counties. EMP implementation arrangements and responsibilities are summarized in Table EMP-1. Environmental and social safeguards for the Green Investment Fund (output 3) will be managed under an environmental and social management system.

Table EMP-1: Institutional Responsibilities for Implementation of the Project Environmental Safeguards

Agency	Roles and Responsibilities
Huangshan Municipal Project Leading Group	<ul style="list-style-type: none"> • Ensure timely national, provincial, and inter-agency coordination and support for the project as needed • High-level support to executing agency • Provide advice on project implementation • Review project progress
Huangshan Municipal Government	<ul style="list-style-type: none"> • Project executing agency • Overall accountability and responsibility for project planning, management, and implementation • Ensure timely and effective execution of the loan agreements • Coordinate with ADB
Huangshan Municipal Project Management Office	<ul style="list-style-type: none"> • Supervise and manage daily project implementation • Recruit and manage design institutes, procurement agents, consultants, contractors, CSCs, in accordance with government and ADB regulations • Submit bidding documents, bid evaluation reports and other documents as needed to ADB for endorsement • Supervise construction and monitor quality control • Coordinate with ADB on all aspects of project implementation <p>Environment safeguards – all project outputs</p> <ul style="list-style-type: none"> • Engage the LIEC; and, EMA for external environmental monitoring • Assign 1 Environment Officer and 1 HPMO Social Officer • Respond to any unanticipated safeguard issues and take corrective actions as needed • Ensure project compliance with the loan and project agreements (including all safeguard provisions), EMP, and ESMS • Prepare semiannual environment monitoring reports to ADB <p>IEE and EMP – all project outputs except Green Investment Fund (output 3)</p> <ul style="list-style-type: none"> • Update IEE and/or EMP as needed, especially during the stage of detailed engineering designs • Ensure that the EMP, especially all relevant mitigation measures, are included in the detailed engineering designs • Establish the EMP grievance redress mechanism <p>ESMS – for Green Investment Fund (output 3)</p> <ul style="list-style-type: none"> • Support HTIC to finalize the ESMS; and submit updated draft ESMS to ADB for endorsement • Support HTIC to implement the Green Investment Fund and ESMS • For the first batch of each subproject type (see ESMS) from each project county and district, submit the draft safeguard screening and categorization documents to ADB for endorsement • Facilitate safeguard training for HTIC • Establish the ESMS grievance redress mechanism • Incorporate monitoring and progress on ESMS implementation from HTIC in the semiannual environment monitoring reports to ADB

Agency	Roles and Responsibilities
Huangshan District Government Huizhou District Government Tunxi District Government Xiuning County Government She County Government Yi County Government Qimen County Government and their respective Project Implementing Units (all project outputs except Green Investment Fund under output 3)	<ul style="list-style-type: none"> • Implement subprojects, including finance, administration, technical and procurement matters, monitoring, evaluation, safeguards • Coordinate with HPMO for project implementation • Assign IA environment officer (1 per IA) • Prepare tendering contracts; and submit bidding documents, bid evaluation reports and other documents to HPMO • Recruit design institutes, contractors, CSCs; and manage contractors and suppliers • Incorporate EMP into bidding documents • Supervise and monitor EMP implementation • Participate in capacity building and training programs • Construction supervision and quality control • Submit withdrawal applications to finance bureau • Commission the constructed facilities
Huangshan Trust Investment Company	<ul style="list-style-type: none"> • Implementing agency for the Green Investment Fund (project output 3) • Establish, manage, and implement the Green Investment Fund and ESMS • Prepare semiannual environment monitoring reports to HPMO, for consolidation within progress reports by HPMO to ADB
Project Facility Operators - the municipal agencies, town / village governments, or district/county Housing and Urban-Rural Development Bureaus, Urban Construction and Investment Companies, Ecology and Environment Bureau, Commission of Tourism, and commission of industrial parks	<ul style="list-style-type: none"> • With IAs, commission the constructed facilities • Operate and maintain the completed facilities, including environmental management, monitoring and reporting responsibilities
“Start-up” environment safeguard consultant	<ul style="list-style-type: none"> • Short-term national position to support HPMO and IAs with start-up support for EMP and ESMS establishment while the LIEC is being recruited • Assess whether the detailed engineering designs are within the scope of the EMP and/or whether new safeguard assessments are required • Help integrate the EMP within the project bidding documents • Assist HPMO and HTIC to establish the GRMs for the EMP and ESMS respectively • Provide initial training to project agencies for EMP and ESMS implementation

Agency	Roles and Responsibilities
Loan Implementation Environmental Consultant	<ul style="list-style-type: none"> • Support the executing and implementing agencies in their tasks to coordinate and implement the EMP and ESMS • Provide ongoing training for EMP and ESMS implementation, including the EMP capacity building described in Table EMP-6 • Review the detailed engineering designs and assess whether the IEE and/or EMP requires updating • Support the updating of the IEE and/or EMP as needed • Review bidding documents to ensure that EMP clauses are incorporated • Review site-specific EMPs (prepared by contractors) to ensure compliance with the EMP • Conduct site inspections to assess compliance with the EMP • Review environment monitoring reports prepared by contractors • Assist HPMO to prepare the semiannual environmental monitoring reports to ADB
External environment monitoring agency	<ul style="list-style-type: none"> • Certified agency that will conduct the external environment monitoring described in Table EMP-5 • Monitor compliance of the identified parameters with the required project targets and standards; identify non-compliance • Submit independent progress reports to HPMO, IAs, ADB
Contractors	<ul style="list-style-type: none"> • Ensure sufficient funding and human resources for full implementation of mitigation and monitoring measures in the EMP • Develop site-specific EMPs based on this EMP, including the specific contractor performance targets listed in Table EMP-2 • Timely and effective implementation of EMP measures for works
Construction supervision company	<ul style="list-style-type: none"> • Ensure sufficient funding and human resources for supervising and instructing contractors for proper and timely implementation of required mitigation and monitoring measures in the EMP • Supervise construction progress and quality • Appoint EHS officer for regular onsite supervision of contractors • Supervise the contractor's EMP implementation performance • Undertake simple and cost-effective on-site quantitative measurements to regularly check that construction complies with the project environmental monitoring standards and targets, especially for noise and air quality (especially during excavation of pipe trenches in urban area and villages), using a basic hand-held meter • Submit monthly EMP monitoring reports to IA and HPMO
Asian Development Bank	<ul style="list-style-type: none"> • Oversee project administration and timely execution of the loan agreements by the executing and implementing agencies • Disburse loan proceeds • Review procurement, consultant recruitment, progress reports, and audit reports • Review project compliance and targets against the design and monitoring framework, EMP, ESMS, social plans, and project administration manual • Review and endorse updated IEE, EMP and/or ESMS as needed • Monitors project progress and conducts review missions • Discloses monitoring reports on ADB public website

ADB = Asian Development Bank, CSC = construction supervision company, EHS = environment, health and safety, EMA = environment monitoring agency, EMP = environment management plan, ESMS = environmental and social management system, GRM = grievance redress mechanism, HTIC = Huangshan Trust Investment Company, LIEC = loan implementation environment consultant, HPMO = Huangshan Municipality project management office.

5. **Environment staff within HPMO and IAs.** One full-time HPMO environment officer and seven district or county IA environment officers (one per implementing agency) will be appointed. These personnel will be responsible for coordination and implementation of the EMP; and will also support the environmental and social staff to be recruited for the ESMS. The HPMO Environment Officer will be responsible for overall EMP coordination. The officer will work full-time for the project and will take charge of: (i) supervising the implementation of mitigation measures during project design, construction and operation; (ii) ensuring that environmental management, monitoring, and mitigation measures are incorporated into bidding documents, construction contracts and operation management manuals; (iii) submitting semi-annual EMP monitoring and progress reports to ADB; (iv) coordinating the GRM; and (v) responding to any unforeseen adverse impacts. The HPMO Environment Officer will be technically supported by the loan implementation environment consultant. Each IA will nominate one environmental officer and one social officer to check the overall implementation of environmental management provisions of the EMP, and to work in close coordination with the HPMO Environmental Officer.

6. **Loan implementation consultants.** HPMO will engage a loan implementation environmental consultant (LIEC) and loan implementation social consultant (LISC), as part of the loan consultancy implementation services. The consultants will support the HPMO to provide capacity building for, and coordination of, the EMP and ESMS implementation. The need to extend consultant support for the HTIC will be reviewed after about 24 months of project implementation.

7. Draft terms of reference for the positions of HPMO Environment Officer, HPMO Social Officer, IA Environment Officer, and the LIEC, are described in Appendix EMP-1. Terms of reference for the HTIC environment and social positions are described in the ESMS (Appendix 2).

C. Potential Impacts and Mitigation Measures

8. Tables EMP-2 and EMP-3 list the potential impacts of the subprojects in the three districts and four counties during project preparation, design, construction and operation, and proposed mitigation measures. The mitigation measures will be incorporated into detailed design, bidding documents, construction contracts and operational management manuals, by the design institutes (during detailed design) and contractors (during construction), under the supervision of CSCs and IAs, with technical support from the LIECs. The effectiveness of these measures will be evaluated based on environmental inspections and monitoring to determine whether they should be continued, improved or adjusted.

Table EMP-2: Potential Impacts and Mitigation Measures during Pre-construction and Construction Phases

Item	Potential impacts / issues	Mitigation measures	Implement	Supervise
A. DESIGN AND PRE-CONSTRUCTION PHASES				
Detailed design stage	Institutional strengthening for EMP Implementation and supervision	<ul style="list-style-type: none"> At least 1 month before construction: (i) reconfirm the full-time status of the HPMO Environmental Officer for the project; (ii) appoint at least one environment officer in each of the 7 IAs (excluding HTIC, which will separately engage an environment officer for the ESMS). At least 2 months before any construction, engage LIEC. At least 2 months before any construction, provide training to all environmental staff for EMP implementation. Confirm that at least one certified EMA has been recruited for the project at least 2 months before any construction. When the contractors and CSCs have been engaged, conduct training on the project EMP. 	HPMO, IAs	EA, ADB
	Updating the EMP	<ul style="list-style-type: none"> Update the mitigation measures defined in this EMP based on final detailed design. This will include the specific designs for the use of biopesticides which have been prepared during the detailed designs (see IEE Section V.D.6 and Section X). Asbestos. Under ADB's List of Prohibited Investment Activities (SPS, 2009), the use of asbestos is prohibited except for the "purchase and use of bonded asbestos cement sheeting where the asbestos content is <20%" (SPS 2009: 76). However: (i) in practice it is difficult to assess whether asbestos content is <20%; and (ii) international development banks are increasingly banning the use of all asbestos from their projects. To ensure international best practice for human health and safety for this project: no asbestos of any kind will be used in any materials supported by the project. Check with the design institute and HPMO to ensure the proposed materials do not include the use of asbestos. Submit the updated EMP to ADB for review; In case of major changes of project location and/or additional physical components, form a DEIA team to conduct additional DEIA and public consultation. The revised DEIA should be submitted to Huangshan and district/county EEBs and ADB for approval and disclosure. To determine if the change is minor or major the HPMO will consult with ADB. 	HPMO, LIEC	EEBs, ADB
Construction Preparation	Environmental monitoring plan	<ul style="list-style-type: none"> Prior to construction, the HPMO will hire an EMA for environmental monitoring; Prepare detailed monitoring plan in accordance with the monitoring plan in this EMP. 	HPMO	HPMO, IAs
	Bidding and contract documents	<ul style="list-style-type: none"> Mitigation measures in the EMP are incorporated in all bidding documents; Bidding documents are sent to ADB for review; Prepare environmental contract clauses for contractors. 	DIs, HPMO, IAs	LIEC, ADB
	EMP training	<ul style="list-style-type: none"> LIEC, or invited environment specialists and/or officials from EEBs provide training on construction environmental management, implementation, supervision, to contractors and 	LIEC, EEBs	HPMO

Item	Potential impacts / issues	Mitigation measures	Implement	Supervise
		CSCs, in accordance with the training plan in this EMP		
	Establish GRM	<ul style="list-style-type: none"> Responsibility for GRM implementation is assigned to the HPMO and IA Environmental Officers and HPMO Social Officers, and is included in their terms of reference; HPMO and IA personnel will be aware of, and trained in, the GRM, and will help support the environmental and social officers when necessary. Key contact details for the GRM (phone number, fax, address, email) will be provided on the HPMO, IAs and/or EEB public websites and information boards at construction sites. 	HPMO, IAs	LIEC
	Site EMPs	<ul style="list-style-type: none"> Prior to any works, prepare site-specific EMP for individual construction sites 	Contractor	CSC
		<ul style="list-style-type: none"> Review and ensure site EMP complies with the measures in this EMP 	HPMO, IA	
B. CONSTRUCTION PHASE				
Wastewater management	Construction wastewater and domestic wastewater generated from construction activities	<ul style="list-style-type: none"> Sedimentation tanks will be installed on site and, after settling out of solids, the upper clear liquid will be recycled for spraying the construction site (dust control), and the waste residue in the tank will be cleared and transported to the construction spoil disposal sites. Oil-water separators will be installed before the sedimentation tank for oily wastewater treatment. All sites for washing of construction equipment will be equipped with water collection basins and sediment traps. Domestic wastewater generated from construction camps will be disposed in three ways: (i) for project sites nearing septic tanks in surrounding villages, domestic wastewater will be treated by the septic tanks before being used for irrigation; (ii) for project sites accessible to municipal sewerage systems, domestic wastewater will be discharged into the nearest sewerage system; (iii) for project sites neither close to villages nor sewerage systems, temporary septic tanks will be constructed for the centralized treatment of domestic wastewater. Fuel storage, machinery maintenance workshop and vehicle cleaning areas must be stationed at least 500 m away from the waterbody. Storage facilities for fuels, oil, and other hazardous materials will be within secured areas on impermeable surfaces and provided with bunds and cleanup installations. Contractors will develop actions for control of oil and other dangerous substances as part of their site EMPs. Contractors' fuel suppliers must be properly licensed. They shall follow proper protocol for transferring fuel and the PRC standard of JT3145-91 (Transportation, Loading and Unloading of Dangerous or Harmful Goods. revised). Labor camps will be located at least 500 m from waterbody. Portable toilets and on-site wastewater pre-treatment systems will be installed at construction camps along with proper maintenance protocols. 	Contractors	CSCs, IAs, LIEC

Item	Potential impacts / issues	Mitigation measures	Implement	Supervise
Water supply	Interruption to existing water supply due to works	<ul style="list-style-type: none"> • Ensure that existing water and wastewater services continue to be provided to communities during the civil works. • Any interruptions to such services as a result of the project works are as limited as possible. • Prior to any such interruptions, consultations are held with all affected communities. 	Contractors	CSCs, IAs, HP MO
Ambient Air	Dust generated by construction activities, gaseous air pollution (CO, CH and NO ₂) from construction machinery, and fugitive emission of odor (NH ₃ and H ₂ S) from existing sewage pipes	<ul style="list-style-type: none"> • Establish a series of measures for dust control in construction sites before work commencement. • Install barriers at the boundary of construction sites with a height no less than 2.5m. • Spraying water daily on construction sites where fugitive dust is being generated. Before excavation, proper spraying shall be performed on the working surface to maintain a certain humidity to reduce dust generation. • Cover stockpiles with dust shrouds or tarpaulin to avoid spillage or dust generation. For the earthwork management for backfill, measures will include surface press and periodical spraying and covering. Extra earth will be cleared from the project site in time to avoid long term stockpiling. • Vehicles with a closed load-carrying case shall be used to transport potentially dust-producing materials. • Design haulage routes and schedules to avoid transport occurring in the central areas, traffic intensive areas or residential areas. • Install vehicle washing equipment or conduct wheel washing manually at each exit of the work area to prevent trucks carrying mud and soils onto public roads. • Keep construction vehicles and machinery in good working order, regularly service and turn off engines when not in use. Ensure vehicle and machinery emissions comply with PRC standards of GB18352-2005, GB17691-2005, GB11340-2005, and GB18285-2005. • During high wind, dust-generating operations shall not be performed and onsite construction materials shall be covered with shrouds. When wind speed exceeds PRC Levels 4 or 5, excavation, soil transportation and demolition works are not permitted. Special precautions need to be applied in the vicinity of sensitive receptors such as schools, kindergartens and hospitals. • Transport the sludge from existing sewer pipes offsite timely to reduce fugitive odor emission. • Use exhaust fans at welding sites to increase ventilation and promote the diffusion of organic exhaust gas onsite. • Timely monitoring of air quality and inspections during construction. 	Contractors, EMAs	CSCs, IAs, LIEC

Item	Potential impacts / issues	Mitigation measures	Implement	Supervise
Noise	Noise generated from construction and transportation activities	<ul style="list-style-type: none"> • Construction activities will be planned in consultation with local authorities and communities so that activities with the greatest potential to generate noise are planned during periods of the day that will result in the least disturbance. • Construction works will be limited to daytime and will be strictly prohibited during the nighttime (22:00 h to 06:00 h) and noon (12:00 h to 14:00 h). Exceptions will only be allowed in exceptional cases, and only after getting the approval of the surrounding residents, local environmental authority and other relevant departments. The contractor shall apply for the approval seven days before the construction works. Nearby residents will be notified of such nighttime activities well in advance. • When preparing construction planning, simultaneous high-noise activities will be avoided. High noise activities will be scheduled during the day rather than evening hours. Similarly, the construction sites will be planned to avoid multiple high noise activities or equipment from operating at the same location. • Movable noise barriers will be adopted during construction at daytime. The barriers will: (i) be of adequate size and thickness to reduce construction noise to the required standards; and (ii) be placed to maximize noise absorption. • Low-noise equipment will be selected as much as possible. Equipment and machinery will be equipped with mufflers and will be properly maintained to minimize noise. • Transportation routes and delivery schedules will be planned to avoid densely populated and sensitive areas and high traffic times. Vehicles transporting construction materials or waste will slow down and not use their horn when passing through or nearby sensitive locations, such as residential communities, schools and hospitals. No honking is permitted during nighttime. • Monitor noise at sensitive areas at regular intervals. If noise standards are exceeded, equipment and construction conditions shall be checked, and mitigation measures shall be implemented to rectify the situation. • Conduct regular interviews with residents/villagers adjacent to construction sites to identify noise disturbance. Community feedback will be used to adjust work hours of noisy machinery. • For the households that will be within 60 m of construction works (Section V.D.3 of IEE), particular attention will be provided. This will include: (a) follow-up consultations with these households prior to the start of any works, to specify the exact planned dates and schedule of works, nature of works, equipment to be used, safety measures, and public access during construction; (b) installation of noise barriers to reduce as much of the emissions as possible, and/or installation of additional layers on the windows of the affected homes as necessary, based on the assessment of the most technically effective method and feedback from the community consultations; (c) agreement on the duration of daily works. 	Contractors, EMAs	CSCs, IAs, LIEC

Item	Potential impacts / issues	Mitigation measures	Implement	Supervise
Soil erosion	Soil erosion caused by construction activities, earthworks	<ul style="list-style-type: none"> • Prepare site soil erosion management plans before works begin. • Level the ground for the temporary spoil storage sites with proper blocking measures. • During construction phase, the earthwork will be reasonably planned and balanced to reduce the stockpiling of spoil onsite as much as possible. Spoil will be reused onsite to the maximum extent feasible as fill. The spoil sites will be away from roads and be restored after storage activities. • Limit construction during rainy season and high winds. Appropriate stormwater drainage systems and slope protection measures will be implemented to minimize soil erosion, such as perimeter bunds and temporary detention and settling ponds to control topsoil runoff. • The construction schedule will be well designed to minimize the exposure time of bare land surface and stabilize all earthwork disturbance areas timely after the earthworks are completed. • Minimize open excavation areas and slope during trenching. • Construction camps, storage areas and access roads will be located within the acquired land to minimize the impacts on the soil and land vegetation in surrounding area. • Landscaping will only use native plant species. • Construct intercepting channels and drains to prevent runoff entering construction sites and divert runoff from sites to existing drainage or open ground for watering the vegetation. • Rock material for the gabion cages for river revetment will be sourced from: (i) licensed suppliers of construction materials; and (ii) the old revetment material extracted from the Caocun River as part of the project works. 	Contractors	CSCs, IAs, LIEC
Solid Waste	Solid waste generated by construction activities and from workers' camps	<ul style="list-style-type: none"> • Provide appropriate waste collection and storage containers at locations away from surface water or sensitive spots; • Arrange with municipal waste collection services for regular collection of waste; • Properly remove and dispose residual materials, wastes and contaminated soils. Paving or vegetating shall be done as soon as the materials are removed to stabilize the soil; • Burning of waste is strictly prohibited; • Provide sufficient garbage bins at strategic locations and ensure that they are protected from birds and vermin, and emptied regularly by the municipal waste collection systems. <p>CONTRACTOR PERFORMANCE TARGET:</p> <ul style="list-style-type: none"> • No uncollected waste at close of construction activities each day. 	Contractors	CSCs, IAs, LIEC

Item	Potential impacts / issues	Mitigation measures	Implement	Supervise
Ecology	Protection of flora and fauna around construction sites	<ul style="list-style-type: none"> • Minimize damage to vegetation. Minimize the damage to existing vegetation and recover the vegetation timely after the completion of construction works. Native plant species will be used for replanting and site rehabilitation. • The surface soil (0-30 cm) will be stored separately for reuse for landscape greening or agriculture. The stockpiling shall have a height less than 5m and a slope less than 1:1.5 with proper compaction to avoid soil erosion. • Minimize damage to aquatic habitats. For the stone debris removal from river channel in Caocun River, only debris from previous river revetment works will be removed, and all works shall be conducted manually without intervention of any mechanical equipment to prevent mechanical damage to the riverbed. • All river channel related works will be carried out during dry season (October to March) to minimize potential impacts on the aquatic habitat. • Landscaping and site rehabilitation. All planting activities under the project, including re-vegetation, landscaping, and rehabilitation of construction sites, will only use plant species which are (i) native (i.e. naturally occurring) to the Xin'an River basin, and (ii) are sourced from local stock within Huangshan Municipality. • In the event that non-native seedlings are required for rapid stabilization of exposed soils and sites, HMG will and will cause the IAs to ensure that only sterile seedlings are used to prevent the spread of weeds. • Training. Provide trainings to contractors and workers to increase their awareness on the need to protect the environment, wildlife and vegetation around the construction sites. • Site inspection. The CSCs and the environmental officer of the HPMO will regularly inspect construction sites to ensure that habitats are well demarcated, and workers are fully informed of "no-go" areas. • Biopesticides. Before any use of biopesticides, confirm that: (a) a complete inventory of the pest species to be addressed for each demonstration site has been prepared; (b) any "pest" species which are rare, threatened, restricted range, or protected species have been excluded from the pest management program; (c) the specific organisms or other agents to be used as biopesticides have been identified during the detailed engineering designs; (d) each proposed agent or method has been confirmed to be highly crop-specific and will only act on the intended pest species, and will not affect local flora and fauna (e.g. the use of water mixed with tobacco will not be used as it may impact aquatic organisms in nearby streams); (e) specific application procedures, volumes, and post-application monitoring have been detailed, to ensure safe and responsible use of the biopesticides. 	Contractors	CSCs, IAs, LIEC

Item	Potential impacts / issues	Mitigation measures	Implement	Supervise
Protected Area	Damage to protected area during construction	<ul style="list-style-type: none"> • Engineering design will be in line with the Taiping Lake Scenic Zone Master Plan (2015-2030) and Huashan Mysterious Grottoes Scenic Zone Master Plan (2007-2025); • All works will be conducted within the confirmed ecological red line only; • Avoid setting up temporary storage sites for construction waste within scenic zones, and all waste generated will be transported out for disposal timely; • For subprojects near riverway, proper onsite wastewater treatment facilities (e.g. sedimentation tank) will be set up to avoid direct discharge of wastewater and impairing of aquatic ecosystem along the river; • Design the location and shape of spoil piles before construction; • Vehicles will slow down within scenic zones and frequent water spraying in construction sites will be performed to minimize dust; • Recover the vegetation in construction sites timely after the completion of construction works to minimize soil erosion and visual landscape impact in scenic zones. 	Contractors	CSCs, IAs, LIEC
Physical cultural resources	Damage to known or unknown above or below-ground cultural relics	<ul style="list-style-type: none"> • Establish chance-find procedures for physical cultural resources; • If a new site is unearthed, work shall be stopped immediately and the IA, HPMO and local CRB promptly notified. The construction will resume only after a thorough investigation and with the permission of appropriate authority. 	Contractors	CSCs, IAs, LIEC, cultural relic bureaus
Community and occupational health and safety	Site and access safety	<ul style="list-style-type: none"> • Erect signs will be placed at construction sites in view of the public, warning people of potential dangers such as moving vehicles and excavations, and raising awareness on safety issues; • Assign personnel to direct pedestrians around dangerous work areas; • Ensure that all sites are secure, discouraging access through appropriate fencing; • Place clear signs at construction sites in view of the people at risk (including workers and nearby communities), warning people of potential dangers such as moving vehicles, hazardous materials, excavations, and raising awareness on safety issues; • At the end of each day, all sites and equipment will be made secure (through fencing and/or lock-down of equipment) to prevent public access; • Erect safety barricades around all excavations; • Hold a public consultation meeting prior to commencing construction to discuss issues associated with ensuring the safety of nearby communities in vicinity of the construction site. 	Contractors	CSCs, IAs, LIEC

Item	Potential impacts / issues	Mitigation measures	Implement	Supervise
	Occupational health	<ul style="list-style-type: none"> • Provide personal protection equipment to workers as needed, e.g. safety boots, helmets, gloves, protective clothing, goggles, ear protection in accordance with health and safety regulations. • An emergency response plan to take actions on accidents and emergencies, including environmental and public health emergencies associated with hazardous material spills and similar events will be prepared, and submitted to the IA for review and appraisal. A fully equipped first-aid base in each construction site will be provided. • A Records Management System will be established to document occupational accidents, diseases, and incidents, that: (a) includes a tracking system to ensure that incidents are followed-up; (b) can easily retrieve records; and (c) can be used during compliance monitoring and audits. The system will be backed up on at least one external hard drive to protect records against loss or damage. • Ensure that safety, rescue and industrial health matters are given a high degree of publicity to all persons regularly or occasionally on the Site. Posters drawing attention to site safety, rescue and industrial health regulations will be made or obtained from the appropriate sources and will be displayed prominently in relevant areas of the site. • Train all workers in basic sanitation and health care issues, general health and safety matters, and on the specific hazards of their work and sites and the requirements for community safety. • Asbestos. In the event that materials containing asbestos are suspected: (i) the contractor will immediately inform the IA, who will inform the HPMO; (ii) the contractor will subcontract the municipal center for hazardous waste, who will be responsible for the safe handling, transport, and disposal of the materials; (iii) such materials will only be disposed in a landfill site certified and designed to receive hazardous materials. 	Contractors	CSCs, IAs, LIEC

CSC = construction supervision company, CRB = cultural relic bureau, DI = design institute, EA = executing agency, EEB = ecology and environment bureau, EMA = Environmental Monitoring Agency, HPMO = Huangshan Municipal project management office (municipal-level PMO), IA = implementing agency, LIEC = loan implementation environment consultant.

Table EMP-3: Potential Impacts and Mitigation Measures during Operation

Item	Potential impacts / issues	Mitigation Measures and/or Safeguards	Implement	Supervise
Point source water pollution	Treated effluent from rural onsite wastewater treatment stations and domestic wastewater from tourism toilets	<ul style="list-style-type: none"> Establish O&M procedures for rural WWTS. Conduct routine inspection on the performance of WWTS. 	O&M units of the relevant MAB. A third-party will be commissioned by MAB for daily work.	IAs
Sludge disposal	Inadequate disposal of sludge from the 5 project-supported WWTS	<ul style="list-style-type: none"> In accordance with national regulations, the raw sludge will be transported by sealed truck one to two times per year to the five county and district wastewater treatment plants that are operating in each project county and district Due diligence has been conducted on these plants (Section III.D). All are operating in compliance with regulatory requirements The treated sludge will be disposed in landfill or used as fertilizer for landscaping 	As above	IAs
Non-point source pollution	Soil and water pollution due to use of agricultural chemicals	<ul style="list-style-type: none"> All use of agricultural chemicals under the project will be subject to the project training and measures to reduce the use of chemical fertilizers and pesticides No agricultural chemicals listed as hazardous under Classes I or II by the World Health Organization³⁸ or listed as prohibited or strictly controlled use under PRC national regulations for pesticide management (see Appendix 1-2) will not be used for any project-supported activities 	O&M units	IAs
Ambient air	Exhaust gas from vehicles and odor from WWTS with associated septic tanks and pumping stations, tourism toilets, and garbage bins	<p>Tourist facilities (parking lots, toilets, bins)</p> <ul style="list-style-type: none"> Design and implement strict and clear procedures for O&M of the public tourism toilets, including daily cleaning, to maintain hygiene and minimize disease risks. Install garbage bins at each public toilet. Bins will have covers, to prevent flies and rodents accessing the litter. Implement daily waste collection schedule for the emptying and removal of litter from the garbage bins. Garbage bins with cover will be used for enclosed storage of waste Layout design of the parking lots will facilitate efficient entry and exit of vehicles, to reduce traffic congestion and gas emissions from vehicle exhaust gas caused by idling. Implement procedures for O&M of landscaping around the parking lots and toilets. Periodical inspection on the condition and O&M of the public toilets, litter bins, parking lots, landscaping to ensure efficient operation 	O&M Units: management committee of each scenic spot	IAs

³⁸ www.who.int/ipcs/publications/pesticides_hazard_2009.pdf?ua=1

Item	Potential impacts / issues	Mitigation Measures and/or Safeguards	Implement	Supervise
		Wastewater treatment stations <ul style="list-style-type: none"> Regular O&M of facilities to ensure optimal performance Periodical inspection on performance Periodical sampling of air quality and odor at established distances from each station (Table EMP-5) Consultations with nearby communities as needed to assess whether there are odor-related issues 		
Noise	Noise from the 23 wastewater pumping stations	<ul style="list-style-type: none"> Each station will install low-noise equipment and thick walls. The pumps will be equipped with anti-vibration pad. Sound insulation windows and doors will be used in the stations. Station operators will maintain the equipment in good working condition as part of standard operating procedures. Periodical check and maintenance will be required. When mal-function of the equipment occurs, the related accessories or parts will be replaced timely to avoid noise from abnormal operation of pumps. 	O&M units of the relevant MAB. A third-party will be commissioned by MAB for daily work.	IAs
Solid waste	Domestic waste from tourists	<ul style="list-style-type: none"> Arrange with municipal waste collection services for regular collection of the tourism waste. Burning of waste is strictly prohibited. Ensure the garbage bins in tourism area are protected from birds and vermin, and emptied daily by the municipal waste collection systems. 	O&M units of the management committee of each scenic spot	IAs

MAB = municipal administration bureau, O&M = operation and maintenance, WWTS = wastewater treatment station.

D. Environmental Monitoring, Inspection and Reporting

9. Three types of project monitoring will be conducted under the EMP: (i) internal monitoring – to be conducted by the seven IAs and the CSCs; (ii) external monitoring – of air, water and noise standards – to be conducted by the certificated EMA in each project county/district; and (iii) compliance monitoring – to be conducted by both the EMA and LIEC, to ensure the EMP is being implemented.

10. The project monitoring program focuses on the environment in the project areas of influence in the seven county/districts (Table EMP-5). The program covers the scope of monitoring, monitoring parameters, time and frequency, implementing and supervising agencies, and estimated costs. The monitoring shall comply with the methodology provided in the relevant national environmental monitoring standards. Other associated standards to be followed are the national environmental quality standards of ambient air, surface water and noise, and the pollutant discharge standards.

11. **Internal monitoring.** During construction, the CSCs and seven IAs will be responsible for conducting internal environmental monitoring in accordance with the monitoring plan (Table EMP-5). Results will be reported through the CSC monthly reports to the IAs and HPMO.

12. **External monitoring.** The IAs will contract at least one EMA to conduct environmental monitoring in accordance with the monitoring program (Table EMP-5). A detailed cost breakdown will be provided by the EMA when the environmental monitoring program is updated at the start of each component implementation. Monitoring will be conducted during construction and

operation periods, until a project completion report is issued. Semi-annual monitoring reports will be prepared by the EMAs and submitted to HPMO and the IAs.

13. **Compliance monitoring for EMP and progress reporting.** The LIEC will review project progress and compliance with the EMP based on field visits, and the review of the environmental monitoring reports provided by the EMAs. The findings of the LIEC will be reported to ADB through the semi-annual EMP monitoring and progress reports. The reports will include (i) progress made in 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 LIECs will help the HPMO prepare the reports and submit the English report to ADB for disclosure.

14. **Project completion environmental audits.** Within three months after each subproject completion, environmental acceptance monitoring and audit reports of each subproject shall be (i) prepared by the construction unit or a capable technical agency commissioned by the construction unit in accordance with the *Tentative Procedure of Project Completion Environmental Inspection and Acceptance for Construction Project* (2017); (ii) disclosed to the public within 5 days after report completion with a duration no less than 20 working days; and (iii) reported to ADB through the semiannual EMP monitoring and progress reporting process.

15. **Quality assurance (QA) /quality control (QC) for compliance monitoring.** To ensure accuracy of the monitoring, QA/QC procedures will be conducted in accordance with the following regulations:

- i) Regulations of QA/AC Management for Environmental Monitoring issued by the State Environmental Protection Administration in July 2006;
- ii) QA/QC Manual for Environmental Water Monitoring (Second edition), published by the State Environmental Monitoring Centre in 2001; and
- iii) QA/QC Manual for Environmental Air Monitoring published by the State Environmental Monitoring Centre in 2001.

Table EMP-4: Environmental Reporting Plan

Report	From	To	Frequency of Reporting
A. Construction Phase			
Internal progress reports	CSCs	IAs	Monthly
External reports	EMAs	IAs, HPMO	Semi-annual
Compliance monitoring with EMP – progress reports	HPMO / LIEC	ADB	Semi-annual
Environmental acceptance monitoring and audit reports	construction units	EEBs, IAs, HPMO	Within three months after subproject completion
B. Operation Phase			
EMP progress reports	HPMO	ADB	Semi-annual

CSC = construction supervision company, EEB = ecology and environment bureau, EMA = environmental monitoring agency, EEB = the municipal and district/county environment protection bureau, HPMO = Huangshan Municipal project management office (municipal-level PMO), IA = implementing agency, LIEC = loan implementation environment consultant.

Table EMP-5: Environmental Monitoring Program

Subject	Parameter	Location	Frequency	Implement	Supervise
1. Construction phase – compliance with measures in Table EMP-2					
Internal monitoring (contractors, CSCs, HPMO and IA Environment Officers)					
Ambient air quality	Dust mitigation	Visual inspection at all construction sites	1 time / week	Contractors, CSCs	IA, LIEC
Noise	<ul style="list-style-type: none"> • LAeq: measured with hand-held meter • Consultations with affected residents 	<ul style="list-style-type: none"> • At each construction site boundary • Settlements within 60 m of construction works – see Table EMP-2 and IEE Section V.3 	Daily measurements and consultations or as needed during peak construction levels at individual sites	Contractors, CSCs	IA, LIEC
Solid waste	Domestic and construction waste	Visual inspection at all construction sites and work-camps	Daily	Contractors, CSCs	IA, LIEC
Soil erosion	On-site management of soil erosion	Visual inspection at spoil sites and all construction sites	1 time / week; and immediately after heavy rainfall	Contractors, CSCs	IA, LIEC
Community health and safety	Measures for traffic management and on-site safety described in in Table EMP-2	Construction sites and public roads and paths	Daily during construction at all individual sites	Contractors, CSCs	IA, LIEC
Occupational health and safety	Camp hygiene, safety, availability of clean water	Inspection at all construction sites and work-camps	1 time / week	Contractors, CSCs	IA, LIEC
External monitoring (certified environment monitoring agency)					
Water quality	SS, petroleum	Onsite treated construction wastewater (by oil-water separator and/or sedimentation tank)	1 time / month during construction	EMA	EEB, IA, LIEC
Ambient air quality	Dust: TSP	All construction sites (at least 1 point upwind and 1 point downwind) and the nearest sensitive receptor	1 time / month during construction	EMA	EEB, IA, LIEC
Noise	LAeq	Boundaries of all construction sites and the nearest sensitive receptor for each construction site	1 time / month (twice a day: once in daytime and once at nighttime, for 2 consecutive days) during construction	EMA	EEB, IA, LIEC
2. Operation phase					
Water quality of effluent from WWTS	pH, COD _{cr} , SS, NH ₃ -N, TP	Influent and effluent from WWTS	4 times / year	EMA; facility operator	EEB, IA
Ambient air quality	Odor: NH ₃ and H ₂ S	At the nearest sensitive receptor from WWTS (1 point upwind and 2 points downwind)	2 times / year	EMA; facility operator	EEB, IA
Noise	LAeq	At boundary of pump stations (IEE Section V.E) and the nearest sensitive receptor	2 times / year (twice a day: once in daytime and once at nighttime)	EMA; facility operator	EEB, IA

Subject	Parameter	Location	Frequency	Implement	Supervise
			for 2 consecutive days)		

BOD₅ = 5-day biochemical oxygen demand, COD_{cr} = chemical oxygen demand, CSC = construction supervision company, EMA = environmental monitoring agency; EEB = ecology and environmental bureau, LAeq = equivalent continuous A-weighted sound pressure level, LIEC = loan implementation environment consultant, NH₃-N = ammonia nitrogen, PM₁₀ = particles measuring ≤10µm; HPMO = Huangshan Municipal project management office; SS = suspended solids; TN = total nitrogen; TP = total phosphorus; TSP = total suspended particle, WWTS = wastewater treatment station.

E. Training and Capacity Building

16. Project agencies in the three districts and four counties in Huangshan Municipality have no previous experience with ADB-funded projects and safeguard requirements. The experience of individual staff within the district and county EEBs for environmental management varies considerably. Domestic procedures for EIA preparation and project approval do not, in general, have a strong focus on practical and time-based mitigation measures or corrective actions, and there is not yet a regulatory requirement in the PRC for EMPs of the scope required by ADB. Implementation of the current EMP represents a significant new task for the local agencies.

17. A capacity building program will be implemented on: (i) the EMP, including the mitigation measures, monitoring, and reporting; (ii) the grievance redress mechanism, including roles, responsibilities and procedures; (iii) procurement and contract management, focusing on EMP incorporation and implementation; (iv) operation and maintenance of the WWTS; and (v) measures for improved efficiency in the use of agricultural chemicals and water resources for agriculture. Training will be provided by the LIEC with the support of other experts under the loan implementation consultant services. Trainees will be the HPMO, IAs, Project Managers of IAs, contractors and CSCs. The HPMO will arrange the training programs, supported by the LIEC and other loan implementation consultants.

Table EMP-6: Project Environment Training Program

Training program	Scope of Training	Trainer	Trainee	Time	Days	Persons
Procurement and contract management (emphasize EMP implementation)	<ul style="list-style-type: none"> • ADB procurement guidelines • Bidding document and contract preparation, including EMP clauses • Risk of improper procurement and mitigation measures, and handling variation orders and contract management 	LIC	HPMO, IAs, Project Managers of IAs	2	2	40
Implementation of EMP	<ul style="list-style-type: none"> • Roles, responsibilities, monitoring, inspection, reporting in EMP • Environment monitoring program; • Public consultation and participation; • GRM implementation, coordination and reporting; • Environment, health and safety during project construction and operation for workers and the community; • Prevention and control of transmissible diseases and HIV/AIDS 	LIEC	HPMO, IAs, Project Managers of IAs, Contractors, CSCs	2	2	40
Grievance redress mechanism	<ul style="list-style-type: none"> • Roles and responsibilities; • Procedures 	LIEC	HPMO, IAs, Project Managers of IAs, Contractors, CSCs	2	2	40

Training program	Scope of Training	Trainer	Trainee	Time	Days	Persons
O&M of WWTS	<ul style="list-style-type: none"> • Operation of WWTS; • Environmental management requirements • Key issues and best practices. 	LIEC and LIC	HPMO, IAs, Project Managers of IAs	2	2	30
Green agriculture	<ul style="list-style-type: none"> • Agricultural non-point source pollution control; • Environmental management requirements • Key issues and best practices. 	LIEC and LIC	HPMO, IAs, Project Managers of IAs	2	2	30
Total				10	10	180

ADB = Asian Development Bank, CSC = construction supervision company, EMP = environment management plan, GRM = grievance redress mechanism, IA = implementing agency, LIC = loan implementation consultant, O&M = operation and maintenance, HPMO = Huangshan Municipal project management office, WWTS = wastewater treatment station.

F. Grievance Redress Mechanism

18. This project grievance redress mechanism (GRM) is a joint GRM for: (i) the initial identification, documentation, and preliminary management of both environmental and social safeguard-related grievances; (ii) the resolving of environmental safeguard-related grievances; and (iii) the resolving of, and/or referral of, social safeguard-related grievances. Environmental and social safeguard-related grievances may differ considerably in the nature of grievances and agencies, procedures, and timing required to address them: the GRM provides a simple, time-based mechanism to meet project needs as required. Social safeguard issues beyond the scope of the GRM procedures will be referred to relevant agencies as needed.

19. The environment and social officers of the HPMO and seven IAs in the three districts and four counties will be the lead coordinators for GRM implementation. However, all project agencies and staff will be trained in the GRM and will take an active role in supporting these staff as and when necessary. At the HPMO level, the HPMO environment officer and HPMO social officer will establish a GRM tracking and documentation system, conduct daily coordination with the IA officers, arrange meetings and conduct site visits as necessary, maintain the overall project GRM database, and prepare the reporting inputs for progress reports to ADB. At the IA level, the environment and social officers will instruct contractors and CSCs on the GRM procedures, and coordinate with the local EEBs and other government divisions as necessary. HPMO and IA staff will be trained and supported by the LIEC and loan implementation social consultant.

20. The contact persons for different GRM entry points, such as the HPMO and IA environmental and social officers, contractors, operators of project facilities, and EEBs, will be identified prior to construction. The contact details for the entry points (phone numbers, addresses, e-mail addresses) will be publicly disclosed on information boards at construction sites and on the websites of the local EEBs.

21. If a complaint is received and filed, the HPMO and IA officers will identify if the complaint is eligible for management under the GRM. Eligible complaints under the GRM include those where: (i) the complaint pertains to the project; and (ii) the issues arising in the complaint fall within the scope of environmental and/or social issues that the GRM is authorized to address. Ineligible complaints include those where: (i) the complaint is not project-related; (ii) the nature of the issue is outside the mandate of the GRM (such as fraud or corruption); and/or (iii) other procedures would be more appropriate to address the issue. Ineligible complaints will be documented and provided to the relevant authorities and the complainant will be informed of these steps. The

procedure and timeframe for the GRM is as follows and summarized in Figure EMP-1.

- **Stage 1 (5 calendar days):** If a concern arises during construction or operation, the affected person may submit a written or oral complaint to the contractor (construction phase) or operator of the project facility (operation phase). The contractor will: (i) respectfully acknowledge the issue and immediately stop the causal activity (e.g. on-site construction causing high noise levels to a nearby household); (ii) not resume the activity until the complaint has been resolved; (iii) inform the Project Managers of IAs of the incident on the same day of the incident occurring and how the contractor has responded or will respond; (iv) give a clear reply to the affected person within two calendar days; and (v) as far as possible, resolve the problem within five calendar days from receiving the complaint. The contractor will keep the Project Managers of IAs fully informed at all stages. The Project Managers of IAs will: inform the HPMO, local village committee, and Ecology and Environment Bureau of the incident within one working day of being informed by the contractor; and, subsequently keep these parties informed at all stages.
- **Stage 2 (5 calendar days):** If the issue cannot be resolved in Stage 1, after five calendar days, the IAs and/or HPMO will take over responsibility. Eligibility of the complaint will be assessed, and a recommended solution given to the complainant and contractors within two calendar days. If the solution is agreed by the complainant, the contractors and/or facility operators (in operation) will implement the solution within five calendar days from the IA or HPMO taking over responsibility of the complaint. Written records will be made of all stages and outcomes. At the expiration of Stage 2, HPMO will inform ADB of the outcome.
- **Stage 3 (15 calendar days):** If no solution can be identified by the HPMO and/or IA, and/or the complainant is not satisfied with the proposed solution, the HPMO and/or HPMO will organize, within seven (7) calendar days, a stakeholder meeting (including the complainant, contractor and/or operator of the facility, EEB, IA, HPMO). A solution acceptable to all shall be identified including clear steps. The contractors (during construction) and facility operators (during operation) will immediately implement the agreed solution. All attempts will be made to fully resolve the issue within 15 calendar days. Written records will be made of all stages and outcomes. At the expiration of Stage 3, HPMO will inform ADB of the outcome.

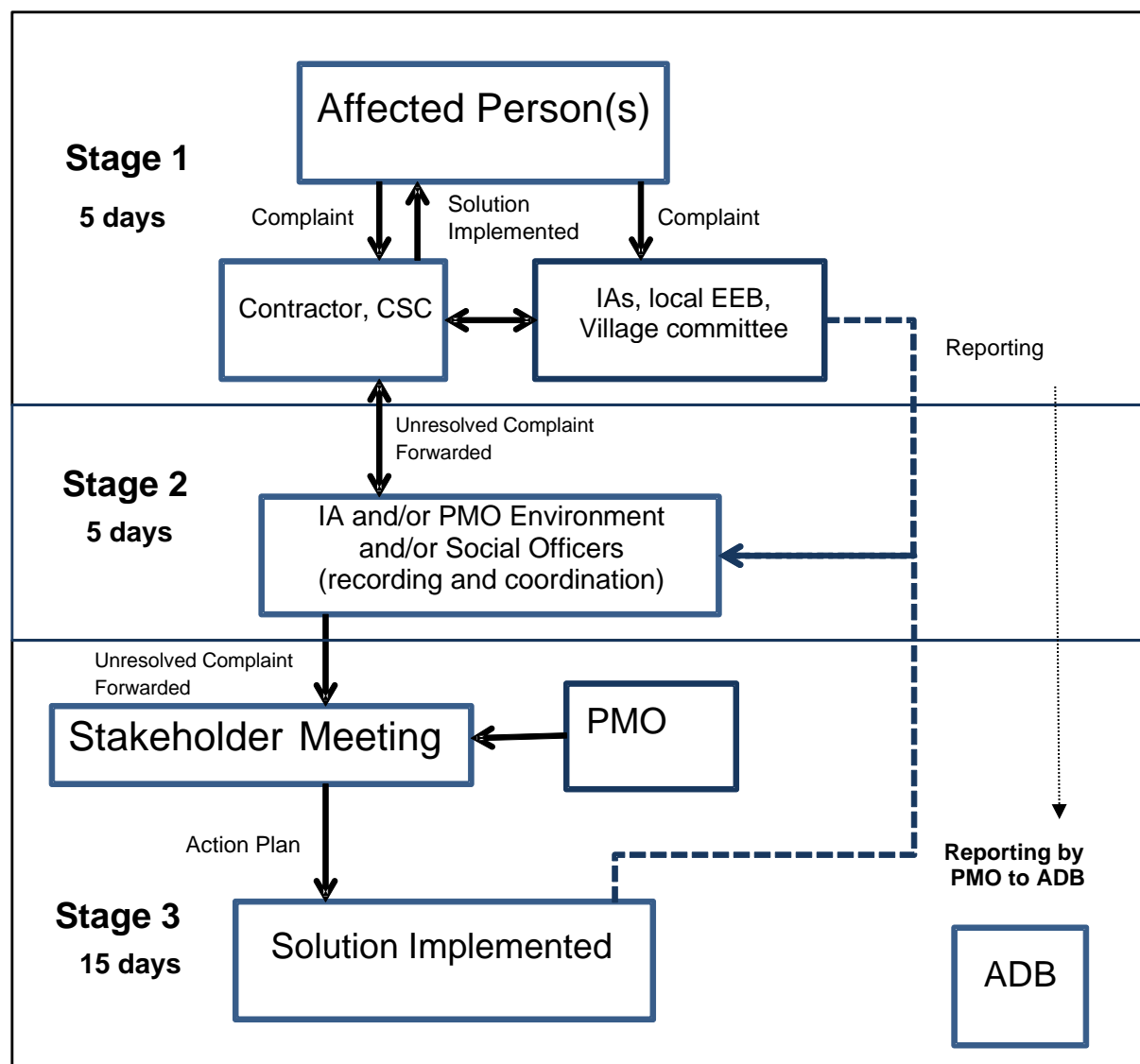


Figure EMP-1: Operation Chart of the Grievance Redress Mechanism

ADB = Asian Development Bank, CSC = construction supervision company, EEB = ecology and environmental bureau, GRM = grievance redress mechanism, IA = implementing agency, HPMO = Huangshan Municipal project management office.

22. The GRM does not affect the right of an affected person to submit their complaints to any agency they wish to, for example the local village committee, community leaders, courts, HPMO, IA, HMG, district/county government, and/or ADB.

23. The HPMO and IAs shall bear any and all costs of implementing the GRM, including meeting, travel, and/or accommodation costs of the project staff or affected person. The GRM will be implemented throughout project construction and at least the first year of operation for each project facility.

G. Public Consultation and Awareness Raising

24. Two rounds of public consultation were conducted during project preparation (Section VII of the IEE). During construction, the project will continue to seek public consultation and raise awareness of project activities, especially those that may impact the public such as noise and dust from excavation of pipe trenches. The public consultation plan is in Table EMP-7 and includes public participation in evaluating environmental benefits and impacts. The IAs are responsible for public participation during project implementation. They will be supported by the HPMO Environment and Social Officers and the LIEC.

Table EMP-7: Public Consultation and Participation Plan

Organizer	Approach	Times/Frequency	Subjects	Participants
Construction				
HPMO, IAs, LIEC	Site visits, informal interviews	At least once a week during peak construction	Construction impacts; adjusting mitigation measures if necessary; feedback	Affected persons Workers
	Site-specific basis	At least one month before the start of construction at any new site	Anticipated risks – noise, dust, etc.	Affected persons
	Public workshops	At least once during peak construction period	EMP implementation progress; construction impacts; adjusting mitigation measures if necessary; feedback	Affected persons
Operation				
HPMO, IAs, OPFs	Consultation and site visits	At least once in first year of operation	Effects of mitigation measures, impacts of operation, feedback	Affected persons
	Public workshop	As needed based on consultations	As above	As above
	Public survey	At least once after 1 year of operation	Comments and suggestions	Project beneficiaries

EMP = environmental management plan, OPF = operator of project facilities, HPMO = Huangshan Municipal project management office, LIEC = loan implementation environmental consultant.

H. Cost Estimates

25. This section provides an estimate of the cost of EMP implementation. The cost comprises three categories: mitigation measures (Tables EMP-2; EMP-3); monitoring (Table EMP-5); and training (Table EMP-6). Costs are presented for the construction phase of five years and the first year of operation (i.e. a total of six years). The costs do not include: (i) detailed design revisions and adjustments; (ii) internal monitoring/inspection during construction, as this will be included in the construction supervision contracts; and (iii) salaries of HPMO and HPMO staff. Costs for mitigation measures and trainings are based on estimates of the DEIA institute and/or the experience of the TRTA consultants from other similar projects. All costs were discussed with the DEIA Institute, HPMO and IAs.

No.	Item	HPMO	Huangshan	Huizhou	Tunxi	She	Yi	Xiuning	Qimen	Total Cost
C1	Procurement and contract management - emphasize EMP implementation	9.6	/	/	/	/	/	/	/	/
C2	EMP implementation	9.6	/	/	/	/	/	/	/	/
C3	GRM	9.6	/	/	/	/	/	/	/	/
C4	WWTS - operation and env. management	7.2	/	/	/	/	/	/	/	/
C5	Green agriculture - env. management	7.2	/	/	/	/	/	/	/	/
	Subtotal	43.2	/	/	/	/	/	/	/	/
	Grand Total (x10,000 CNY)	126.2	198.8	331.4	271.4	795.7	173.1	591.7	249.7	2694.9
	Total x10,000 EURO (1 EURO=7.6576 CNY)	16.5	26.0	43.3	35.4	103.9	22.6	77.3	32.6	351.9
	Proportion of total (%)	4.68%	7.38%	12.30%	10.07%	29.53%	6.42%	21.96%	9.27%	100.00%

CSC = construction supervision company, DI = design institute, EA = executing agency, EEB = ecology and environment bureau, EMA = Environmental Monitoring Agency, IA = implementing agency, LIEC = loan implementation environment consultant, HPMO = Huangshan Municipal project management office, WWTS = wastewater treatment station.

^aCostings were based on the following assumptions: (i) a construction duration for each project site of 1.5 years; (ii) a construction season of 6 months per year; and (iii) an operational duration of one year (first year of operation).

I. Mechanisms for Feedback and Adjustment

26. Based on environmental inspection and monitoring reports, the HPMO and IAs shall decide, in consultation with the LIEC, whether (i) further mitigation measures are required as corrective actions, or (ii) some 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 and/or ESMS will be made, if necessary. The HPMO Environmental Officer and the LIEC will play critical roles in the feedback and adjustment mechanism.

27. If during inspection and monitoring, substantial deviation from the EMP and/or ESMS 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 HPMO and IAs will immediately consult with ADB and form an environmental assessment team to conduct additional environmental assessment. If necessary, further public consultation will be undertaken. The revised DEIAs and project IEE, including this EMP and/or ESMS, will be submitted to the ADB for review, appraisal, and public disclosure. The revised EMP and/or ESMS as relevant will be passed to the contractors, CSCs and operators of project facilities for implementation.

APPENDIX EMP-1. DRAFT TERMS OF REFERENCE FOR ENVIRONMENTAL POSITIONS

1. HUANGSHAN MUNICIPAL PMO ENVIRONMENT OFFICER

A. Background

1. Development projects supported by the Asian Development Bank (ADB) routinely include a project management office (PMO). For this project, the Huangshan Municipal PMO is responsible for project implementation and comprises the municipal agencies involved in the project. Compliance with the loan and project agreements include implementation of: (i) an environment management plan (EMP), which is prepared as part of the project initial environment examination; and (ii) an environmental and social management system (ESMS). The EMP is the critical guiding document to manage, monitor, and report upon potential project environmental impacts. Implementation of the EMP is a full-time task. The ESMS will be implemented for output 3 of the project. The HPMO environment officer will oversee the implementation of the EMP and ESMS. These terms of reference describe the position requirements.

B. Scope and Duration of Work

2. The officer will work on behalf of the HPMO to implement the project EMP. The officer will report directly to the HPMO. The position is full-time for the entire project duration.

C. Qualifications

3. The officer 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, including specific experience on the management and monitoring of green agriculture projects; (iii) ability to communicate and work effectively with local communities, contractors, and government agencies; (iv) ability to analyze data and prepare technical reports; (v) willingness and health to regularly visit the project construction sites and in different seasons; and (vi) ideally, proficiency in spoken and written English.

D. Detailed Tasks

4. The HPMO Environment Officer will have a detailed understanding of the project EMP and ESMS and supporting documents, including the domestic environmental reports, the project initial environmental examination (IEE), and project environmental assurances. The officer will have the following tasks.

For the EMP

- (i) Assess whether the EMP requires updating due to any changes in project design, which may have occurred after the EMP was prepared.
- (ii) Distribute the Chinese language version of the EMP to all relevant agencies, including the implementing agencies, and municipal agencies for environment protection. This should occur at least 3 months before construction begins.
- (iii) Conduct meetings with agencies as necessary to ensure they understand their specific responsibilities described in the EMP.
- (iv) Ensure that relevant mitigation, monitoring, and reporting measures in the EMP are included in the bidding documents, contracts, and relevant construction plans.
- (v) Confirm that the implementing agencies responsible for the internal environment monitoring described in the EMP understand their tasks and will implement the monitoring in a timely fashion.
- (vi) At least 2 months before construction begins, establish and implement the project grievance redress mechanism (GRM) described in the EMP. This will include: (a) preparation of a simple

table and budget identifying the type, number, and cost of materials needed to inform local communities about the GRM and starting dates and scope of construction; (b) design, prepare, and distribute these materials, and plan and conduct the community meetings; (c) prepare a form to record any public complaints; (d) preparation of a summary table to record all complaints, including dates, issues, and how they were resolved; and (e) ensure that all relevant agencies, including contractors, understand their role in the GRM.

- (vii) Prior to construction, ensure that the implementation agencies and their contractors have informed their personnel, including all construction workers, of the EMP requirements. This will include all mitigation measures relating to impacts to air, water, noise, soil, sensitive sites, ecological values, cultural values, worker and community health and safety, respectful behavior when communicating with local communities, and responding to and reporting any complaints.
- (viii) During project construction, make regular site visits with the loan implementation environment consultant (LIEC) to assess progress, meet with contractors and/or local communities, and assess compliance with the EMP.

For the ESMS

- (ix) Distribute the Chinese language version of the ESMS to all relevant agencies, including HTIC, at least three months before the ADB loan comes into effect.
- (x) Assist HTIC and all other relevant agencies to implement the ESMS.
- (xi) Coordinate and provide support as needed for the HTIC environmental and social officers recruited by the implementing agency for project output 3.
- (xii) Conduct meetings with HTIC and other agencies as necessary to ensure they understand their specific responsibilities described in the ESMS.
- (xiii) Provide training to HTIC, potential equity investment applicants, and other project agencies as necessary to facilitate implementation of the ESMS.
- (xiv) Assist HTIC to ensure that candidate subprojects are correctly categorized and comply with the selection criteria for environment.
- (xv) With the HPMO Social Officer, implement the project grievance redress mechanism (GRM), including: (i) instruct the other project agencies on their responsibilities in the GRM; (ii) establish a simple registry system, to document and track grievances received (including forms to record complaints and how they have been resolved); and (iii) prepare reports on progress of the GRM for inclusion in the semi-annual environmental and social monitoring and progress reports to ADB.
- (xvi) Ensure the officers provide progress reports on a semi-annual basis, in time for consolidation with the overall environment monitoring report to be submitted by HPMO to ADB.

Overall

- (xvii) Ensure that all relevant agencies submit required progress reports and information, including environmental monitoring and reports of any issues or grievances.
- (xviii) Compile, review, and store environmental progress reports from the implementation agencies, records of any grievances, and any other relevant issues. Maintain digital copies of all information. When necessary, enter data into summary tables in digital format (e.g., to transfer records of grievances from hard copy forms). Ensure that all information is stored in the HPMO filing system, backed up, and can be easily retrieved.
- (xix) Prepare semiannual environment progress reports.
- (xx) Work closely with the HPMO, district and county IAs, loan implementation consultants, and other agencies as necessary to conduct these tasks.

E. Reporting Requirements

5. Semiannual environment monitoring reports using the template provided by ADB or a domestic format reviewed and approved by ADB.

F. Logistical Support Provided by the HPMO to the Environment Officer

- (i) Provision of hard and soft copies of the project EMP and ESMS, 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.
- (ii) Vehicle transport, office materials, and other logistical support, as necessary for the officer to visit the project construction sites and local communities, arrange and conduct meetings, and prepare and distribute consultation materials.
- (iii) Overall coordination, including review of the draft semiannual monitoring reports, and final responsibility for submission of the monitoring reports to ADB.

2. HPMO SOCIAL OFFICER (tasks for the ESMS)

I. BACKGROUND

6. Part of the ADB project loan will be on-lent from the government to the Huangshan Trust Investment Company (HTIC) to establish a Green Investment Fund. HTIC will on-lend the funds directly to qualified investees (small and medium-sized enterprises in areas of green farming and ecotourism). To oversee the project implementation, the Huangshan Municipal project management office (HPMO) has been established in the Huangshan Municipal Government. An Environmental and Social Management System (ESMS) has been developed by the government and HTIC. HTIC will establish the ESMS within their business procedures. The ESMS is the key guiding document to assess and manage the potential environmental and social impacts of subprojects. This is the first ESMS to be conducted by the HTIC. The HPMO will appoint or recruit a full-time environmental officer to help implement the project safeguards, including the ESMS. These terms of reference describe the requirements for this position.

II. SCOPE AND DURATION OF WORK

7. The officer will work on behalf of the HPMO with HTIC environmental and social officers, to implement the project ESMS. The officer will report directly to the HPMO. The position is for the overall project duration of 6 years.

III. QUALIFICATIONS

8. The officer will have: (i) an undergraduate degree or higher in applied social science; (ii) at least five years of experience in social management, monitoring, and/or impact assessment; (iii) ability to communicate and work effectively with local communities, contractors, and government agencies; (iv) ability to analyze data and prepare technical reports; (v) willingness and health to regularly visit the subproject sites; and (vi) ideally, proficiency in spoken and written English.

IV. DETAILED TASKS

9. The officer will have a detailed understanding of the ESMS and the supporting documents to be produced (land acquisition/resettlement and ethnic minority people impact checklists, categorization forms, land use rights transfer framework, social and gender action plan). Working closely with the HPMO Environment Officer, HTIC environmental and social officers, and other agencies, the officer will:

- (i) Distribute the Chinese language version of the ESMS to all relevant agencies, including HTIC, at least three months before the ADB loan comes into effect.
- (ii) Assist HTIC and all other relevant agencies to establish and implement the ESMS.
- (iii) Meet with HTIC and other agencies as necessary to ensure they understand their specific responsibilities described in the ESMS.
- (iv) Provide training to HTIC and other project agencies as necessary to implement the ESMS.
- (v) Assist HTIC to ensure that candidate subprojects are correctly categorized and comply with the social selection criteria.
- (vi) With the HPMO Environment Officer, implement the project grievance redress mechanism (GRM), including: (i) instruct the other project agencies on their responsibilities in the GRM; (ii) establish a simple registry system, to document and track grievances received (including forms

to record complaints and how they have been resolved); and (iii) prepare reports on progress of the GRM for inclusion in the semi-annual environmental and social monitoring and progress reports to ADB.

- (vii) Prepare semi-annual social progress reports for the HPMO to submit to ADB.
- (viii) Provide social and gender indicators and targets for the project performance monitoring system.
- (ix) Regularly visit subprojects where there are special social or ethnic issues, impacts or benefits.
- (x) Prepare semi-annual social progress reports, and other ESMS issues that may arise.

V. REPORTING REQUIREMENTS

Semi-annual monitoring reports on the implementation and progress of the ESMS should be submitted to ADB within 1 months after each reporting period, using the template provided by ADB or a domestic format reviewed and approved by ADB.

3. PROJECT IMPLEMENTING AGENCY ENVIRONMENT OFFICERS

A. Background

1. The project will be coordinated by the Huangshan Municipal PMO. Compliance with the loan and project agreements include implementation of: (i) an environment management plan (EMP), which is prepared as part of the project initial environment examination; and (ii) an environmental and social management system (ESMS). The EMP is the critical guiding document to manage, monitor, and report upon potential project environmental impacts. Implementation of the EMP is a full-time task. The ESMS will be implemented for output 3 of the project. Overall coordination of the project EMP is the responsibility of the HPMO environment officer. At the field level, implementation of the EMP will be undertaken by the Project Managers of the implementing agencies in the three districts and four counties. For this purpose, each IA requires a IA Environment Officer.

B. Scope and Duration of Work

2. The seven IA Environment Officers will work on behalf of the IAs to implement the project EMP in Huangshan District, Huizhou District, Tunxi District, She County, Yi County, Xiuning County and Qimen County, respectively. The officers will report directly to each of their IA managers and work closely with the district or county environment protection bureaus (EEBs), environment monitoring agencies (EMAs), and HPMO Environment Officer. The positions are for the entire project duration (6 years).

C. Qualifications

3. The officers will have: (i) a bachelor degree in environmental management or related field, and/or equivalent experience; (ii) at least 5 years of experience in environmental management, monitoring, and/or impact assessment, including specific experience on the management and monitoring of green agriculture projects; (iii) ability to communicate and work effectively with local communities, contractors, and government agencies; (iv) ability to analyze data and prepare technical reports; and (v) willingness and health to regularly visit the project construction sites and in different seasons.

D. Detailed Tasks

4. The IA Environment Officers will have a detailed understanding of the project EMP and supporting documents, including the domestic environmental reports, project IEE, and project environmental assurances. The officers will have the following tasks.

For the EMP

- (i) Work closely with the HPMO Environment Officer, EEB, environment monitoring agency, contractors, construction supervision companies, and all other relevant agencies to implement the EMP.
- (ii) Distribute the Chinese language version of the EMP to all relevant agencies, including the implementing agencies, municipal agencies for environment protection. This should occur at least 3 months before construction begins.
- (iii) Conduct meetings with agencies as necessary to ensure they understand their specific responsibilities described in the EMP.
- (iv) Ensure that contractors implement the relevant mitigation measures in the EMP.
- (v) Implement the monitoring and reporting requirements in the EMP, including timely submission of progress reports to the HPMO Environment Officer.
- (vi) Implement the project GRM.
- (vii) Make regular inspections of construction sites to assess progress, meet with contractors and/or local communities, and assess compliance with the EMP.
- (viii) Maintain digital records of all progress and information.

For the ESMS

- (xxi) Coordinate and provide support as needed for the ESMS environmental and social officers recruited by the implementing agency for project output 3.
- (xxii) Ensure the officers provide progress reports on a semi-annual basis, in time for consolidation with the overall environment monitoring report to be submitted by HPMO to ADB.

Overall

- (ix) Support the HPMO environment officer in all their tasks.

E. Reporting Requirements

- 5. Monthly reports to the HPMO Environment Officer.

4. LOAN IMPLEMENTATION ENVIRONMENTAL CONSULTANT

A. Background

1. The project will be coordinated by the Huangshan Municipal PMO, whose overall responsibility includes implementation of the project EMP. At the field level, the project will be implemented by IAs in the three districts and four counties. The HPMO and IAs will be assisted by a loan implementation consultant team. The loan implementation environmental consultant (LIEC) will be a part of this team and will support the HPMO and IAs to implement the project EMP and oversee the environmental and social management system (ESMS).

B. Scope and Duration of Work

2. This position could be a firm or an individual engaged by the HPMO. It is an independent position. It is not part of the HPMO in-house environmental team or the implementing agencies. The specialist will report directly to the HPMO. The position will be spread over the entire project duration of 6 years of construction. The LIEC should be recruited as soon as possible after loan effectiveness, as the first task is to confirm project environmental readiness.

C. Qualifications

3. 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 green agriculture 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.

D. Tasks

4. Working closely with the HPMO and HPMO Environmental Officers, the LIEC will do the following.

For the EMP

5. 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 HPMO and IAs to implement the 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 HPMO, implementing agencies, and contractors on the specific requirements of the EMP as required.

6. During project implementation:

- (i) Undertake site visits to all implementing agencies during subproject construction and operating phase.
- (ii) Assist in the ongoing public consultation process as described in the project IEE.
- (iii) Conduct EMP compliance assessments, identify any environment-related implementation issues, and propose necessary responses in corrective action plans.
- (iv) Undertake training of project agencies as required by the EMP training plan.
- (v) 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 dust (during the pipe trenches construction), using a basic hand-held meter

For the ESMS

- (vi) Support the HPMO environment officer and the ESMS environmental and social officers to oversee implementation of the ESMS.
- (vii) Ensure that the steps of the ESMS are incorporated into the business procedures of HTIC.
- (viii) Deliver training in (i) ESMS procedures for screening, categorizing and assessing environmental impact; (ii) the setting and monitoring of environmental safeguards in loan conditions; and (iii) ESMS record-keeping and reporting.
- (ix) Assist HTIC to establish and publicize the grievance redress mechanism (GRM) for subprojects, ensuring that the GRM publicity is appropriate to the scale and complexity of the subproject and includes, as a minimum, the disclosure of all contact persons for lodging complaints.
- (x) Review the operation of the GRM for a range of subprojects and locations and make revisions to GRM procedures as required.
- (xi) Conduct regular checks on ESMS compliance by HTIC: review ESMS workbooks, undertake site visits as required, identify problems, and propose necessary corrective action.
- (xii) Assist the HPMO to prepare semi-annual project monitoring progress reports for submission to

ADB within 1 months after each reporting period.

Overall

- (xiii) Assist the HPMO to prepare semiannual environmental monitoring progress reports for submission to ADB.
- (xiv) Work closely with the HPMO, district and county IAs, loan implementation consultants, and other agencies as necessary to conduct these tasks.

5. LOAN IMPLEMENTATION SOCIAL CONSULTANT

I. BACKGROUND

The Huangshan Municipal Government will apply a \$100 million loan from Asian Development Bank (ADB) to implement the Anhui Huangshan Xin'an River Ecological Protection and Green Development Project. Overall project implementation will be coordinated by the Huangshan Municipal project management office (HPMO). Of the loan, \$8 million will be on-lent to the Huangshan Trust Investment Company (HTIC), to establish a Green Investment Fund with an amount of CNY100 million. HTIC will on-lend the funds directly to qualified investees (small and medium-sized enterprises in green farming and ecotourism). An Environmental and Social Management System (ESMS) has been developed to regulate safeguards for the Green Investment Fund and will be established by HTIC within their business procedures. The ESMS is the key guiding document to assess and manage the potential environmental and social impacts of subprojects. This is the first ESMS to be conducted by the HTIC. HTIC will appoint or recruit specific staff to be responsible for implementing the ESMS. The HPMO will recruit a loan implementation social consultant (LISC) to help implement the ESMS. These terms of reference describe the requirements for the LISC.

II. SCOPE AND DURATION OF WORK

External position recruited as an individual or through a firm. The specialist will report directly to the HPMO. Duration: at least 10 person-months, within the first 48 months of project implementation.

III. QUALIFICATIONS

The specialist will have: (i) an undergraduate degree or higher in social, gender, or related field; (ii) at least 10 years of experience in social management, monitoring, and/or impact assessment; (iii) familiarity with ADB Project management requirements and national social 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.

IV. TASKS

Working closely with the HPMO Social Officer, HTIC Social Officer and other relevant personnel and agencies, the consultant will assist in all aspects of the implementation of the ESMS. The consultant will:

1. Ensure that the steps of the ESMS are incorporated into the business procedures of the HTIC.
2. Deliver training in (i) ESMS procedures for screening, categorizing and assessing social impacts; (ii) the setting and monitoring of social safeguards in loan conditions; and (iii) ESMS record-keeping and reporting.
3. Assist HTIC to establish and publicize the grievance redress mechanism (GRM) for subprojects, ensuring that the GRM publicity is appropriate to the scale and complexity of the subproject and includes, as a minimum, the disclosure of all contact persons for lodging complaints.
4. Review the operation of the GRM for a range of subprojects and locations and revise GRM procedures as required.
5. Conduct regular checks on ESMS compliance by HTIC: review ESMS workbooks, undertake site visits as required, identify problems, and propose necessary corrective action.

6. Assist the HPMO to prepare semi-annual project monitoring progress reports for submission to ADB within 1 months after each reporting period.

V. REPORTING REQUIREMENTS

Assist the HPMO and HTIC to prepare their safeguard reporting requirements.

APPENDIX EMP-2: RESTRICTED-USE PESTICIDES IN THE PEOPLE'S REPUBLIC OF CHINA

Pesticide use in the PRC is guided by a wide range of regulations. Key regulations and sources are as follows.

Directory for restricted use pesticides (2017) issued by the former Ministry of Agriculture (MoA); now the Ministry of Agriculture and Rural Affairs:

Order 2567 of former MoA issued in August 2017: http://www.moa.gov.cn/govpublic/ZZYGLS/201709/t20170911_5810706.htm

Prohibited pesticides in China which are issued in different orders from the Ministry of Agriculture and Rural Affairs and former Ministry of Agriculture (MoA):

Order 194 of former MoA issued in April 2002 : http://jiuban.moa.gov.cn/zwlrm/tzgg/gg/200210/t20021016_14307.htm

Order 199 of former MoA issued in June 2002 : http://jiuban.moa.gov.cn/zwlrm/tzgg/gg/200210/t20021016_14307.htm

Order 274 of former MoA issued in April 2003 : The link is missing in MoA's website.

Order 322 of former MoA issued in December 2003: The link is missing in MoA's website.

Order 747 of former MoA issued in November 2006: http://jiuban.moa.gov.cn/zwlrm/tzgg/gg/200612/t20061213_739003.htm

Order 1157 of former MoA issued in February 2009: http://jiuban.moa.gov.cn/zwlrm/tzgg/gg/200902/t20090227_1226994.htm

Order 1586 of former MoA issued in July 2011: http://jiuban.moa.gov.cn/zwlrm/tzgg/gg/201107/t20110705_2045813.htm

Order 2032 of former MoA issued in December 2013: http://www.moa.gov.cn/govpublic/ZZYGLS/201312/t20131219_3718683.htm

Order 2289 of former MoA issued in August 2015: http://www.moa.gov.cn/govpublic/ZZYGLS/201508/t20150825_4803203.htm

Order 2445 of former MoA issued in September 2016: http://jiuban.moa.gov.cn/zwlrm/tzgg/gg/201609/t20160913_5273423.htm

Order 2552 of former MoA issued in September 2017: http://www.moa.gov.cn/govpublic/ZZYGLS/201707/t20170721_5757240.htm

APPENDIX 4-A: POTENTIAL SUBPROJECT LIST

No	Investee	Proposed equity financing	Subproject Name	Project Description
1	Liubaili Monkey Tea Company	40 million CNY	Liubaili Organic Tea Farming Promotion Project	1. Expand organic tea farming production 2. Promote eco-tourism through nature tea garden and green tea culture
2	Younong Organic Agricultural Farming	40 million CNY	Younong Organic Grain&Oil Farming Promotion Project	1. Expand organic rice and rapeseed farming production of 6700 ha 2. Building 5 service centers to provide organic farming services
3	Huangshan Shanshui Rural Development Company	60 million CNY	Shanshui Rural Development Project	1. Rural village environment improvement, including solid waste management, water resource rehabilitation and non-point source pollution control. 2. Establish organic agricultural base 3. Promote eco-tourism in the villages with revitalized environment.
4	Huangshan Huixiang Rural Development Company	60 million CNY	Huixiang Beautiful Village Demonstration Project	1. Rural village environment improvement, including solid waste management, water resource rehabilitation and non-point source pollution control. 2. Promote eco-tourism in the villages with revitalized environment.

APPENDIX 4-B: DRAFT TERM SHEETS

Partners: Huangshan Trust Investment Company (HTIC) will be the Limited Partner (LP) and its subsidiary Huangshan Xintou Investment Company (HXIC) will be General Partner (GP).

Fund structure: Limited Liability Partnership

Fund manager and General Partner: Huangshan Xintou Investment Company, subsidiary of HTIC, will be the Fund Manager and GP.

Target fund size: The initial fund size is 200 million CNY. Commitment from HTIC including 100 million CNY from ADB loan, 50 million CNY from KfW loan and 50 million CNY from Xin'an River Eco-compensation Fund.

Investment period: The initial fund is expected to be fully utilized within 5 years from the launch date of the Fund.

Reinvestment: Funds are reinvested provided that GIF maintain sufficient levels of liquidity to meet HTIC's debt service obligations to HMG (for ADB/KfW loans) and Eco-compensation fund, and as approved by Investment Decision Committee.

External investors: Parallel LPs can potentially be set up by the Fund to attract commitment from external investors. The fund-setup is based on market practice. The fund-setup might allow e.g. private investors to gain additional return in the return-waterfall within the hurdle rate (see Payments), to cater for their relatively higher cost of capital.

Final Repayment Date: All investments must be liquidated, and money paid as provided in "Payments," below, by the 25th anniversary of the Fund's launch date unless the Partners agree to an extension.

Investment profile: The fund will provide equity investment to companies targeting ecological agriculture, green and environmental protection and eco-tourism. Financing provided to a company will be of no one more than 30% of the fund size. Equity finance from the fund to a company cannot exceed more 50% of a company's total equity. Tenure of financing is expected of averagely 4-7 years.

Investment restrictions: Financing from the Fund must be provided for the purpose of ecological protection and/or green economic development. GIF may not finance companies in which HTIC has an interest. All companies receiving finance will be required to comply with ADB environmental, social, integrity and other requirements and to report on their compliance.

Governance: GIF will have an Investment Decision Committee (IDC) of five persons: 2 representatives from the HPMO, 2 representatives of the Xin'an River Ecological Compensation Fund, and 1 representative of HXIC, the fund manager. An Investor Board will be established with other Limited Partners committing capital to GIF. Decisions will require the affirmative vote of five IDC members. Limited partners may attend investment committee meetings as non-voting participants. GIF will be audited annually in accordance with ADB requirements.

Repayment dates: _____ in each year.

Payments:

Interest, dividends, and other returns to the Fund in excess of equity investment amount will be applied: 1st to pay any taxes owing by the Fund; 2nd to pay the costs incurred in respect of any third-party consultants or experts engaged by HXIC; 3rd to pay HXIC's Fees; 4th to HTIC, HXIC and any other investors in proportion to their respective investments.

Returns of its equity investment received by the Fund that are not reinvested within 6 months after receipt and returns of principal received by the Fund after the end of the reinvestment period will be applied: to HTIC, to HXIC and any other partner of the GIF until they have been repaid their contribution in full.

Amounts received by the Fund in excess of the amounts specified in the preceding paragraphs will be paid, after paying any taxes, consulting and experts' costs and HXIC's Fees, the HTIC, HXIC, and any other investors until they to the HTIC, HXIC, and other investors in proportion to their respective contributed amounts.

Fund Manager Fees: The fund manager fee is at 3%. Expenses to be borne by HXIC/GP include: Establishment of GIF; Operation of GIF including due diligence of financing opportunities including related fees e.g. for legal and auditing services, administration of finance provided, divestment; termination of GIF. External cost related to equity investments, e.g. for legal and auditing services, can be held by the individual investment, in agreement with the Investment Decision Committee.

Calls on investor commitments: HXIC require investors to provide money to the Fund, in proportion to their commitments to the Fund and in no event in excess of their respective total commitments, only as and when investments have been approved by the investment committee. HXIC will give investors not less than 30 days' notice to provide money to the Fund, specifying the date by which money must be provided. HXIC will not require money to be provided more than 30 business days before it reasonably expects to provide the money to an investee.

Temporary placement of funds: All money temporarily held by the Fund will be held in an interest-bearing bank account at (X) bank or money market product issued by (X) bank that provides entrusted bank services for the Fund, and interest will be paid out as describe in "Payments."

APPENDIX 4-C: SUBPROJECT SELECTION CRITERIA

Selection Criteria for Subprojects and Investees

HXIC will review the candidate subprojects and respective investees, and conduct due diligence on them. The subprojects and investees supported by the GIF must meet the technical, financial, economic, environmental, and social criteria below as well as the criteria in the Loan Agreement and the Project Agreement and elsewhere in this project administration manual (PAM). The subprojects must focus on the following sectors: ecological agriculture, ecotourism, and pollution control. Selected subprojects must provide adequate financial returns to the investor and substantial benefits to the economy, society, and environment. The following criteria will apply.

Technical Criteria

All subprojects must meet the following technical criteria:

- (i) All subprojects should result in net benefits achieved within at least one of the following green eligibility criteria without imposing adverse impact on the other criteria: Pollution Source Control (a. reduction of pollutants discharged to water bodies; b. reduction of chemical, fertilizer, pesticides to farmland); Green Economy Development (c. farmland turned into green farming; d. jobs added in the green economy e. additional green/ECO tourist attracted to Huangshan); Climate Change Adaptation/Mitigation (f. land made more resilient to climate change; infrastructure made more resilient to climate change; reduction of GHG); or others which may be approved by Asian Development Bank (ADB).
- (ii) Baseline for benefits to be achieved shall be established before the subprojects are implemented. Benefits produced by the subproject after implementation shall be monitored and recorded.
- (iii) Preference shall be given to subprojects with lowest unit "pollution discharged to water bodies" reduction cost (\$/ton).
- (iv) All subprojects must use commercially available technologies/techniques with reliable, measurable, and verifiable results that will contribute to the benefits achieved from the subprojects.
- (v) All subprojects must not be on the government's overcapacity list.
- (vi) Any proposed technologies to be used shall be the advanced available technologies where feasible.
- (vii) All subprojects shall comply with the industry policies of the subproject's location. Preference will be given to subprojects that belong to the encouraged and prioritized sectors of the national/local government's list/plan, local key supported projects or pilot project identified by the national/local government.
- (viii) All subprojects shall contribute to at least one of the output indicators set in the Project's design and monitoring framework; and
- (ix) All subprojects must be located geographically in Huangshan Municipality.

Financial Criteria

All subprojects must be financially viable. The financial internal rate of return shall be greater than the cost of capital. The financial internal rate return should also exceed the cost of capital under several plausible adverse scenarios.

All investees must be financially creditworthy and do not have a poor credit record. The investee must contribute a minimum of 20% of the total subproject investment cost as counterpart financing.

Subprojects Environmental and Social Safeguards Criteria

All subproject must meet the following criteria:

- (i) Each subproject shall meet requirements of the environmental and social management system developed for the Project.
- (ii) The subproject shall not have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. Environment Category A subprojects, and Category A and B on resettlement and indigenous peoples, within the meaning of the SPS, will be excluded from the Project.
- (iii) Social assessment shall be prepared for all subprojects, including identifying social benefits and respective beneficiaries including women, the poor, and low-income people.
- (iv) Each subproject must acquire proper approvals from relevant national, provincial, and local authorities.
- (v) The subproject must not be located in any designated environmental protection zone, ecological sensitive area, or cultural heritage site.
- (vi) Each subproject must be designed, constructed, and operated in accordance with relevant national and provincial social and environmental laws and regulations.
- (vii) The subproject must not involve any land acquisition or housing demolition.³⁹
- (viii) The subproject must not have any negative impacts on ethnic minorities.⁴⁰
- (ix) The subprojects must not support enterprises which have activities involving commercial development of cultural resources of Indigenous Peoples without their consent for the commercialization of such resources.
- (x) The subprojects shall not result in labor retrenchment or labor redundancies.

In the event that a potential subproject has good pollution reduction potential, but does not meet one or more of these criteria, HXIC may consider and recommend it to ADB, in which case ADB will review and may approve or disapprove in its discretion.⁴¹

Criteria for Investment and Investees

The investment focus will be on small- and medium-sized enterprises in Huangshan, which need capital for continuous growth, scaling up, corporate acquisitions, particularly for enhancing the environmental sustainability of the company's operations. Capital from the GIF for equity investment must be to an investee who will undertake a qualified subproject and may not be used to purchase equity interests from existing investors.

Minimum Due Diligence Requirements. The due diligence for all investments shall at least comprise, but not be limited to, the following:

- (i) A detailed appraisal and assessment of business and financial risks of the

³⁹ The investment proposal will be screened through an involuntary resettlement impact screening checklist which is included in an Appendix of the Environmental and Social Management System (ESMS) in accordance with procedures contained in the project's ESMS.

⁴⁰ The subproject proposal will be screened through an ethnic minorities impact screening checklist.

⁴¹ Process for changes into the selection criteria for any subproject should follow ADB's Project Administration Instructions (PAI 5.02).

- eligible investee.
- (ii) A detailed appraisal and assessment of key technology and growth potential of the eligible investee.
- (iii) A detailed appraisal and assessment of the eligible investee's management team; including its relevant experiences, expertise, management culture, attitude to risk, and psychology.
- (iv) A detailed review, identification, and assessment of feasibility of identified exit routes. In case of a support to a project with an agreed put option, the Fund should obtain a legal opinion of the possibility to execute the put.
- (v) A detailed corporate governance assessment and integrity due diligence covering anti-money laundering compliance to match the requirements of national law and regulations as well as international standards at operational level.

Investment criteria. All equity investments must be in investees that:

- (vi) Conduct businesses with environmental/social return, which can also generate an enhanced financial return; and
- (vii) The subproject exit horizon does not exceed 7 years.

Subproject requirement. Equity Investment must meet the following requirements:

- (viii) Investments will be in companies at growth or expansion stage which need capital to enable significant and strategic expansion where "growth stage" refers to consistent source of income and regularly taking on new customers with profit improving, and "expansion stage" refers to rapid growth in both revenue and cash flow.
- (ix) The investee must have good growth potential with feasible technology/business model.
- (x) The investee should be ready for fast growth or further scaling up of production.
- (xi) Investments will be made in an amount not greater than 30% of the Fund commitments (CNY60 million). Investments will not be of more than 50% of the total equity of the investee.
- (xii) The target return of equity must be greater than the cost of capital.

APPENDIX 4-D: SAMPLE STATEMENT OF UTILIZATION OF FUNDS

	201x	Cumulative
A. Opening cash balance	<u> x </u>	<u> xx </u>
B. Sources of funds		
1 ADB loan proceeds	xx	xx
2 KfW loan proceeds		xx
3 Return (from previous equity		xx
4 Own funds	xx	xx
5 Others	<u> </u>	<u> xx </u>
Total (sum 1 to 5)	<u> x </u>	<u> xx </u>
C. Uses of funds		
1 Equity investments to qualified enterprises (EI 1)		
ADB share	xx	xx
KfW share	xx	xx
Own share	xx	xx
2 Equity investments to qualified enterprises (EI 2)		
ADB share		xx
KfW share	xx	xx
Own share	<u> </u>	<u> xx </u>
Total (sum 1 to 2)	<u> x </u>	<u> xx </u>
D. Net cash activity (B - C)	<u> x </u>	<u> xx </u>
E. Ending cash balance (A + D)	<u> xx </u>	<u> xx </u>

NOTES: Include basis of preparation, reporting currency, undrawn external assistance, and details of subloans such as amounts committed, disbursed up to the previous year, disbursed during the current reporting period, cumulative disbursement, undisbursed commitments, percentage of loan utilized, etc.

APPENDIX 4-E: PROCUREMENT MANNUAL

A. Introduction

1. This procurement manual is prepared to regulate the procurement activities of the Green Investment Fund component in the Anhui Huangshan Xin'an River Ecological Protection and Green Development Project, which will utilize an Asian Development Bank (ADB) loan. ADB expects that for the GIF, the procurement is undertaken by the respective loan beneficiaries in accordance with established private sector or commercial practices, and which are acceptable to ADB.

2. First objective of the manual is to draw attention to Qualified Investees that they have the responsibility to ensure the procurement activities they undertake to implement their Subprojects must:

- (i) Comply with any relevant laws and regulations of the People's Republic of China (PRC) and the municipal or provincial governments in the greater Huangshan area where the project is located and
- (ii) Adhere to procurement principles and guidance determined by ADB to be applicable to this GIF project.

3. Second objective of the manual is to offer specific guidance on how procurement activities can be undertaken that will ensure compliance with ADB principles and regulations.

4. It is not appropriate for this ADB manual to offer specific advice on compliance with the specific requirements of the PRC and local governments' laws and regulations. Such legal compliance is the responsibility of invest companies and applies not just to procurement activities but is an all-embracing responsibility they have in how they conduct to all their business activities.

5. Notwithstanding the above statement, all the guidance provided in this manual is considered to be compatible with current applicable PRC law—and specifically the PRC Tendering and Bidding Law 1999 (effective from 1 Jan 2000), the scope and applicability of which includes all investment projects that utilize foreign capital funds. Qualified Investees should therefore ensure that their procurement staff are familiar with the requirements of this law and its applicable regulations, in addition to being provided with this procurement manual.

6. It is also not the intention of this manual to force changes in the procurement procedures of the investees where they already substantially comply with required ADB procurement principles. However, it is expected that the investees will review their own procurement procedures using the contents of this manual as a guide and adjust their procedures to ensure the required substantial compliance.

7. The contents of this procurement manual will be kept under review during project implementation and can be revised at any time according to the project requirements, or changes in applicable laws and regulations. Any changes in the manual will be jointly approved by HMG and ADB.

B. Procurement Objectives

8. The aim of any procurement process is to ensure the resulting procurement provides the purchaser with goods, works or services that:

- (i) Are fit for the intended purpose—i.e., they meet required quality, durability and performance criteria;
- (ii) Provide value for money to the purchaser; and
- (iii) Are procured in a timely and efficient manner.

9. These objectives are wholly compatible with best commercial practice and endorsed by ADB. However, the objectives are not mutually exclusive, and they can conflict to a degree. For example, sophisticated procurement procedures may well be justified for large scale or technically complex procurement but would not be justified on efficiency grounds for simpler small-scale procurement. ADB procurement regulations and commercial best practice procurement regulations recognize the need for an efficient procurement process by providing simpler procedures for small-scale procurement.

10. Another crosscutting objective of any procurement process is to adequately safeguard investees against the risks of corruption and fraud that could damage the level of subproject performance (as measured in financial terms and/or energy/emissions savings), and potentially the competitiveness of the entire business.

C. ADB Core Procurement Principles

11. The specific procurement rules and procedures to be applied in implementation of a project depend on the circumstances of the particular case, but the following six core procurement principles (“Core Procurement Principles”) guide ADB requirements:

12. Economy. The principle of economy means taking into account factors such as price, quality, and any nonprice attributes, as appropriate, without adversely affecting the viability of the project.

13. Efficiency. The principle of efficiency ensures that procurement processes are proportional to the value and risks of the required outcome and underlying project activities, taking into account implementation capacity, time constraints, and cost-effectiveness.

14. Fairness. The principle of fairness means (a) equal opportunity for and treatment of eligible bidders; (b) equitable distribution of rights and obligations between borrowers and bidders; and (c) credible mechanisms for addressing procurement-related complaints and providing recourse. ADB encourages open competition as the preferred procurement approach, whenever possible, to maximize fairness of the opportunity to bid.

15. Transparency. The principle of transparency means ensuring, through appropriate documentation and review of activities in the procurement process, that (a) relevant procurement information is made publicly available to interested parties, in a consistent and timely manner, through readily accessible and widely available sources at no (or reasonable) cost; (b) appropriate reporting of procurement activity; and (c) use of confidentiality provisions in contracts only where justified.

16. Quality. This principle requires that the procurement arrangements⁴ are structured to procure inputs and deliver outputs of appropriate standard in a timely and effective manner to achieve the project outcomes and development objectives, taking into account the context, risk, value, and complexity of procurement.

17. Value for money. This principle enables the borrower to obtain optimal benefits through effective, efficient, and economic use of resources by applying, as appropriate, the Core Procurement Principles and related considerations, which may include life-cycle costs and socioeconomic and environmental development objectives of the borrower. Price alone may not sufficiently represent value for money.

18. It is generally accepted by procurement experts that these principles, if properly applied, will ensure the procurement objectives set out in Section B of this manual are realized by the investees and represent best procurement practice. However, in setting the requirement that “GIF procurement is undertaken by the respective loan beneficiaries in accordance with established private sector or commercial practices, acceptable to ADB,” ADB recognizes that it may be in the interests of commercial borrowers of ADB funds to apply these principles in a more flexible manner than as stipulated in ADB’s detailed procurement regulations that have been designed with public procurement primarily in mind.

D. Specific Guidance on GIF Procurement

19. This section of the manual builds on the earlier content by providing some specific guidance to investee companies. The section first gives guidance on how generally accepted procurement objectives might be best achieved and then considers each of the ADB procurement principles in turn and gives guidance on compliance.

1. Ensuring the Procurement Results are Fit for Purpose

20. For potential suppliers to provide equipment or goods or services that meet the needs of the purchaser, it is vital that purchasers clearly articulate their needs and expectations to those potential suppliers. Therefore, appropriate written information should be provided to potential suppliers. A good written specification of purchaser needs will enhance the prospects for those needs being successfully met and will also provide a basis for any procurement disputes to be adjudged and settled in a fair way.

21. Feasibility study reports will need to be prepared and approved for all the subprojects. These feasibility study reports will document the performance expectations of the Subproject and therefore, it is important that, as a minimum, these expectations are included in relevant procurement specifications.

22. For the procurement of key equipment and/or civil works that are critical to the performance of the subproject then the procurement documentation should include a more detailed design specification. This should be prepared by qualified technical staff in conjunction with procurement staff.

23. For the procurement of services (such as technical support to assist the implementation of the subproject), it is important to ensure the potential service providers are suitably qualified, and that the scope of work and the required outputs/deliverables of the service provider are clearly defined.

2. Achieving Value for Money

24. Value for money (VFM) is normally considered to be achieved if the purchaser feels they have paid a fair price for what they have received. However, some would argue that VFM is only achieved if one pays the lowest available price.

25. In reality, VFM is a more complex concept to assess than simply through a purchase price comparison alone. For example, for an equipment purchase, the costs or downtime for equipment servicing, and the availability of spare parts may be important factors to the purchaser. Additional length of a performance guarantee (over and above anything specified by the purchaser) might also legitimately influence the purchaser to not purchase based on the cheapest price. If VFM is to be assessed on a scientific basis then a risk-based approach over the equipment life cycle should be used, but even then there will be subjectivity over matters

26. such as assessing the level of risk and the value of maintaining a long-lasting and trusted purchaser-supplier relationship.

27. Specific guidance on making VFM judgements is as follows:

(i) Consider what factors will affect the VFM judgement in advance of procurement and where possible include these into the product specification. Also, ask all potential suppliers to provide supplementary information considered relevant to the purchase decision in addition to the basic supply price (e.g., response time to breakdowns, guarantee terms, service frequencies, downtime and costs, delivery periods and costs of spare parts).

(ii) Establish a company procurement committee to evaluate VFM and make procurement decisions as a means of reducing the individual subjectivity in VFM assessments. Ensure that records are kept of decisions made and the reasons for them, so that independent or higher-level reviews can assess their reasonableness.

(iii) Use open procurement (see below) wherever possible so that the lowest available specification compliant price is known thus making the price premium paid for non-quantifiable VFM factors readily identifiable.

(iv) Only use sole supplier purchasing where either (a) an existing competitively let rolling supplier contract already exist, or (b) there has been recent similar procurement made via open procurement, or (c) extenuating circumstances apply that justify short-cutting normal procedures and company standing orders allow for this (note: such a situation under the GIF is extremely unlikely and such short-cutting is normally only justified in response to an emergency).

3. Timeliness and Efficiency of Procurement

28. For the procurement process to operate in a timely and efficient manner, the subproject will need to be planned and budgeted, so procurement activities are carefully scheduled to be compatible with the subproject implementation plan and that financial commitments can be met when due.

29. It follows that procurement plans should (i) be linked to the financial plans, (ii) allow a realistic time for the completion of individual activities, and (iii) as far as possible avoid a "log jam" of activity in the procurement department.

30. Efficiency of procurement will be achieved where (i) companies develop standardized procedures and procurement documentation, (ii) the number of procurement packages are minimized without unduly restricting competitiveness, (iii) adopting simplified procurement procedures for small low value procurement, and (iv) the use of existing rolling annual or multi-year supplies of services and supplies for which a company has a regular demand.

4. Use of Competitive Procurement

31. Effective competition undoubtedly reduces prices by forcing suppliers to innovate and become more efficient. Purchasers will only be able to benefit from reductions that are available if they use procurement procedures based on competitive bidding or shopping.

32. Competitive procurement is most commonly achieved in a project setting through advertising and an open invitation for suppliers to request tender document and submit bids.

33. For some critical and specialist procurement packages a multi-stage procurement process may be advantageous whereby potential suppliers are first invited to pre-qualify by demonstrating they have the required skills and experience. Then all pre-qualified suppliers would be invited to submit bids.

34. Preparing bids for some procurement packages can impose a heavy workload and expense on potential suppliers, and this can discourage some good quality suppliers from bidding if they feel their chance of being successful is low. Purchasers can guard against the risks this situation creates restricting the number of suppliers invited to bid to a small number (typically three to five) of those most qualified to be the supplier.

35. However, before deciding on the detailed procurement procedures to use they should ensure investee companies should consult any applicable government laws and regulations on the procurement methods permissible in specific circumstances. This especially applies to state-owned enterprise (SOE) investee companies who will undoubtedly operate in a more regulated procurement environment than wholly private enterprises.

5. Fairness and Equal Opportunity

36. All eligible bidders should have an equal and fair opportunity. Procurement processes are designed and implemented that avoid preferential or discriminatory measures that might favor or adversely affect certain participants.

37. Fairness and equal opportunity goes hand in hand with procurement procedures that require open competitive bidding. It also goes hand in hand with transparency in procurement (see below).

38. Further measures to promote fairness and equal opportunity include:

- (i) Ensuring that potential suppliers have adequate time to submit bids or expressions of interest (the actual time allowed should depend on the complexity of the procurement and the level of detail requested in bids/expression of interest);
- (ii) The terms of purchase contracts used are equitable to both sides;
- (iii) The purchasing organization has a grievance redress mechanism (GRM) to deal with cases of alleged unfairness, misprocurement, or other abuses. This mechanism should operate so as to be independent of the purchasing function; and
- (iv) Subject only to issues of commercial confidentiality, unsuccessful bidders may request and receive feedback on why they were unsuccessful.

6. Transparency in Procurement

39. Transparency of procurement processes are those governed by clear rules that are easily accessible and can be consistently applied. This will show that the purchaser is fair and provides equal opportunity to all, as evidenced by their open and fair in procurement activity.

40. Transparent procurement involves contract opportunities (procurement plans and individual bid opportunities) being advertised widely, and results are published (or at least made available to the unsuccessful bidders).

- (i) Transparency in procurement has a number of potential benefits to purchasers.
- (ii) Competition is increased.
- (iii) Suppliers can more readily identify the bids most suited to them allowing them to select which bids to make and better tailor bids to meet the purchaser's needs. From the purchaser side this reduces the number of poor quality or unqualified bids and should increase bid quality.
- (iv) They gain a reputation for openness and fairness in how their businesses are operated and if they practise local procurement policies (where allowed by applicable regulations) for the support they provide the local community.
- (v) Open and transparent processes are less susceptible to abuse through fraud and corruption and such abuse is more likely to be detected.

E. Required Organizational Capacity and Arrangements

41. The investee companies need to assess whether or not they possess adequate procurement capacity in terms of:

- (i) functional responsibilities;
- (ii) internal processes;
- (iii) resources and skills;
- (iv) information management; and
- (v) experience and performance.

42. For the selection of qualified investees, ADB has assessed organizational capacity of proposed investee companies. The capacity building suggestions of these assessments may be of guidance to others and can be shared by contacting the Management Company for relevant guidance.

43. If investee companies conclude it is uneconomical to build the required internal procurement capacity then they should consider recruiting the services of a procurement agent to fill the gap.

APPENDIX 4-F: ADB LIST OF PROHIBITED INVESTMENT ACTIVITIES

The use of ADB funds is strictly prohibited for the following activities (ADB Safeguard Policy Statement, 2009).

1. Production or activities involving harmful or exploitative forms of forced labor⁴² or child labor.⁴³
2. Production of or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements or subject to international phase-outs or bans, such as (a) pharmaceuticals,⁴⁴ pesticides, and herbicides,⁴⁵ (b) ozone-depleting substances,⁴⁶ (c) polychlorinated biphenyls⁴⁷ and other hazardous chemicals,⁴⁸ (d) wildlife or wildlife products regulated under the Convention on International Trade in Endangered Species of Wild Fauna and Flora,⁴⁹ and (e) transboundary trade in waste or waste products.⁵⁰
3. Production of or trade in weapons and munitions, including paramilitary materials.
4. Production of or trade in alcoholic beverages, excluding beer and wine.⁵¹
5. Production of or trade in tobacco.
6. Gambling, casinos, and equivalent enterprises.
7. Production of or trade in radioactive materials,⁵² including nuclear reactors and components thereof.
8. Production of, trade in, or use of unbonded asbestos fibers.⁵³ NOTE: see project-specific assurance (ESMS Section VII) for use of asbestos.
9. Commercial logging operations or the purchase of logging equipment for use in primary tropical moist forests or old-growth forests.
10. Marine and coastal fishing practices, such as large-scale pelagic drift net fishing and fine mesh net fishing, harmful to vulnerable and protected species in large numbers and damaging to marine biodiversity and habitats.

⁴² All work or services not voluntarily performed i.e. extracted from individuals under threat of force or penalty.

⁴³ Employment of children whose age is below the host country's statutory minimum age of employment, or, in contravention of International Labor Organization Convention No. 138 "Minimum Age Convention" (www.ilo.org).

⁴⁴ A list of pharmaceutical products subject to phaseouts or bans is available at <http://www.who.int>.

⁴⁵ A list of pesticides and herbicides subject to phaseouts or bans is available at <http://www.pic.int>.

⁴⁶ A list of the chemical compounds that react with and deplete stratospheric ozone resulting in the widely publicized ozone holes is listed in the Montreal Protocol, together with target reduction and phaseout dates. Information is available at <http://www.unep.org/ozone/montreal.shtml>.

⁴⁷ A group of highly toxic chemicals. Likely to be found in oil-filled electrical transformers, capacitors, and switchgear dating from 1950 to 1985.

⁴⁸ A list of hazardous chemicals is available at <http://www.pic.int>.

⁴⁹ A list is available at <http://www.cites.org>.

⁵⁰ As defined by the Basel Convention; see <http://www.basel.int>.

⁵¹ Does not apply to project sponsors who are not "substantially involved" in these activities i.e. the activity concerned is ancillary to a project sponsor's primary operations.

⁵² Does not apply to the purchase of medical equipment, quality control (measurement) equipment, and any equipment for which ADB considers the radioactive source to be trivial and adequately shielded.

⁵³ Does not apply to purchase and use of bonded asbestos cement sheeting where the asbestos content is <20%.

APPENDIX 4-G: TEMPLATE OF SEMI-ANNUAL PROGRESS REPORT

报告期 (Reporting period)		提交日期 (Date of Submission)	
A. 介绍及基础数据 (INTRODUCTION AND BASIC DATA)			
1. 项目基础信息 (Basic Project Information)			
项目号 (Project/Loan Number)	PRC: XXXX		
项目名称 (Project Title)	PRC: Anhui Huangshan Xin'an River Ecological Protection and Green Development Project		
接收人 (Recipient)	People's Republic of PRC		
执行机构 (Executing Agency)	Huangshan Municipal Government (HMG)		
项目办 (Project Management Office)	Huangshan Municipal Project Management Office (HPMO)		
项目汇总表 (Project Summary Cost Estimates) (€ million)			
Item		Amount	
A. Base Cost			
1.			
2.			
3.			
Subtotal (A)			
B. Contingencies			
C. Financial Charges During Implementation			
Total Project Cost			
项目融资计划 (Project Summary Financing Plan)			
Source 资金来源	Amount (€ million) 金额	Share of Total (%) 占比	
Asian Development Bank 亚行			
Ordinary Capital Resources 普通资金来源			
Total Project Cost			
2. 项目批准、生效及关闭日 (Project Approval, Effectiveness and Closing Dates)			
批准日期 (Approval date)		项目实施期限 (原) [Elapsed project period (original)]	
贷款协定、项目协定签字日 (Loan signing date)		关 帐 日 (修 改 后) (Loan closing date) (revised)	
生效日期 (Loan effective date)		项目实施期限 (修改后) [Elapsed project period (revised)]	
关帐日(原定) (Loan closing date) (original)		亚 行 上 次 项 目 检 查 时 间 (Date of last ADB review mission)	

[illegible][illegible]

C. 实施进度 (IMPLEMENTATION PROGRESS)
1. 报告期间项目实施进度情况 (Project Implementation Progress during the Reporting Period by Output)
[_____, (State the progress and achievements in implementation by output since the last progress report.)]
2. 项目实施安排 (Project Implementation Arrangements)
[_____, (State assessment of project implementation arrangements such as establishment, staffing, and funding of the PMO)]
3. 项目进度评价 (Assessment of Project Progress)
(Assess progress in implementing the overall project to date in comparison with the original implementation schedule—quantifiable and monitorable target, (include simple charts such as bar or milestone to illustrate progress, a chart showing actual versus planned expenditure, S-curve graph showing the relationship between physical and financial performance, and actual progress in comparison with the original schedules and budgets, the reference framework or guidelines in calculating the project progress including examples are shown in <i>the project administration memorandum [PAM]</i>) (You can append existing chart/table/graph showing physical and financial progress as appendices, if any.)
4. 评价主要假设条件及风险的有效性 (Assessment of the Validity of Key Assumptions and Risks)
[评价实现量化后的实施目标所设想的主要假设条件及风险的有效性 (Assess the validity and key assumptions and risks in achieving the quantifiable implementation targets)]
5. Progress of Subborrower
6. Effectiveness of GIF RFA and the Facility Account
7. Interest Differential Accumulated and Used, and effectiveness in achieving its targeted objectives
8. Implementation of ESMS
(Include implementation of activities in the environmental management plan under the ESMS for Subprojects)
9. Selection of Subsequent Batches of Subprojects
(Include progress in identifying, screening, assessing, and selection future Subprojects).

D. 项目建设目标 (PROJECT PURPOSES)
1. 建设内容/实施安排状况 (Status of Project Scope/Implementation Arrangements) [_____, (Assess the status of project scope/implementation arrangements compared with those in the project document, and whether major changes have occurred or will need to be made.)]
2. 项目成果实现的可能性及补救措施 (Likelihood of Achievement of the Project Outcomes and Remedial Measures) [_____, (Assess the likelihood that the immediate development objectives (project purpose) will be met in part or in full, and whether remedial measures are required based on the current project scope and implementation arrangements.)]
3. 主要假设和风险变更 (Changes to the Key Assumption and Risks) [_____, (If applicable, assess changes to the key assumptions and risks that affect attainment of the development objectives.)]
4. 其他建设内容 (Other Project Developments) [_____, (If applicable, state any other project developments, including monitoring and reporting on environmental and social requirements that might adversely affect the project's viability or accomplishment of immediate objectives.)]
E. 相关条款的遵从 (COMPLIANCE WITH COVENANTS) [_____(Summarize the status of the borrower's and EA's compliance with key financial, safeguards, and other covenants, particularly, for those covenants on due.)]
F. 主要问题与困难 (MAJOR PROJECT ISSUES AND PROBLEMS) [如适用，请归纳影响或有可能影响项目实施进度、符合各条款要求，及实现即期目标等的主要问题，提出解决这些问题的建议（如变更建设内容、项目实施安排及贷款资金的再分配）] (If applicable, summarize the major problems and issues affecting or likely to affect implementation progress, compliance with covenants, and achievement of immediate development objectives. Recommend actions to overcome these problems and issues (e.g., changes in scope, changes in implementation arrangements, and reallocation of loan proceeds))
G. 下一汇报期工作计划 (WORK PLAN FOR NEXT 6 MONTHS)

H. Status of Compliance with Major Loan and Project Covenants

贷款协定和项目协定中主要条款的遵守情况

Schedule	Paragraph No.	Description	Status	Type

APPENDIX 4-H: EXAMPLE OF LIMITED PARTNERSHIP AGREEMENT

General

According to the *Partnership Enterprise Law of The People's Republic of China* (hereinafter referred to as Partnership Enterprise Law), *Administrative Measures of the People's Republic of China for the Registration of Partnership Enterprises* (hereinafter referred to as Measures on the Registration of Partnership Enterprises) and relevant laws, administrative regulations and rules, it is stipulated that this agreement shall be concluded through the consensus of all partners to jointly establish a limited partnership enterprise. All partners are willing to abide by the relevant laws, regulations and rules of the state, pay taxes according to law. Where the terms of this agreement are inconsistent with laws, administrative regulations and rules, the provisions of laws, administrative regulations and rules shall prevail. This agreement shall become effective after being signed and sealed by all partners. Partners have rights and obligations in accordance with legal requirements and partnership agreements.

The parties have reached the following agreement to abide by:

1. Definition

1.1 Terms

In this Agreement, the following terms have the meanings referred to in this Article, unless the context indicates otherwise:

- 1.1.1 **This Agreement** means the ##### Partnership (Limited Partnership) Limited Partnership Agreement and its amendments or modified versions as approved by due process.
- 1.1.2 **The Partnership Enterprise Law** refers to the Law of the Partnership Enterprise of the People's Republic of China, which was amended at the 23rd meeting of the Standing Committee of the Tenth National People's Congress of the People's Republic of China on August 27, 2006 and effective since June 1st, 2006, including revisions, modifications or re-enactments from time to time prior to the signing of this Agreement.
- 1.1.3 **A Limited Partnership or Partnership Enterprise** refers to ##### partnership (limited partnership) jointly established by the parties to this Agreement in accordance with the Partnership Enterprise Law and relevant laws and regulations and this agreement.
- 1.1.4 **A General Partner or Manager** means an institution that acts as a general partner of the partnership and assumes the management functions of the investment business of the partnership. At the time of signing this agreement, the general partner / manager is Huangshan Xintou Investment Company.
- 1.1.5 **A Limited Partner** is a party that signs this agreement as a "limited partner" and a limited partner who is enlisted by the transfer of a limited partnership interest or the subscription of a limited partnership in a subsequent fundraising.
- 1.1.6 **The Partners**, unless otherwise stated, means the general partner and the limited partner.
- 1.1.7 **The Management Team** refers to the management team of the manager who is stationed in the limited partnership.
- 1.1.8 **Associated persons** means any persons, including those controlled by such persons, those who control such persons and those who are controlled by the same person with such persons. **Control** here refers to the power of one party to dominate the other party's primary business conduct or personal activity, which may be based on equity, voting rights, and other relationships that are generally considered to be dominant.
- 1.1.9 **Management Fee** refers to the payment of the investment management service provided by the third party service agency designated by the administrator and/or the manager from the limited partnership.
- 1.1.10 **Performance Remuneration** refers to the income obtained by the general partner in accordance with Articles 7.3 and 7.4 of this Agreement.
- 1.1.11 **The Limited Partnership Fee** refers to the expenses incurred by the limited

partnership itself, including the fees listed in Article 2.11.1 of this Agreement (including but not limited to management fees).

- 1.1.12 **Manager's fees** are expenses that the Manager shall bear at his own expense, including the fees listed in Section 2.12 of this Agreement.
- 1.1.13 **The Amount of Capital Contribution** is the amount of cash that a partner promises to pay to a limited partnership and is accepted by the general partner.
- 1.1.14 **The Total Amount of Capital Contribution** is the total amount of cash that all partners have promised to pay to the limited partnership and accepted by the general partner.
- 1.1.15 **The Amount of Paid-in Capital** refers to the amount of cash actually paid by the partners to a limited partnership in accordance with the terms of this agreement.
- 1.1.16 **The Total Amount of Paid-in Capital** is the total amount of cash actually paid by the partners to the limited partnership in accordance with the terms of this agreement.
- 1.1.17 **Limited Partnership Interest** refers to the interest of the partner in the limited partnership as agreed in this agreement. For the limited partner, it refers to the share of the property that is held in the limited partnership based on the paid-in capital contribution, including the recovery of the paid-in capital, the right to obtain profit and the rights and related benefits of the legal provisions and the participation/voting rights of the partners conferred by this agreement; for the general partner, in addition to the above-mentioned share of the property based on the paid-in capital contribution, it also includes the execution and management of partnership matters and the associated benefits.
- 1.1.18 **Project Investment** refers to equity investment conducted by the limited partnership.
- 1.1.19 **Portfolio Enterprise** refers to an enterprise in which a limited partnership has invested and holds a share of equity or other property.
- 1.1.20 **Proposed Investment Target Project** refers to the target project that is determined by the general partner investment decision-making team and is proposed to conduct due diligence.
- 1.1.21 **Temporary Investment** refers to fixed income management products, currency funds, wealth management bond funds, cash, notice deposits, bank time deposits and large deposit certificates within one year (including one year), bonds, asset-backed securities, medium-term notes with remaining maturity (or resale period) less than 397 natural days; bond repurchase and central bank notes with a term less than one year; short-term financing bills and other fixed-income financial instruments that are permitted to invest by this limited partnership in the law.
- 1.1.22 **Subsequent Investment** refers to the follow-up capital investment to the invested portfolio enterprise made by the limited partnership, according to the agreements that have been signed before the termination of the investment period.
- 1.1.23 **Investment Cost** refers to the investment capital purchased or invested by the limited partnership and the expenses incurred for the investment (including but not limited to law, audit, evaluation, intermediary fees in the form of financial advisors, but excluding management fees).
- 1.1.24 **Investment Income** refers to the cash received from the sale or disposal of the investment project, or the remaining portion of the dividends, interest and other tax deducted income from the investments. For the sake of clarity, the investments include temporary investments of the limited partnership.
- 1.1.25 **Investment Revenue** refers to the remaining portion of investment income minus investment costs.
- 1.1.26 **Defaulting Partner** means a partner who violates this agreement.
- 1.1.27 **Observant Partner** means a partner who does not have a record of violation of this agreement.
- 1.1.28 **The annual single interest rate of return** refers to the annual rate of return.
- 1.1.29 **CNY**, if the currency is not specifically indicated, refers to CNY.

1.2 Title

The headings of the various parts of this Agreement are for convenience only and the title

should not constitute a definition, limitation or extension of this Agreement and its terms.

2. Limited Partnership

2.1 Establishment/Change

- 2.1.1 The parties agree to jointly establish ##### partnership (limited partnership) in accordance with the Partnership Enterprise Law and the terms and conditions stipulated in this Agreement.
- 2.1.2 The parties agree and undertake that for the purpose of registration/change of registration of the limited partnership, all required documents will be signed and provided, and all necessary procedures will be performed. The date on which the limited partnership obtains the business license is the date on which the limited partnership is established; after the establishment of the limited partnership, each partner shall complete the initial capital contribution of the limited partnership in accordance with the provisions of Annex I of this agreement, and complete the corresponding registration.
- 2.1.3 Before the first change of the limited partnership: If any partner violates the agreement, resulting the limited partnership cannot change the registration. the general partner could directly register the change of the limited partnership only with the observant limited partners. In this case, it is deemed that the defaulting partner will automatically quit this agreement, and no other party of this agreement will be liable for this. The general partner has the right to require the defaulting partner to bear the liability for breach of the agreement on behalf of the observant partner.

2.2 Name

- 2.2.1 The name of the limited partnership is ##### partnership (limited partnership) (subject to the registration).
- 2.2.2 According to the business needs of the limited partnership, the general partner may change the name of the limited partnership after the written consent of all partners, but should notify the limited partners in writing when it's decided to change, and go through the corresponding registration change procedures.

2.3 Main Business Premises

- 2.3.1 The main business place of the limited partnership is [#####] (subject to the registration).
- 2.3.2 According to the business needs of the limited partnership, the general partner may change the main business premises of the limited partnership after the written consent of all partners, and go through the corresponding registration change procedures.

2.4 Purpose

The limited partnership will exploit the advantages of each partner, realize the complementary resources, conduct professional equity investment, maximize the investment value-added of the partnership enterprise, and finally maximize the value of the investments for the partners.

2.5 Business Scope

The business scope of a limited partnership is project investment and investment management. (Subject to the business scope registered at the enterprise registration authority).

2.6 Target Raising Scale

The target raising scale of this limited partnership is XXX million CNY (hereinafter referred to as "target raising scale"), which is subject to the actual raising scale.

2.7 Term of Agreement

- 2.7.1 The duration of a limited partnership is 5 years from the date of the establishment of the limited partnership, divided into investment period and withdrawal period.
- 2.7.2 The investment period is from the date of establishment of the limited partnership to the earlier of the following dates: 1) the date of the full five years from the date of

establishment, or 2) the date on which the total amount of the capital contribution of the limited partnership is completed. After the expiration of the investment period, the limited partner will not be required to fulfil its outstanding investment commitments for investment in the new portfolio business, except for the payment of limited partnership fees and subsequent investments in existing portfolio companies.

2.7.3 The period from the end of the investment period to the expiration of the limited partnership duration is the withdrawal period of the limited partnership. During the withdrawal period, the general partner shall fully realize the investment of the limited partnership to the portfolio company. During the withdrawal period, the limited partnership should not invest in the new portfolio company unless approved by the investment decision-making committee. However, subsequent investment in existing portfolio companies is not subject to this limitation.

2.7.4 According to the business needs of the limited partnership, the partnership company may decide that the withdrawal period of the partnership may be extended by one year and up to two times at a time, but the total duration of the limited partnership is extended to a maximum of seven years.

2.8 Partners

2.8.1 The limited partnership has X partners, including general partner X person(s), limited partner X person(s).

2.8.2 The name and address of X general partner(s) are:

Name/name	Registered address or residence	Business license number
####	####	*****

2.8.3 The name and address of X limited partner(s) are:

Name/name	Registered address or residence	Business license number
####	####	*****

2.9 Partner Register

After the establishment of a limited partnership, the general partner shall place a register of partners in its premise, registering the names of the partners, the domicile, the amount of the capital contribution, the amount of the paid contribution and other information deemed necessary by the general partner, the general partner. The partner register should be updated at any time based on changes in the above information.

2.10 Pledge limit

No partner may pledge, encumbrance or set any third-party rights in its share of the limited partnership.

2.11 Limited Partnership Fee

2.11.1 The expenses to be covered by the limited partnership include the following fees related to the establishment, operation, termination, dissolution, liquidation, etc. of the limited partnership:

- (i). The start-up fee for a limited partnership includes, but is not limited to, the costs associated with the formation and establishment of a limited partnership, including preparation costs, registration fees and consulting fees for legal and accounting professionals;
- (ii). Legal, accounting, auditing, bank custody and other related fees that cannot be provided by the manager to the partnership;
- (iii). All legal, audit, evaluation, financial advisory and other third-party costs

- incurred in the investment, holding, operation, sale of the eligible investee or project that ultimately achieves the investment, which can be borne by the project company or project;
- (iv). Legal, audit, evaluation and other third-party fees incurred for a target project that has been approved by a limited partnership investment decision-making commission but ultimately isn't invested;
 - (v). Taxes and handling fees associated with obtaining, acquiring, holding, selling and otherwise disposing of partnership property;
 - (vi). Unconventional fees such as litigation fees, arbitration fees, and announcement fees related to limited partnership matters;
 - (vii). Financial statements and reporting fees for limited partnerships, including production, printing and delivery costs;
 - (viii). Management fees and custodian fees;
 - (ix). Partner conference meeting fee;
 - (x). Taxes and other fees charged for the proceeds or assets, transaction or operation of a limited partnership by the government;
 - (xi). Limited partnership dissolution and liquidation expenses;
 - (xii). Other expenses that are not included in the above, but generally should not be included in the general partner's daily operation expenses.

2.11.2 Before the establishment of a limited partnership, the start-up fees and other expenses advanced by the general partner, the general partner's shareholders or their affiliates shall be reimbursed or returned by the limited partnership upon payment of the conditions after the establishment of the partnership.

2.11.3 Except as otherwise provided in this Agreement, as a consideration provided by the Manager and/or the third party service agency designated by the Manager to provide management and other services to the limited partnership, the parties agree that the limited partnership shall be directed to the Manager and/or the third party service agency designated by the Manager for the total payment management fee is as follows:

- (i). During the investment period stipulated in this Agreement, the limited partnership pays the management fee at 3% per year of the actual contribution of each partner. The calculation formula for the management fee of each partner is: investment period management fee = partner's paid-in capital contribution × 2% × current management fee calculation days / 365; in the withdrawal period and extension period stipulated in this agreement, the limited partnership does not accrue management fees, the general partner does not charge management fees.
- (ii). If the third-party service agency designated by the administrator and/or the manager proposes a management fee payment plan higher than the above criteria based on a reasonable budget, it can be implemented after the general partner report and get approval in the partner meeting.
- (iii). The management fee is prepaid every twelve (12) months. The first charging period is twelve (12) months from the date of payment of the initial management fee for the limited partnership. In the future, the charging period will be analogized. The first payment date is the "date of arrival" specified in the notice of payment for the first payment of the general partner, and the management fee for each charging period thereafter is within the eleventh (11th) business day of each charging period (in case of legal holidays, advance payment to the most recent working day). For the sake of clarity, the management fee is deducted from the capital contribution of the limited partner, and the limited partner does not need to pay a separate management fee.
- (iv). The exact amount of the management fee for the third party service agency designated by the limited partnership to the manager and/or the manager for the limited time period in the previous charging period shall be settled in

accordance with paragraph (i) of this Article before the tenth working day of each charging period. If the actual payment amount is more than the settlement of the amount payable, the difference will be discounted to the management fee of the next charging period or the capital contribution of the next limited partner. If it cannot be discounted, the manager and/or the administrator shall specify the third-party service agency shall return the difference to the limited partnership.

- 2.11.4 The manager confirms that although the manager has the right to hire a third-party service agency to provide management and other services to the limited partnership and arrange a limited partnership to pay the corresponding management fees, the specific investment decision-making matters of the limited partnership shall be the responsibility of the manager, and shouldn't be entrusted to a third party service agency.

2.12 **Manager fee**

The following expenses incurred by the limited partnership shall be paid by the manager at the management fee:

- 2.12.1 Management team personnel expenses, including salaries, bonuses and benefits;
- 2.12.2 Office rent, property management fees, utilities, communication fees, office facilities (such as office equipment, furniture, vehicles, etc.) related to limited partnerships and managers;
- 2.12.3 Investment decision committee meeting and other meeting fees of the administrator;
- 2.12.4 All reasonable travel expenses and reception fees incurred due to investment, holding, operation and sale of the proposed investment target project or portfolio company;
- 2.12.5 Other daily operating expenses of managers.

Within the amount of the general partner's management fee receivable, the limited partnership directly pays the expenses and deducts the management fees payable to the manager.

3. Funding Method, Amount and Period of Partners

3.1 **Amount of capital contribution**

- 3.1.1 The total amount of capital contribution of all partners in the limited partnership is XXX CNY. The proportion, payment method and deadline of the committed capital contribution of each partner is listed in Annex I.
- 3.1.2 After all partners have completed the first phase of capital contribution or the conditions for the initial funding, the general partner applies to the enterprise registration authority for registration of the limited partnership.
- 3.1.3 The limited partner's paid-in capital contribution shall not be less than XXX 5 million CNY, and the general partner's paid-in capital contribution shall be XXX million CNY.

3.2 **Contribution of Capital**

- 3.2.1 Except as otherwise provided in this Agreement, each partner shall pay the contributions in accordance with the provisions of this Article 3.3.
- 3.2.2 When the general partner requests contribution of the capital, he shall issue a notice of payment to all the partners, stating the proportion of the capital contribution payable by the partner in the period, the amount to be paid and the deadline for payment. On the day of the capital contribution date, each partner shall pay the full amount of the capital contribution to the limited partnership account designated by the general partner as required by the notice. The payment notice shall be issued at least ten working days before the deadline for payment.

- 3.2.3 After the establishment of the limited partnership, the general partner will issue a notice of the first payment to all partners in accordance with the progress of the limited partnership, and require each partner to pay XX% of the committed capital. The initial investment shall be from the limited partnership. It will be in place within one month from the date of establishment. The general partner shall contribute to the second phase according to the operation of the limited partnership (including but not limited to the progress of the limited partnership investment, the investment project situation, the follow-up options, etc.) within five (5) years from the date of establishment of the limited partnership.

3.3 Overdue

- 3.3.1 Except as otherwise provided in this Agreement, if any partner fails to pay the full amount in accordance with Article 3.3 on or before the closing date of the capital contribution, the other observant partners may determine that the partner is a “defaulting partner” and the defaulting partner should bear the responsibility for breach of contract:
- (i). The amount of overdue payment from the next day of receipt will be paid to the observant partners for overdue liquidated damages at a rate of five tenths per day. Next day after deadline, the general partner will issue a written reminder to the defaulting partner. Within ten (10) working days from the date of the notification (hereinafter referred to as the credit period), the defaulting partner shall perform the obligation to pay the contribution and the liquidated damages stipulated in this paragraph.
 - (ii). If the defaulting partner fails to fulfill the obligation to pay the capital during the credit period, the ratio of the liquidated damages will increase to one thousand per day after credit period. Next day after credit period, the general partner may again give the defaulting partner a fifteen (15) working day as grace period and issue a written notice to the defaulting partner. The grace period begins on the expiration of the credit period. During the grace period, the defaulting partner shall fulfill the obligation to pay the contribution and the liquidated damages stipulated in paragraph (i) and (ii) of this article. The general partner may also waive the breach of contract by the defaulting partner in accordance with the terms of the provisions of paragraphs (iv) and (v) of this article.
 - (iii). If the defaulting partner pays all the contributions payable during the credit or grace period but fails to pay all the liquidated damages payable, the general partner has the right to deduct them from the distribution of the defaulting partner.
 - (iv). Responsibilities for all losses caused by the breach of contract to the limited partnership include, but are not limited to: 1) losses suffered by the limited partnership due to failure to meet the investment obligations on time and to the third party; 2) limited The partnership seeks from the defaulting partner the costs of judicial proceedings such as liquidated damages, late fees, etc. and reasonable legal fees.
 - (v). If the defaulting partner fails to fulfill the payment obligation during the credit period, or if the defaulting partner is given a grace period, the defaulting partner fails to fulfill the payment obligation within the grace period:
 - a) The defaulting partner shall not be entitled to pay subsequent contributions as a partner. The defaulting partner shall lose voting rights for all matters agreed by the partners under this agreement and shall not be counted in the voting base (Except conditions stipulated in the Partnership Enterprise Law).
 - b) The general partner has the right to choose to distribute the unpaid contribution of the defaulting partner (hereinafter referred to as “unpaid contribution”) among the observant partners who intend to subscribe, according to their current paid contribution ratio. , or accept a new partner to fulfill the

subsequent funding commitments of the defaulting partner, or reduce the total subscription contribution of the limited partnership accordingly. In any of the above cases, the defaulting partner shall still bear the limited partnership fee (including the management fee) in accordance with the committed capital contribution at the time of signing this agreement during the investment period; The limited partnership fee excluding the management fee corresponding to the capital contribution actually paid by the partner is still borne by the default partner. If implementing this article will cause the amount of capital contribution of defaulting partner or the new partner less than the minimum capital contribution of the limited partner as stipulated in this Agreement, all partners shall confirm and agree it.

- 3.3.2 The liquidated damages and late payment fees agreed in this Article shall be distributed as other income of the limited partnership in accordance with Article 7.4 of this Agreement, and shall not be counted as the capital contribution of the partner who paid the liquidated damages or late payment, nor the base of the distribution of income between a general partner and a limited partner.
- 3.3.3 Except as otherwise provided in this Agreement, for “defaulting partners” under Section 3.3.1, the general partner may decide to take the above measures from the perspective of facilitating the limited partnership, or choose to take the following measures:
- (i). Directly initiate the arbitral procedure to recover from the defaulting partner 1) the amount of the outstanding capital; 2) the overdue default of the unpaid capital from the date of receipt of the account, calculated as five or one thousandth of a day (where applicable); and 3) all costs incurred by the limited partnership for arbitral proceedings and other judicial proceedings, including reasonable attorneys' fees.
 - (ii). The exemption of the defaulting partner includes the payment obligation and rights of all subsequent contributions that have not been paid in the default period, and the exemption is subtracted from the initial total contribution of the limited partnership.
 - (iii). A settlement agreement other than the method of accountability stipulated in this agreement is reached with the defaulting partner for the breach of contract.
 - (iv). For the breach of the limited partner, in accordance with the foregoing procedure, the general partner shall decide and execute the above-mentioned breach of contract clause on behalf of the limited partnership; for the breach of the general partner, in accordance with the foregoing rules, each of the limited partners shall have the right to represent the limited partnership in accordance with the foregoing rules.
- 3.3.4 Upon the agreement of the Partner Conference, the partner may transfer its share of the property in the partnership to other partners, but shall notify the other partners 30 days in advance.

4. Limited partner

4.1 Limited Liability

The limited partner shall bear limited liability subject to the amount of its contribution.

4.2 Authority Limited Partner

- 4.2.1 The limited partner has the right to know about the limited partnership in accordance with this agreement.
- 4.2.2 The limited partners may, in accordance with this agreement, convene, participate in or entrust other partners to participate in the meeting of the partners, and have the right to vote at the meeting of the limited partnership partner.

- 4.2.3 The limited partner has the right to obtain income from the limited partnership in accordance with this agreement.
- 4.2.4 The limited partner has the right to supervise the general partner in accordance with this agreement. Without prejudice to the normal operation of the partnership, the limited partner has the right to know the business status of the partnership, consult the financial information of the partnership account book, and check its implementation of the limited partnership.
- 4.2.5 When a general partner exercises his rights, the limited partner has the right to urge him to exercise his rights; if the limited partnership needs to file a lawsuit or apply to the arbitration institution for arbitration, the limited partner has the right to request the general partner to do it by fax, in writing or in other forms. If the general partner refuses to file a lawsuit or arbitration after receiving the written request, or does not file a lawsuit or arbitration within thirty (30) natural days from the date of receipt of the written request, the limited partner has the right to file a lawsuit or arbitration in its own name for the benefit of a limited partnership.
- 4.2.6 A limited partner does not operate daily business of the limited partnership and may not represent the limited partnership externally. Except as otherwise provided in this Agreement, no limited partner shall participate in the management or control of the investment business of the limited partnership and other transaction business conducted in the name of a limited partnership, or sign documents on behalf of a limited partnership.
- 4.2.7 In the course of the operation of a limited partnership, which may have a significant impact on the interests of the limited partner, the limited partner has the right to take measures to adjust the scale of the investment or to withdraw the partnership to prevent the risk from expanding.
- 4.2.8 The limited partner shall abide by this agreement when exercising the voting rights of the delisting, replacement, and selection of the general partner's rights.
- 4.2.9 There is no limitation for the limited partner to introduce investments to the limited partnership or operate other investment activities.

4.3 **Statement and Guarantee of Limited Partners**

The limited partners hereby promise and guarantee:

- 4.3.1 If it is an institutional investor, it is an entity that is legally established and validly exists;
- 4.3.2 If it is an institutional investor, its signing of this agreement has been effectively resolved and fully authorized in accordance with its internal procedures;
- 4.3.3 The person signing this Agreement is its legally valid representative;
- 4.3.4 Except where it has been expressly disclosed and accepted by the general partner, it holds a limited partnership interest for its own interests, and there is no entrustment, trust or proxy relationship on the interests, and the duration of the limited partnership will not change. All the partners have unanimously confirmed that the asset management institution will invest funds in this limited partnership with the asset management plan issued by it, and does not constitute a violation of the above provisions;
- 4.3.5 It understands the risks that may be incurred by participating in the limited partnership and is capable of undertaking such risks;
- 4.3.6 It decides to participate in this limited partnership based on its own independent will judgment;
- 4.3.7 It has read this Agreement carefully and understands the exact meaning of the terms of this Agreement, and there is no material misunderstanding;
- 4.3.8 The source of funding paid to the limited partnership is legal;
- 4.3.9 All information and materials submitted by the company and its authorized representatives to the limited partnership and the general partner, including information about their subject qualifications and legal status, are true, accurate and complete. If such information changes, it will be timely notified to the general partner.

4.4 **Limited partner withdrawal**

4.4.1 A limited partner may, in accordance with this Agreement, transfer the limited partnership interest it holds to withdraw from the limited partnership. Otherwise, the limited partner may not request the withdrawal of the partnership or the early recovery of the investment principal. If required by the law and regulation, the limited partner should withdrawal from the partnership.

4.4.2 When a limited partner happens in the following situations, he/she can withdraw from the partnership:

- (i). Revoked business license, ordered to close, revoked, or declared bankrupt;
- (ii). The limited partnership interest held is enforced by the court;
- (iii). Other circumstances that are considered to be deemed withdrawal in the Partnership Law.

When a limited partner withdraws from the partnership in accordance with the above-mentioned agreement, the limited partnership shall not be dissolved.

4.4.3 During the duration of the limited partnership, the limited partner may withdrawal when one of the following circumstances occurs:

- (i). The reasons for the withdrawal of the partnership as stipulated in this agreement;
- (ii). With the consent of the general partner;
- (iii). The partner is in serious breach of the obligations set forth in this agreement and is unanimously agreed by the partners other than the defaulting partner.

5. **General partner and manager**

5.1 **Unlimited liability**

The general partner bears unlimited liability for the limited partnership debt.

5.2 **Conditions and selection procedures for executive partner**

5.2.1 The executive partner shall have the following conditions:

- (i). An institution registered in the territory of the People's Republic of China;
- (ii). The limited partners all agree to be accepted as the general partner of the limited partnership.

5.2.2 The executive partner must meet the above term 5.2.1; the signing of this agreement by all partners is deemed to select the general partner as the executive partner of the limited partnership.

5.2.3 [#### company] is the general partner and executive partner. The management and operation rights of a limited partnership and its investments and other activities are exclusively for the general partner (by the general partner directly or through its officially delegated representative). The general partner will lead an investment decision-making committee. The final decision of the investment (and exit) of the limited partnership is made by the investment decision-making committee.

5.3 **Manager and management team**

5.3.1 **Manager.** The general partner is the manager of the partnership. The partnership enterprise will sign an entrusted management agreement with the manager to agree on the rights and duties and obligations of the manager. Notwithstanding the foregoing, managing a limited partnership and conducting a limited partnership is an exclusive duty of the general partner, and the decision to select and dispose of the limited partnership investment project shall be made by the general partner in accordance with the relevant agreement of this agreement.

5.3.2 **Management team.** Managers should, in accordance with international practice,

formulate competitive incentive mechanisms based on the domestic limited partnership market conditions, and recruit management professionals with equity investment experience through market-based methods.

5.4 Duties

5.4.1 The General Partner, as an executive partner, owns the exclusive execution rights of the Limited Partnership as agreed in this Agreement and Partnership Law, including but not limited to:

- (i). Undertaking the investment management decisions of the partnership and the daily management of other businesses;
- (ii). Representing the partnership in the employment of a consultant to provide investment consulting and management services to the partnership;
- (iii). Representing the partnership in the employment of professionals, intermediaries and consultants to provide services to the partnership;
- (iv). Initiating a lawsuit or responding to the interests of the partnership, conducting arbitration; reconciling with the other party to resolve the dispute between the partnership and the third party; taking all possible actions to protect the property security of the partnership and reducing the risks of the partnership, the general partner and its property;
- (v). Representing a partnership to enter into a management agreement and an escrow agreement;
- (vi). Handling tax-related matters of the partnership enterprise in accordance with national tax administration regulations;
- (vii). Managing and maintaining the assets of a limited partnership;
- (viii). Opening, managing and revoking bank accounts and securities accounts of limited partnerships, issuing cheques and other payment vouchers;
- (ix). Taking other actions necessary to achieve the purpose of the partnership, to maintain or to obtain the legitimate rights and interests of the limited partnership;
- (x). Signing the document on behalf of the limited partnership.
- (xi). No transaction may be conducted with this partnership except with the consent of the partner meeting.
- (xii). Regularly reporting to the limited partners on the implementation of the partnership and the operating and financial status of the partnership.

5.4.2 Based on the provisions of Article 5.4.1, all partners hereby specifically agree and authorize the general partner to have the rights to decide on the following matters:

- (i). Appoint or change the representative appointed by the general partner;
- (ii). Confirm the actual contributions of each partner and issue and sign a confirmation of capital contribution;
- (iii). Change the name and premise of the limited partnership;
- (iv). Select and change the custodian institution on the premise that the custodian institution and the escrow agreement are in compliance with applicable laws, regulations and regulatory requirements;
- (v). According to this agreement, the existing limited partners or new limited partners will continue to raise funds until the target raising scale is reached;
- (vi). Whether it agrees to the limited partner's transfer of the equity of the partnership;
- (vii). Whether to agree to the appointment or withdrawal of a limited partner;
- (viii). Within the normal business scope of the partnership, the right to transfer or dispose of the intellectual property, real estate and other property of the partnership is determined, but the rights of this paragraph are limited to the reasonable transfer and disposal of the principal by the general partner for the purpose of the partnership;
- (ix). Modifications to this Agreement that do not affect the substantive content or the wording;

- (x). Dispose the assets held by the limited partnership for various reasons in accordance with this agreement.

5.5 **Breach**

The general partner should seek the best interests for the limited partnership based on the principle of good faith. If the limited partnership loses interest or bears debts or liabilities due to the intentional or gross negligence of the general partner, the general partner shall be liable for compensation.

5.6 **Limitation of liability**

- 5.6.1 The general partner should not be required to return the capital contribution of any limited partner, nor the investment income of the limited partner; all principal return and return on investment should be derived from the available assets of the limited partnership.
- 5.6.2 Unless due to intentional or gross negligence, the general partner and its management team shall not be liable for the loss of the limited partnership, resulting from its act or omission.

5.7 **Disclaimer**

Each partner agrees that the management team and the general partner, the agents and consultants employed by the general partner shall perform their duties to the general partner or the limited partnership and handle the limited partnership entrustment. If the general partner and the above-mentioned persons are subject to any claims, litigation, arbitration, investigation or other legal proceedings for performing their duties or handling the entrusted matters, the limited partnership shall compensate all the losses and expenses incurred by the individual. The compensation shall be derived from the assets available of the limited partnership, unless there is evidence that the loss, expense and related legal proceedings were caused by the intentional or gross negligence of that individual.

5.8 **General partner layoff and replacement**

- 5.8.1 When the general partner fails to perform the capital contribution obligation in accordance with this agreement, or its intentional or gross negligence causes loss to the limited partnership or improper conduct in the execution of the partnership, the limited partner may expel the general partner in accordance with the procedures stipulated in Article 5.8.2.
- 5.8.2 One of the following procedures should be performed to expel the general partner:
 - (i). According to the arbitration procedure stipulated in this agreement, the arbitration institution may decide to expel the general partner as stipulates in Article 5.8.1;
 - (ii). The partner conference made a resolution on the layoff of the general partner.
- 5.8.3 If the partner conference fails to reach a unanimous resolution on the acceptance of the new general partner within 30 days after the layoff resolution, the limited partnership enters the liquidation process.
- 5.8.4 The general partner replacement should perform the following procedures:
 - (i). The partner conference decides to accept the new general partner at the same time as the general partner layoff resolution;
 - (ii). The new general partner signs a written document confirming that it is bound by this agreement and fulfills the duties and obligations of this agreement that should be performed by the general partner.
- 5.8.5 From the date of completion of the procedures described in the Article 5.8.2, the general partner withdraws from the limited partnership, ceases to perform the limited partnership affairs and hands over the limited partnership affairs to the new general partner agreed by the partner conference.

5.9 General partner withdrawal

- 5.9.1 The general partner hereby undertakes that, unless otherwise expressly agreed in this Agreement, the general partner shall perform the duties under this Agreement until the Limited Partnership is dissolved or liquidated in accordance with this Agreement; no withdrawal is required until the Limited Partnership is dissolved or liquidated; it will not take any action to disband or terminate on its own initiative.
- 5.9.2 When the general partner happens in the following situations, it is deemed to withdraw from the partnership:
- (i). Was revoked business license, ordered to close, revoked, or declared bankrupt;
 - (ii). The limited partnership interest held by the court is enforced;
 - (iii). Other circumstances in which the provisions of the Partnerships Law apply to the general partner are considered to be deemed withdrawal.
- 5.9.3 When the general partner withdraws from the partnership in accordance with the above-mentioned agreement, the limited partnership enters the liquidation procedure unless the limited partnership immediately accepts the new general partner.
- 5.9.4 When the general partner has to withdraw due to mismanagement or other reasons, the general partner should pay the limited partnership the costs incurred in replacing the general partner and other economic losses.

6. Investment Business

6.1 Investment objectives

The limited partnership will fully draw on the operating mode of the international mature market equity investment fund, combined with the direction of China's economic development. In principle, the limited partnership will invest in ecological agriculture, environmental protection and eco-tourism during the investment period.

6.2 Investment management

- 6.2.1 The general partner leads an investment decision-making committee, which is the final decision-making body for limited partnership investment. It is responsible for reviewing and making decisions on the investment projects (and their exits) submitted by the investment management team. The investment decision-making committee shall be established exclusively for this limited partnership and shall serve specifically for this limited partnership.
- 6.2.2 In principle, a limited partner does not participate in the daily management and operation of a limited partnership or participate in an investment decision-making committee, but could dock with the day-to-day management of the partnership and recommend investment projects to the partnership.

6.3 Investment restrictions

Except as otherwise provided in this Agreement, this Limited Partnership shall not:

- 6.3.1 Investing in stock trading in the secondary market;
- 6.3.2 Conducting derivative securities trading such as futures trading, options trading, and forward contracts;
- 6.3.3 Providing capital loans and guarantees to the limited partner or third party (except for the provision of investment target projects that can be converted into shares of the company's equity or other assets), or by borrowing liabilities;
- 6.3.4 The cumulative investment amount for a single invested enterprise shall not exceed 30% of the total capital contribution of the limited partnership, except with the consent of the investment decision-making committee;
- 6.3.5 Control of investment in a single invested enterprise, except with the consent of the investment decision-making committee;
- 6.3.6 Investment in real estate and infrastructure development and construction;
- 6.3.7 Investing in industries that do not comply with national industrial policies;
- 6.3.8 The investment does not have stable cash flow return expectations or asset appreciation value, high pollution, high energy consumption, failure to meet national

energy conservation and environmental protection standards, and low technology added value;

6.3.9 Providing loans, sponsorships and donations to anyone (including partners);

6.3.10 Purchase, possession of real estate, intellectual property, etc., property not related to business purposes.

6.3.11 Engaging in investment activities prohibited by laws and regulations.

6.4 Investment exit method

The limited partnership can exit its equity investment through the initial listing, merges, acquisitions, equity repurchase, equity transfer, equity swap and other means. The expiration of the limited partnership shall, in principle, be settled in accordance with Article 14.2 of this Agreement. At the same time, in the case of the expiration of the limited partnership period, the existing funds or newly established funds in Anhui Province may be used to accept and purchase the equity investments that have not yet been withdrawn.

6.5 Cash management

All cash assets of a limited partnership, including but not limited to cash to be invested, to be allocated and expensed, can be managed for liquidity. Idle funds can participate in the financial interbank market business and other low-risk investments. The operational risks are borne by the general partner.

6.6 Prohibition of debt and guarantee

During the operation period of the limited partnership, it is prohibited to borrow debt and engage guarantee business.

7. Capital account, income distribution and loss sharing

7.1 Capital Account

7.1.1 A capital account should be established for each partner in the accounting book of the limited partnership. On the last day of each accounting period, each partner's capital account balance should be adjusted.

7.1.2 The following items should be recorded as an addition to the capital account: 1) the share of the partner in the current limited partnership income; and 2) the amount of capital contributed by the partner during the period.

7.1.3 The following items should be recorded as a deduction for the capital account: 1) the allocated cash drawn by the partner; and 2) the limited partnership loss shared by the partner during the accounting period.

7.1.4 The partner's capital account shall be further adjusted in accordance with other special assignments agreed in this Agreement.

7.2 Principle of income distribution and loss sharing

7.2.1 The investment income obtained from the limited partnership shall be allocated in the order agreed in Article 7.3 of this Agreement.

7.2.2 Non-investment income other than the income from limited partnership investment shall be distributed among the partners in accordance with the relevant agreement in Article 7.4 of this Agreement.

7.2.3 The loss of the limited partnership within the total subscribed capital contribution is shared by all partners on the basis of the subscribed capital contribution, and the loss exceeding the total contribution of the limited partnership is borne by the general partner. The risks arising from the operation of idle funds are borne by the general partner. If the idle fund operation generates a principal loss, the general partner is responsible for making up.

7.2.4 The net profit of the partnership after deducting related costs, expenses, expenses and tax liabilities shall be distributed by all partners in proportion to the actual contribution.

7.2.5 The general partner is responsible for the specific implementation of the limited partnership income distribution. The general partner shall liquidate the investment

income obtained from each proposed investment project and pre-allocate within 30 (30) working days after the completion of the liquidation; account for each non-investment income and pre-allocate it within thirty (30) business after the completion of the accounting.

7.3 Distribution of investment income

During the duration of the limited partnership, the investment income or investment loss obtained by each investment project shall be liquidated. The investment income obtained from each investment project during the duration of the limited partnership shall be distributed in the following order:

- 7.3.1 Firstly, the general partner and the limited partner are returned to the actual contribution amount calculated according to the actual investment contribution ratio, until the general partner and the limited partner obtain the accumulated distribution amount according to item (1) of this article. Recovering their actual contributions to the investment project;
- 7.3.2 If there is a balance, it is distributed at a rate of (XX)% of the limited partners and (XX)% of the general partners.

7.4 Distribution of non-investment income

- 7.4.1 The manager (including his management team) receives the investment management fee, investment termination fee, investment advisory fee, investment termination compensation and other similar forms of expenses due to the investment activities of the limited partnership project (in the case of joint investment, such expenses shall be common Investors are allocated according to the proportion of investment (hereinafter referred to as "cost income"), which is owned by the limited partnership and should be first allocated to the limited partnership account when the cash income is obtained; if the fee income is non-cash such as shares and stock options In the case of asset-based payments, the Manager shall assign the non-cash assets to the Limited Partnership Account on the date they are cashed. The above-mentioned fee income obtained by the limited partnership is first used to offset the expenditure of the limited partnership on the investment plan. (XX)% of the balance should be allocated to the manager, and (XX)% should be distributed among all partners according to the actual amount of contributions.
 - 7.4.2 The liquidated damages and late payment fees paid to the limited partnership due to the overdue payment of the limited partner/asset principals shall be counted as the income of the limited partnership and shall be between all the contracting partners/asset principals (the limited partnership shall be entrusted with the hypothetical assets) The case where a person directly acts as a limited partner is a specific statistical observing partner).
- ### **7.5 Non-cash allocation**
- 7.5.1 Under no circumstances may the limited partnership be allocated in a non-cash manner. Before the limited partnership is liquidated, the general partner shall use reasonable efforts to realize the investment of the limited partnership and avoid distribution in a non-cash manner.
 - 7.5.2 If the general partner fails to make reasonable efforts to realize through reasonable means such as the transfer of the agreement, the general partner agrees that the non-cash assets can be realized through public auction.

7.6 Income tax

The partner shall pay income tax on the corresponding investment income of the partnership in accordance with the Partnership Enterprise Law and other applicable laws. As far as the applicable law stipulates that the partnership enterprise shall perform the relevant taxes on the withholding obligations, the partnership enterprise has the right to withhold and pay in accordance with the relevant applicable laws. The general partner shall conduct reasonable

tax planning according to law, so that the overall tax structure of the limited partnership is optimized.

8. Accounting and reporting

8.1 Bookkeeping

- 8.1.1 During the duration of the partnership, the general partner shall establish accounting books and financial reporting systems in accordance with the law.
- 8.1.2 During the duration of the partnership and within (3) years after the dissolution, the general partner shall keep or record the full and accurate records of the partnership transaction in the appropriate accounting books in the general partner's residence. , which should contain all the information required by applicable law. These accounting books should be recorded in Chinese in accordance with Chinese accounting standards. The accounting book of this partnership recorded in this way is the basis for the preparation of financial reports submitted by the designated partners under this Treaty.

8.2 Fiscal year

The fiscal year of the limited partnership is the same as the calendar year; the first fiscal year begins on the date of the establishment of the limited partnership and ends on December 31 of the current year.

8.3 Audit and financial report

- 8.3.1 The limited partnership shall, after the end of each fiscal year, engage an independent auditor to audit the financial report of the limited partnership. The selection or replacement of the audit institution shall be carried out by the general partner after the proposal of the general partner is confirmed by the limited partner.
- 8.3.2 The general partner shall complete the audit of the previous year by April 30 of each year and submit the annual financial report of the limited partnership to the limited partner by letter, fax, email or other means, and attach the audit report provided by the limited partnership audit institution. The general partner shall report to the other partners in writing about the operation of the invested company within one month after each quarter.

8.4 Review financial books

The limited partner shall have the right to inspect or copy the legitimate matters related to the limited partnership interest held by the agent in person within a reasonable time limit during normal working hours, within a reasonable time limit of five (5) natural days. The accounting book of the partnership. The limited partner shall exercise the rights under this section in accordance with the confidentiality procedures and agreements established or updated by the limited partnership from time to time and shall not affect the normal operation of the limited partnership.

8.5 Investment management report

The general partner shall report the limited partnership investment operation to the limited partners on a regular and irregular basis, and ensure that the contents of the report are free from false, misleading statements or major omissions, and are responsible for the truthfulness and completeness of the reported content.

8.5.1 Periodic reports. The general partner should:

- (1) Submit the investment management report for the first half of the limited partnership within the first month of each semi-annual period;
- (2) The semi-annual supervision of the custodian bank to submit the limited partnership custody report in a timely manner;
- (3) The last annual limited partnership operation report is submitted within four months after the end of each fiscal year.
- (4) The semi-annual and annual reports should reflect all significant events during the

limited partnership reporting period.

8.5.2 Interim report. In the event of a limited partnership operation, when the following events may have a significant impact on the interests of other partners, the general partner shall promptly notify all partners:

- (1) The limited partnership suffered a serious loss;
- (2) Significant changes in the directors, supervisors, senior management or core investment team of the general partner;
- (3) Major events occurred in the projects invested by the limited partnership;
- (4) The project invested by the limited partnership is withdrawn;
- (5) The general partner increases, reduces, divides, dissolves, and decides to file for bankruptcy or is filed for bankruptcy;
- (6) The limited partnership proposed investment project has a relationship with the general partner and other investment entities or other investors controlled by it;
- (7) Under the premise of the general partner, the companies invested by the limited partnership have significant connected transactions;
- (8) The general partner's directors, supervisors, senior management or core investment team members are subject to criminal or administrative penalties;
- (9) The general partner is involved in major lawsuits and arbitrations;
- (10) Other major issues that may affect the rights and interests of investors.

8.6 Information disclosure

On the premise that the general partner reasonably estimates its necessity, it should, as far as practicable, provide continuous feedback and timely updated information related to the occurrence of important events to the partners, and ensure that the limited partnerships perform the corresponding information in accordance with the requirements of the relevant regulatory authorities. Disclosure obligations.

8.7 Confidentiality

Notwithstanding the foregoing, the Limited Partner specifically confirms that the obligations under this Article shall not cause the General Partner, the Trustee or their respective affiliates to breach their confidentiality obligations with respect to any invested company, General Partner, Trustee Management The organization and its respective affiliates may not disclose the confidential information prohibited under these confidentiality obligations, and without prejudice to applicable laws and regulations, if the relevant information is disclosed in good faith, it does not meet the maximum of the partnership or the invested enterprise. Interest, the general partner may not disclose such information. The general partner may edit the highly sensitive information covered by this article's report for confidentiality purposes.

9. Implementation of partnership affairs

9.1 Implementation of partnership affairs

- 9.1.1 A limited partnership is a partnership with a general partner. The power to enforce, manage, and operate a limited partnership and its investment business and other activities belongs to the general partner and is exercised directly by or through its delegated representatives.
- 9.1.2 The general partner may, in accordance with the terms of this agreement, contract or engage in other acts on behalf of the limited partnership to achieve the purpose and purpose of the limited partnership.
- 9.1.3 The general partner shall exercise the foregoing powers of 9.1.1 and 9.1.2 and other powers stipulated in this agreement, and shall strictly abide by the provisions of this agreement, and shall not exercise powers beyond the authority or in violation of this agreement.
- 9.1.4 Where the partners perform partnership affairs separately, the executive partners may challenge the matters performed by other partners. When an objection is filed, the execution of the transaction should be suspended. In the event of a dispute, a vote shall be taken by a partner other than the partner who has filed the objection, and the

voting method shall be adopted by the partner, one vote, one vote, and the voting partner.

- 9.1.5 If the partner entrusted with the execution of the partnership does not perform the transaction in accordance with the partnership agreement or the decision of the entire partner, the other partners may decide to revoke the commission.

9.2 **The behavior of the general partner is binding on the limited partnership**

The general partner and his delegated representatives are all binding on the limited partnership for all conduct of the partnership firm, including business cooperation with any third party and representation on the matter.

9.3 **Authorization**

By signing this Agreement, all limited partners authorize the general partner to sign on behalf of all and any limited partners on the following documents:

- (1) Amendments to this Agreement or a modified partnership agreement. When the content of the modification is the relevant content of the independent decision of the general partner as stipulated in this agreement, the general partner may directly sign on behalf of the limited partner; when the content of the modification is the relevant content of the resolutions of the partner meeting as stipulated in this agreement, the general partnership The person may sign on behalf of the limited partner by the resolution of the partner's meeting; when the content of the amendment is the relevant content of the investment decision committee's resolutions stipulated in this agreement, the general partner's written consent document (including but not limited to mail) by the investment decision committee resolution , texts, letters, etc.) can be signed on behalf of a limited partner.
- (2) Enterprise registration/change registration documents for all limited partnerships.
- (3) Partner contribution confirmation.
- (4) A document to be signed in order to perform a limited partnership dissolution or liquidation of a related business when the general partner acts as the liquidator of the limited partnership.

9.4 **Asset custody**

- 9.4.1 The limited partnership shall entrust a reputable national commercial bank (hereinafter referred to as the "custodian institution") to custodian all assets in the limited partnership account, and all cash flows of the limited partnership shall be conducted through the third party escrow account opened by the limited partnership at the custodian bank. To ensure that the limited partnership assets are independent and not conflated with the assets of the general partner. The parties agree that the limited partnership custodian is selected or replaced by the general partner.
- 9.4.2 The investment instructions issued by the limited partnership to the custodian bank must be resolved by the investment decision-making committee.
- 9.4.3 When any cash outlay occurs in a limited partnership, the procedures agreed with the escrow agreement between the custodian and the custodian shall be followed.

9.5 **Management agreement**

After the establishment of the limited partnership, the "trust management agreement" may be signed with the administrator to stipulate investment management and remuneration, but the agreement of the "trust management agreement" shall not conflict with the relevant provisions of this agreement.

10. **Partner conference**

10.1 **Partner conference**

- 10.1.1 The Partner Conference is the highest authority of the limited partnership. The meeting of the partners is convened and presided over by the general partner. All partners have the right to participate in the meeting.

10.1.2 The functions and powers of the Partner Conference include and only include:

- (i). Review and approve the annual report of the general partner and make strategic recommendations;
- (ii). Early termination and dissolution of the limited partnership;
- (iii). Selection of general partners (except for the first general partner), transfer of equity, withdrawal and subsequent participation of the latter;
- (iv). Delisting the general partner in accordance with the procedure agreed in Article 5.9.2 due to the circumstances agreed in Article 5.9.1;
- (v). The reduction of the size of the limited partnership and the cessation of subsequent funding;
- (vi). Amendments to this Agreement, except for matters that the General Partner may decide to amend;
- (vii). Branches that establish limited partnerships within and outside China (except for special purpose entities established for investment projects);
- (viii). Review and approve the Manager to propose a management fee payment plan based on the reasonable budget based on the reasonable budget of Article 2.11.3 of this Agreement, and in accordance with the provisions of Section 2.11.3 of this Agreement. Article (3), reviewing and approving the management fee payment plan for the first charging period proposed by the administrator;
- (ix). Decide whether to terminate the investment period in advance and enter the exit period, or terminate the limited partnership in advance;
- (x). Approving a default partner to withdraw from the partnership in accordance with item (3) of Article 4.4.3 of this Agreement;
- (xi). Approving the partnership to withdraw from the partnership in accordance with Article 12 of this Agreement;
- (xii). Make a resolution on the dissolution and liquidation of the partnership;
- (xiii). Review and approve the partnership profit distribution plan and make up the loss plan;
- (xiv). Incorporate new partners into the partnership;
- (xv). This Agreement expressly stipulates all other matters that need to be agreed by the Partner's Assembly;
- (xvi). The Partnerships Act expressly requires all other matters that need to be agreed by all partners and cannot be excluded by agreement.

The Partner Conference should not discuss limited partnership potential investment projects or other matters related to the implementation of limited partnership matters, and the limited partners should not exercise control over the management and other activities of the limited partnership through the Partner Conference.

10.1.3 The matters considered by the partners listed in the above article shall be decided by all partners before the resolution is passed. Unless otherwise agreed in this Agreement, the agreement shall be followed. If there is a conflict of interest between the partner and the item being voted, it shall not participate in the voting and shall not be counted in the voting base.

10.1.4 The general partner shall organize an annual partner meeting within five (5) months after the start of each year. The general partner shall notify all partners in writing (20) working days prior to the meeting and submit the partner at the same time. General Assembly motion. The main content of the annual partner conference is to review the annual report of the previous year made by the general partner, and all partners propose the investment strategy to the limited partnership.

10.1.5 The general partner may organize a temporary partner meeting after written notice ten (10) working days in advance, and a limited partner who holds more than 10% of the total paid contribution, individually or in total, may recommend the general partner to

convene a temporary partnership. At a general meeting, if a general partner fails to perform his duties within thirty (30) business days, the limited partner with the highest proportion of capital contribution or the limited partner who holds a total of more than one-third of the total paid contribution may jointly recommend one. The limited partner shall notify all partners in writing (10) working days in advance to convene and organize a temporary partner meeting. A limited partner who holds more than 10% of the total paid contribution, either individually or in aggregate, may submit a proposal for voting at the temporary partner meeting.

10.1.6 The notice of the meeting issued by the general partner or limited partner in accordance with 10.1.4 and 10.1.5 shall include at least the following contents:

- (i). Time and place of the meeting;
- (ii). Way of holding the meeting;
- (iii). Meeting agenda;
- (iv). Meeting materials necessary for the vote of the partners;
- (v). Contact and contact details.

11. Transfer of equity

11.1 Transfer of limited partner interests

11.1.1 Except for the transfer stipulated in this Agreement, the limited partner shall not transfer any rights in the limited partnership in any other way, including but not limited to the right to contribute capital and receive income distribution. An assignment of an interest that is not in compliance with this Agreement may result in the general partner identifying the transferor as a defaulting partner and requiring him to be liable for breach of contract.

11.1.2 A limited partner (hereinafter referred to as the "transferor") who intends to transfer the interest in a limited partnership applies for the transfer of all or part of the interest held. The application is valid when all of the following conditions are met:

- (i). The transferor issues a transfer request to the general partner at least thirty (30) days in advance;
- (ii). Such transfer of interest will not cause the limited partnership to violate the Partnerships Law or other relevant laws and regulations, or have additional restrictions on business activities;
- (iii). The proposed transferee has submitted to the general partner a letter of commitment regarding its consent to be bound by this Agreement and to comply with this Agreement and to inherit all the obligations of the transferor, and other documents, documents requested reasonably by the general partner;
- (iv). The proposed transferee has promised in writing to undertake all costs incurred by the limited partnership and general partner arising from the transfer.

11.1.3 For a valid application for the transfer of a limited partnership interest, the general partner shall make a decision of consent or disapproval in accordance with the principle of facilitating the smooth operation of the limited partnership. If the general partner agrees to the transfer, the other limited partners shall also agree and waive the priority transfer, but the general partner shall have the priority of transfer.

11.1.4 If any limited partner breaches the agreement to transfer all or part of its partnership interests in this limited partnership, the general partner has the right to take the following actions:

- (i). Excluding the right of the defaulting partner to participate in any future investment project;
- (ii). The amount in the capital account of the defaulting partner is reduced by 20% and is distributed to the non-defaulting partner.

11.2 General partner equity transfer

- 11.2.1 The general partner may, in accordance with the agreement, transfer the limited partnership interest held to the other party, unless agreed by all the limited partners.
- 11.2.2 If all limited partners pass the resolution to accept the new general partner and expel the original general partner, the original general partner shall transfer all the limited partnership interests held to the new general partner, and the transfer price shall be assessed and determined by the independent third party accepted by both the transferor and the transferee.
- 11.2.3 If a general partner appears to be insolvent and enforced to transfer the interest of the limited partnership interest, it is deemed that the general partner withdraws from the partnership. If a new general partner is willing to bear all the responsibilities and obligations of the original general partner and obtain approval from all the limited partners, the original general partner shall transfer all the limited partnership interest to the new general partner, otherwise the limited partnership enters the liquidation process.
- 11.2.4 Except for the transfer provisions stipulated in this Agreement, the general partner shall not transfer any of its interests in the limited partnership in any other way.

12. Force majeure

12.1 Force Majeure means all events that occur after the signing of this Agreement, which cannot be foreseen at the time of signing this Agreement, whose occurrence and consequences cannot be avoided or overcome, and which impede the full or partial performance of either party. Such incidents include earthquakes, typhoons, floods, fires, wars, disruptions to international or domestic transportation, acts of government or public institutions (including major legal changes or policy adjustments), epidemics, riots, strikes, and other events of force majeure adopted in general international business practices. The lack of funds on one side is not a force majeure event.

12.2 In the force majeure event, affecting a party's performance of its obligations under this agreement, the performance will be suspended within the delay period caused by force majeure, and is not considered a breach of contract. The party claiming force majeure shall promptly notify the other party in writing and provide sufficient evidence proving the occurrence and duration of force majeure within fifteen (15) days thereafter.

12.3 In the force majeure event, each partner should immediately consult each other to find a fair solution and every reasonable effort should be made to minimize the consequences of force majeure. If the occurrence or consequences of force majeure cause significant impediment to the operation of the limited partnership for more than six (6) months, and the partners do not find a fair solution, the partner may request a withdrawal in accordance with this agreement, in which case the partner conference shall approve the partner's withdrawal request.

13. Dispute Resolution

All disputes arising from and related to this Agreement shall first be settled through friendly negotiation between the relevant parties. If the parties' concerns cannot resolve the dispute, they shall submit it to the Arbitration Commission. The arbitral award is final and binding on all parties involved. Unless the arbitral tribunal has a ruling, the arbitration fee shall be borne by the losing party. The losing party shall also compensate the winning party for legal fees and other expenses.

14. Dissolution and liquidation

14.1 Disband

The limited partnership shall be terminated and liquidated within fifteen (15) natural days from the date of occurrence of any of the following:

- 14.1.1 All investments in the limited partnership have been withdrawn;
- 14.1.2 The duration of the partnership expires, and the partner conference decides not to extend it;
- 14.1.3 The number of the partner is less than quorum over thirty (30) days;
- 14.1.4 The purpose of the partnership as stipulated in this agreement has been achieved or cannot be achieved;
- 14.1.5 The general partner fails to produce an alternate general partner within thirty (30) days after the termination of the business due to the suspension of the business license, closure order or cancellation;
- 14.1.6 A serious partner breaches the contract by one or more of the limited partners, which gives the general partner reason to believe that the limited partnership cannot continue to operate;
- 14.1.7 This limited partnership has been cancelled business license, ordered to close or revoked;
- 14.1.8 All partners decide and agree to dissolve for any other reason;
- 14.1.9 Other reasons as stipulated by laws, administrative regulations or this agreement.

14.2 **Liquidation**

- 14.2.1 The liquidator is a general partner, unless partners who represents more than half of the total paid-in contribution decides to assign another person other than the general partner.
- 14.2.2 After the liquidator is determined, all the assets of the limited partnership not realized are managed by the liquidator, but if the liquidator is not a general partner, the general partner is obliged to help the liquidator to realize the unrealized assets, and the limited partnership will not pay any management fee or other fees to the general partner during the liquidation period.
- 14.2.3 The liquidation period is one (1) year. If it cannot be liquidated within one (1) year, it shall be extended by the liquidator. Non-cash assets that are not realized at the end of the liquidation period will be disposed in accordance with the provisions of Article 7.5 of this Agreement.

14.3 **Liquidation payment**

- 14.3.1 When the limited partnership expires or terminates and enters liquidation, the interest and returns will be paid in the following order:
 - (i). Pay the liquidation fee;
 - (ii). Pay employee wages, social insurance fees and statutory compensation;
 - (iii). Pay the taxes owed;
 - (iv). Pay the debt of the limited partnership;
 - (v). Distribute the principles among all partners according to procedures and provisions stipulated in this Agreement.

Among them, items (i) to (iii) must be paid in cash. If the cash is insufficient, the liquidation of other assets should be increased. Item (iv) should be negotiated with the creditor.
- 14.3.2 Where the limited partnership property is insufficient to repay the partnership debt, the general partner shall bear the joint liability for the creditor.

15. **Other**

15.1 **Notice**

- 15.1.1 Any notice, request or communication under this Agreement shall be in writing, and delivered or sent to the following address:
 - (i). Send a notice of limited partnership to:
 - Address: #####
 - Fax: #####
 - Phone: #####

- Recipient: ##### Company
- (ii). Send a notice to the general partner/manager to:
Address: #####
Fax: #####
Phone: #####
Recipient: ##### Company
- (iii). A notice to each limited partner is sent to the address listed in Annex I to this Agreement.
- Anyone may change the address at any time by notice from the general partner to the limited partnership and the partners.

15.1.2 Unless there is evidence that it has been received in advance, otherwise

- (i). In the case of the delivery, the notice shall be deemed to have been served when it is sent to the address stated in Article 15.1.1;
- (ii). In the case of a registered mail or prepaid postage, the notice shall be deemed to have been served ten (10) business days after the mailing;
- (iii). In the case of mailing by airmail, the notice shall be deemed to have been served five (5) business days after the mailing;
- (iv). In the case of a fax transmission, the notification is deemed to be delivered when the sender's fax machine records the transmission confirmation.

15.2 Annex

The annex to this Agreement is an integral part of this Agreement and has the same legal effect as this Agreement.

15.3 All agreements

This Agreement constitutes the entire agreements between the partners, superseding all previously agreed unsigned informal agreements, offers, promises or memoranda of limited partnerships, and other oral and written agreements regarding the raising and establishment of limited partnerships.

15.4 Severability

If any provision of this Agreement is deemed invalid for any person or circumstance, the validity of the remaining terms applied to other persons or circumstances shall not be affected.

15.5 Confidentiality

Each party to this Agreement shall be responsible for the confidentiality of the business secrets of other parties that are known in negotiating, signing and executing this Agreement. Without the prior written consent of the general partner, each partner may not disclose to the third party any of the following information provided by the partnership: this agreement (including its amendments from time to time), any other agreement referred to in this agreement, The financial statements and other information of the partnership and any information about the investee companies, except in the following cases:

- 15.5.1 The information has been known by the public and the partner or any of its agent doesn't violate these terms;
- 15.5.2 The information that the partner must provide in order to perform its legal obligations under applicable law or in any legal proceedings;
- 15.5.3 Information disclosed to its employees and professional advisers and potential investors (including the partner's auditors and legal counsel), and such individuals have written warranted compliance with the partner's confidentiality obligations under this Agreement; or
- 15.5.4 Information provided at the request of a regulatory body with appropriate jurisdiction.

A partner who discloses information in accordance with this Agreement shall notify the general partner in advance within the scope of applicable law so that the general partner has enough

time to take reasonable measures as he deems necessary.

In order to carry out the fundraising of a limited partnership, or due to the normal operation and management needs of the limited partnership, the general partner may disclose the information of the limited partnership to the recipient of the information on the premise that the information recipient has promised to keep it confidential.

Notwithstanding the other terms of this Agreement, the general partner could not disclose and keep confidential to the limited partners in the following matters for the period in which it considers reasonable: (1) The general partner believes in good faith that the disclosure of the information is detrimental to the Partnership or the investment, or (2) The applicable law and third party requires to keep the information confidential.

The general partner may disclose any necessary information of the partnership or limited partner as required by applicable law. At the same time, at the request of the general partner, each limited partner shall provide all necessary information to the general partner in a timely manner.

The content of this article shall not constitute an unreasonable restriction on the right to know of a limited partner.

15.6 Signing agreement

The parties of this agreement sign [X] copies of the original form, each partner holds one copy, the limited partnership retains two copies, and the rest is used for registration procedures. Each signed agreement has the same legal effect.

15.7 Effective date of this agreement

This Agreement shall be legally binding on the signatory parties from the date of the official seal of the parties and the signature of the legal representative/delegated representative. But the signature of the external regulatory authority is required for the investment provisions stipulated in this agreement. If its supervisory authority raises an objection to the terms of this agreement, in respect of such objection clauses, (a) after the objection of the supervisory authority is removed, the signatories shall be legally bound, and (b) in order to eliminate the objection, the parties shall do the best to cooperate until the dissent is eliminated. If the objection fails to be resolved within a reasonable period, the parties shall resolve it by reference to the force majeure clause of Article 12 in this Agreement. Regardless of the solution, the signatory should not be considered as breach of contract or be required to bear liability for breach of contract. The same applies to the amendment of this agreement.

[No text in the following]

[This page is the signing page of the "#### Partnership (Limited Partnership) Limited Partnership Agreement".]

This Agreement was signed by the following parties on the day of XXX 20XX:

General Partner/Manager: #### Company

Legal representative / authorized representative:

Limited Partner: #### Company

Legal representative / authorized representative:

Annex I: Partners and their initial subscribed contributions

Unit: CNY 10,000

Category	Name	Address	Business license or identification number	Funding Method	Pay Contribution	Subscription capital contribution ratio	Payment deadline	Responsibility
General Partner	#### Company	####	*****	Cash	####	####	*****	Unlimited liability
Limited Partner	#### Company	####	*****	cash	####	####	*****	Limited Liability
Total					####	100%		

**APPENDIX 5: ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM FOR THE
GREEN INVESTMENT FUND**

ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM

FOR THE

**Huangshan Trust Investment
Company**

Prepared by the Huangshan Municipal Government for the
PRC: Anhui Huangshan Xin'an River Ecological Protection and Green Development
Project

October 2019

CURRENCY EQUIVALENTS

(as of 6 August 2019)

Currency unit	–	yuan (CNY)
CNY1.00	=	€0.1262
€1.00	=	CNY7.9228

ABREVIATIONS

ADB	- Asian Development Bank	HMG	- Huangshan Municipal Government
BOD	- Biochemical Oxygen Demand	HTIC	- Huangshan Trust Investment Company
COD	- Chemical Oxygen Demand	GHG	- Greenhouse Gas
CNY	- Chinese Yuan	LIEC	- Loan implementation environment consultant
CSC	- Construction supervision company		
DEIA	- Domestic EIA	IA	- Implementing Agency
EA	- Executing Agency	IEE	- Initial Environmental Examination
EHS	- Environmental, health and safety	MSW	- Municipal Solid Waste
EIA	- Environment impact assessment	Mu	- Chinese land unit (1 ha = 15 mu)
EMA	- Environmental monitoring agency	PM	- Particulate matter
EMP	- Environmental management plan	PMO	- Huangshan municipal project management office
EPD	- Environmental protection department	PRC	- People's Republic of China
EEB	- Ecology and environment bureau	SPS	- Safeguard Policy Statement
ESMS	- Environmental and Social Management System	TOR	- Terms of Reference
FSR	- Feasibility Study Report	TRTA	- Transaction Technical Assistance
GAP	- Gender action plan	WSCP	- Water and soil conservation plan
GDP	- Gross Domestic Product	WSP	- Water supply plant
GHG	- Greenhouse Gas	WWTP	- Wastewater treatment plant
GRM	- Grievance redress mechanism		

This environmental and social management system is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

In preparing any country program or strategy, financing any Project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

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I. INTRODUCTION

1. This document is the Environmental and Social Management System (ESMS) for the Huangshan Trust Investment Company (HTIC), and its borrowers, as part of the Anhui Huangshan Xin'an River Ecological Protection and Green Development Project (the project). An ESMS is an internal management system implemented by a financial institution to manage the potential environmental and social impacts of its equity investments.

2. The Green Investment Fund component under the project is to provide financial support for environmentally friendly business and services sectors, including green agriculture and ecotourism, for small and medium sized enterprises in three districts and four counties of Huangshan Municipality, Anhui Province, the People's Republic of China (PRC). Issues involving development and natural resources management in the project area include inefficient and/or outdated farming technology, excessive use of agricultural chemicals, insufficient infrastructure for ecotourism, and lack of protection of natural resources.

3. The project is supported by a €89.69 million loan from the Asian Development Bank (ADB) to the Huangshan Municipal Government (HMG). The HMG is the executing agency. A total of €13.00 million of the loan will be on-lent from the government to HTIC, the financial intermediary (FI), to establish a Green Investment Fund with a total amount of €26 million (CNY200 million).⁵⁴ The HTIC will on-lend the funds directly to qualified investees. The qualified investees comprise small and medium-sized enterprises in areas of green farming and ecotourism. Investment proceeds via HTIC will be used for environmentally sustainable and socially responsible development, including improved practices for tea gardens, organic rice, bamboo forestry, orchards, and ecotourism.

4. This ESMS is to help the HTIC, HMG, and qualified investees to manage the environmental and social risks of individual subprojects, and to support the overall project objectives of promoting green development and natural resources management in the Xin'an River Basin.

5. The Green Investment Fund will encourage and favor subprojects which promote agricultural innovation, efficiency, and the sustainable use of water, soil and energy. Projects may unintentionally result in impacts to surface water, groundwater, soil, air quality, noise levels, ecology, communities, physical cultural resources, and/or land use rights transfer. The identification, screening and management of such risks are key objectives of the ESMS.

6. This is the first time any banking institution in Huangshan Municipality has implemented an ESMS. The ESMS is written in non-technical language and is simplified and tailored to the capacity of HTIC to implement an ESMS, which is currently low. It provides step-by-step procedures to assess and manage potential environmental and social impacts associated with equity investment applications under the Green Investment Fund.

II. INSTITUTIONAL FRAMEWORK FOR THE ESMS

A. Legislative and policy framework

7. The project, including the Green Investment Fund and this ESMS, is being implemented within the context of relevant policies and laws of the PRC and policies of the ADB. Within the PRC, over 40 laws, regulations, standards and guidelines concerning agricultural production and natural resources management are relevant to this project (ESMS-Appendix 1). For the environment, these include environmental protection, planning, and impact assessment, water resources management, quality standards and guidelines for air, water, soil, and noise,

⁵⁴ The additional start-up capital to the fund is provided by KfW and the government.

disposal of solid waste, and protection of flora, fauna and cultural resources. For social issues, these include the management of land use rights transfer, involuntary resettlement, ethnic minorities and protecting the rights of vulnerable groups including women, the poor, the low-income and the disabled.

8. The ESMS complies with the requirements of the ADB Safeguard Policy Statement (SPS, 2009). The SPS comprises three operational policies, for the environment, indigenous peoples, and involuntary resettlement. These seek to avoid, minimize, or mitigate adverse environmental and social impacts. Under the SPS, projects categorized “financial intermediation loan” (FIL) require the preparation of an ESMS, which includes: environmental and social policies; screening, categorization, and assessment; document preparation requirements and review procedures; organizational structure and staffing including skills and competencies in environmental and social areas; training requirements; and monitoring and reporting.

B. Definitions of terms used

9. This section provides the definitions of key terms used in the ESMS.

Affected person. A person directly or indirectly affected by a subproject activity.

Applicant. SME or individual that applies for an equity investment under the Green Investment Fund. After the application is endorsed, the applicant is termed a “qualified investee” (see below).

Small and medium-sized enterprise (SME). Defined by the PRC Ministry of Industry and Information Technology and National Development and Reform Commission as: small enterprise – annual revenue CNY<5 million; medium enterprise – annual revenue CNY5–200 million.

Huangshan municipal project management office (PMO). Established under Huangshan Municipal Government. See Section II.C for role in project.

PMO environmental officer and social officer. Qualified officers appointed by the PMO to assist the PMO, HTIC, and qualified investees to implement the ESMS. See Section II.C for role in project.

Equity investment. A subproject which receives financial support from the Green Investment Fund after successfully completing the required screening and approval procedures including the ESMS.

Equity investment agreement. Signed agreement between the HTIC and a qualified investee describing the terms and conditions of the financial support provided under the Green Investment Fund.

Executing agency (EA). The municipal agency responsible for the project, the Huangshan Municipal Government.

Financial intermediary (FI). An entity that provides finance as its principal or subsidiary function. The FI for the Green Investment Fund is HTIC. It will channel the project loan proceeds between the Huangshan Municipal Government and the qualified investees.

FI environmental officer and social officer. Qualified officers appointed by the FI to assist the FI and qualified investees to implement the ESMS. See Section II.C for role in project.

Finance officer. Qualified officer appointed by HTIC responsible for equity investment management. See Section II.C for role in project.

Gender action plan (GAP). Project plan with measurable indicators to strengthen gender-inclusive designs. The GAP is within the project administration manual.

Grievance redress mechanism (GRM). A mechanism to receive and facilitate resolution of affected peoples' concerns, complaints, and grievances about the project's environmental or social performance. See Section V.

Implementing agency (IA). An agency which implements the project activities. For the Green Investment Fund, HTIC is the implementing agency.

Involuntary resettlement. Defined by the SPS (2009) as: physical displacement (relocation, loss of residential land, or loss of shelter) and/or economic displacement (loss of land, assets, access to assets, income sources, or means of livelihoods), as a result of: (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or on access to legally designated parks and protected areas.

Indigenous Peoples (IP). Defined by ADB's SPS (2009) as: a distinct, vulnerable, social, and cultural group. Safeguards are triggered if a project directly or indirectly affects the dignity, human rights, livelihood systems, culture or cultural resources of such groups.⁵⁵

Land use rights transfer (LURT). Leasing or renting farmland use rights without any change in the land ownership and/or the agricultural use.

Loan implementation environmental consultant (LIEC) and social consultant (LISC). External environment and social specialists hired under the loan implementation consultancy services. See Section II.C for roles in project.

Project Administration Manual (PAM). Summary document describing all administrative, financial, procurement, and safeguard procedures for the overall project. The PAM and other project documents are available on the ADB public website.

Qualified investee. The final recipient of an equity investment, whose application has been completed (including the steps in the ESMS) and approved by HTIC.

Safeguards Commitment Letter (SCL). An agreement ancillary to the loan agreement signed between a FI and qualified investee, whereby the qualified investee undertakes to use its loan to carry out the subproject in accordance with: (i) the approved subproject design; (ii) in compliance with all requirements in the ESMS; and (iii) which gives the FI the right under applicable PRC law to exercise remedies against the qualified investee under the loan agreement.

Social development action plan (SDAP). Project plan with measurable indicators to strengthen socially-inclusive designs. The SDAP is within the project administration manual.

Subproject. Any activity financed by the Green Investment Fund under the project. Also referred to as a "qualified subproject".

⁵⁵ The PRC Government uses the term "ethnic minorities". This may trigger ADB's safeguard requirements in accordance with the above definition.

C. Roles and responsibilities for the ESMS

10. This section identifies the roles and responsibilities of the agencies in implementing the ESMS.

Table II.1. Institutional Responsibilities for Implementation of the Environmental and Social Management System

Agency	Roles and Responsibilities
Huangshan Municipal Project Leading Group	<ul style="list-style-type: none"> • Ensure timely national, provincial, and inter-agency coordination and support for the project as needed • High-level support to executing agency • Provide advice on project implementation • Review project progress
Huangshan Municipal Government	<ul style="list-style-type: none"> • Project executing agency • Overall accountability and responsibility for project planning, management, and implementation • Ensure timely and effective execution of the loan agreements • Coordinate with ADB
Huangshan Municipal Project Management Office	<ul style="list-style-type: none"> • Support HTIC to establish and implement the ESMS • Submit updated draft ESMS to ADB for endorsement • Establish project grievance redress mechanism • Support HTIC to review and strengthen the environmental and social design of equity investment applications before approval • For the first 2 applications of each development category, submit the draft safeguard screening and categorization documents to ADB for endorsement • Facilitate safeguard training for HTIC • Prepare semiannual environment monitoring reports to ADB including on ESMS implementation progress • Ensure project compliance with the loan and project agreements – including all safeguard provisions – and ESMS • Terms of reference for the PMO environmental officer and social officer are in EMP Appendix 1-1 and the PAM
Huangshan Trust Investment Company	<ul style="list-style-type: none"> • Implementing agency for the Green Investment Fund and ESMS • Recruit at least one qualified environment officer and one social officer to oversee establishment and implementation of ESMS • Establish, manage, and implement the Green Investment Fund and ESMS • Integrate the ESMS within HTIC business procedures • Support PMO to implement the grievance redress mechanism • Monitor and report compliance of qualified investees with the safeguard conditions of each equity investment • Prepare semiannual environment monitoring reports to PMO, for consolidation within progress reports by PMO to ADB <p>The HTIC environment officer and social officer will:</p> <ul style="list-style-type: none"> • Work closely with HTIC finance officers and qualified investees to implement the ESMS, review equity investment applications against ESMS steps A-F (Section III), and manage the ESMS database • Support PMO to implement the GRM • Facilitate training related to safeguards and project design • Monitor ESMS implementation of the qualified investees • Compile ESMS progress reports • Submit semi-annual safeguard progress reports to PMO • Provide information as requested by PMO to assist with queries and/or preparation of progress reports to ADB • Terms of reference are in ESMS-Appendix 6 <p>The HTIC financial officers will:</p>

Agency	Roles and Responsibilities
	<ul style="list-style-type: none"> • Receive and review equity investment applications against ESMS steps A-F (Section III), working with qualified investees, PMO and other agencies as necessary • Document the results of Steps A-F for each equity investment application in the HTIC ESMS database • Liaise with qualified investees, PMO and other agencies as necessary to ensure relevant safeguard approvals and design considerations are achieved
Investee (potential applicant of equity investment)	<ul style="list-style-type: none"> • Work with HTIC to complete the screening, categorization, and subproject design • Provide HTIC and PMO access to the subproject designs and sites • Implement and comply with any environmental or social conditions required as part of the equity investment
“Start-up” Environment Safeguard Consultant (external technical support provided under the ADB loan)	<ul style="list-style-type: none"> • Short-term national position to support PMO and implementing agencies with start-up support, including for ESMS establishment, while the loan implementation consultants are being recruited • Assist PMO and HTIC to establish the GRM for the ESMS • Provide initial training to HTIC for ESMS implementation
Loan Implementation Environmental Consultant and Social Consultant (external technical support provided under the ADB loan)	<ul style="list-style-type: none"> • Assist HTIC to establish and implement the ESMS • Provide ongoing training to HTIC staff for ESMS implementation • Review environment monitoring reports prepared by contractors • Assist PMO to prepare semiannual environmental monitoring reports to ADB • Terms of reference are in EMP Appendix 1-1 and the PAM
Asian Development Bank	<ul style="list-style-type: none"> • Oversee project administration and timely execution of the loan agreements by the executing and implementing agencies • Review project compliance and targets against the design and monitoring framework, EMP, ESMS, social plans, and project administration manual • Review and endorse updated ESMS as needed • Monitor project progress and conduct review missions • Disclose monitoring reports on ADB public website

ADB = Asian Development Bank, EMP = environment management plan, ESMS = environmental and social management system, GRM = grievance redress mechanism, HTIC = Huangshan Trust Investment Company, LIEC = loan implementation environment consultant, PAM = project administration manual, PMO = Huangshan Municipality project management office.

11. The relationship among the project agencies for the ESMS is shown in Figure II.1.

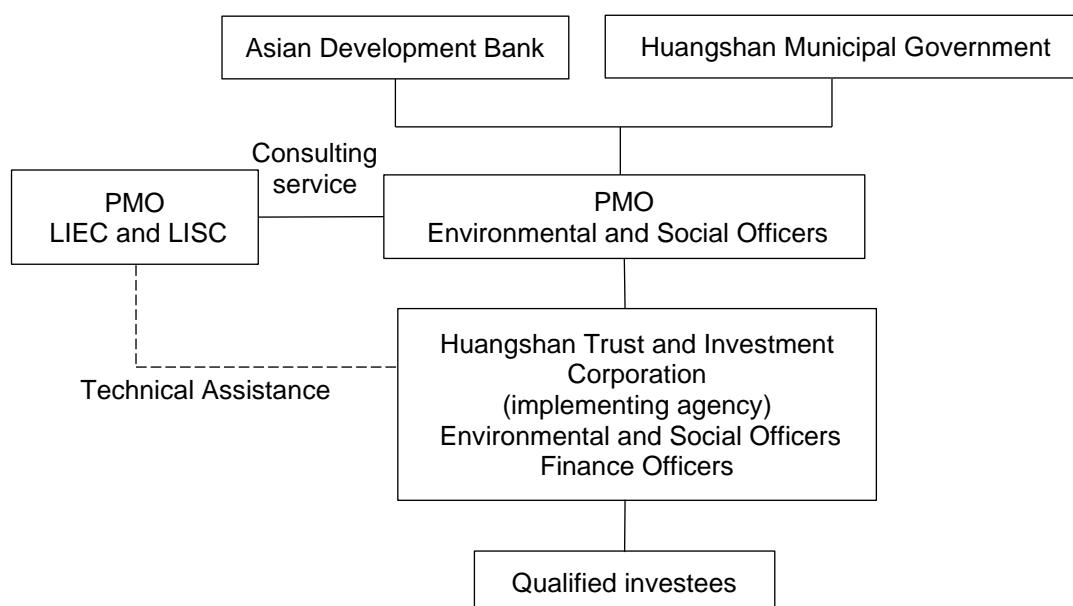


Figure II.1: Organization Chart of the project Agencies for the ESMS

PMO = Huangshan Municipality project management office, LIEC = loan implementation environment consultant, LISC = loan implementation social consultant.

D. What the project will and will not support

12. The Huangshan Municipal Government and HTIC agree to the following terms and restrictions for the Green Investment Fund.

13. THE GREEN INVESTMENT FUND WILL ONLY SUPPORT subprojects which:

- have minimal or no environmental impacts. Subprojects must meet the ADB definition of “Category B” or “Category C” for the Environment. “Category A” activities are excluded (Worksheet 1–Appendix 3);
- have all relevant domestic environmental approvals and/or land permits, as well as for any associated facilities or operations;
- have a clearly defined geographic location;
- are clearly based on participatory consultation and agreement with other stakeholders, especially affected persons [for subprojects involving multiple parties and lands];
- do not result in changes to land ownership (e.g. from village land to other categories) or official land use category (e.g. from agricultural to other land use); and,
- demonstrate compliance with the project social and gender action plans (SDAP and GAP – see the project administration manual).

14. HTIC THROUGH THE GREEN INVESTMENT FUND WILL ENCOURAGE AND FAVOR subprojects which demonstrate the sustainable use of natural resources, including:

- water use efficiency;
- sustainable water supply;

- soil conservation practices;
- energy efficiency;
- reduced use of agricultural chemicals;
- improved pest control methods e.g. integrated pest management;
- manure processed as organic fertilizer;
- production, processing and marketing of local special products;
- adoption of traditional ethnic practices;
- involvement and/or support to women, the poor, and/or ethnic minorities.

15. THE GREEN INVESTMENT FUND WILL NOT FUND any activities which:

- are listed in the ADB Prohibited Investment Activity List (ESMS-Appendix 2);
- may cause significant and irreversible impacts to the environment i.e. meet the definition of ADB “Category A” for Environment;
- are located in or next to a designated water source protection zone, protected area, cultural heritage site, or critical natural habitat;
- involve large-scale landscape alteration e.g. quarrying, or terracing on slopes greater than 25°;
- involve involuntary land acquisition impacts;
- involve demolition of residential or private commercial buildings;
- involve involuntary resettlement, and which meet the definition of ADB “Category A” or “Category B” for resettlement, and any involuntary resettlement issues from past land acquisition or existing facilities as defined under ADB’s SPS;
- have impacts on vulnerable ethnic minorities (“Category A” or “B”) and any issues of indigenous peoples or ethnic minority communities from past activities or existing facilities as defined under ADB SPS;⁵⁶ and/or,
- involve on-lending to other financial intermediaries or banking institutions.

E. Pre-readiness for establishment of the ESMS

16. At least three months prior to establishing the Green Investment Fund, HTIC shall issue a formal Presidential Directive to integrate the ESMS into HTIC business procedures and submit this directive to HMG and ADB. The directive shall: (a) officially recognize the ESMS as HTIC policy in the project districts and counties from the date of the Directive; (b) instruct the finance officers of the Green Investment Fund that the ESMS steps are now part of equity investment assessment and approval procedures; (c) identify by name and position the managerial and review arrangements for steps and decisions taken while implementing the ESMS; (d) confirm that breaches of environmental and social conditions by qualified investees will be treated by HTIC in the same way as breaches in other loan conditions – attracting similar penalties; (e) confirm the working relationship between HTIC and PMO and its loan implementation consultants; (f) ensure the wide dissemination within HTIC of the Chinese-language ESMS documents (including instructing the finance officers to print copies of the ESMS Workbook in ESMS-Appendix 3 to use in the field and fill out as part of their duties); and, (g) commit to the training plan in the ESMS by facilitating HTIC officers’ attendance at training courses as required.

17. Application of the ESMS procedures is described in Section III.

III. IMPLEMENTATION OF THE ESMS – SIX STEPS

18. This section describes six steps to implement the ESMS. The steps are conducted for all

⁵⁶ The due diligence during the preparation of the overall project has confirmed that the project area does not involve ethnic minority communities that would trigger ADB SPS requirements on indigenous peoples. The Green Investment Fund activities are also not expected to involve such impacts.

equity investment applications. The six steps are: A–screening; B–improving the subproject design for environmental and social benefits; C–categorization; D–assessment; E–safeguard implementation; and F–monitoring and reporting. Steps A to D are conducted as part of the due diligence before an equity investment is approved. Steps E to F are conducted during implementation of the subproject. All steps are conducted by the HTIC finance officer and environmental and social officers, working with the qualified investees, PMO Environment and Social Officers, and Loan Implementation Environmental and Social Consultants. Information disclosure, public consultation, and participation of affected persons are key requirements under PRC laws and the ADB Safeguard Policy Statement (2009). Information disclosure and public consultation are included under Steps D to E.

19. The six steps are to be performed by HTIC, except where stated otherwise. The steps are summarized in Figure III.2.

STEP A: SCREEN TO IDENTIFY POTENTIAL IMPACTS

First filter – compliance with national and international laws and regulations

- A.1. Does the equity investment application include any activities prohibited under PRC laws?
- A.2. Does the equity investment application include any activities on the ADB Prohibited Investment Activity List (Appendix 2)?
- A.3. Does the applicant have existing or pending lawsuits for violation of PRC laws related to environment or land?
- A.4. If the answer is “yes” to any of the above: reject the application, or, invite the applicant to re-apply after the application has been re-designed to meet compliance.
- A.5. If the answer is “no” to all of the above, continue with the next steps.

Second filter – environmental and social screening

- A.6. Meet with the loan applicant and conduct a site visit.
- A.7. Complete Worksheets 1-4 in Appendix 3 (environment, land acquisition, resettlement, land use rights transfer, ethnic minorities).
- A.8. Proceed to Step B. Note: do not proceed until Step A is fully completed.
- A.9. Document all applications, whether they pass Step A or not. Include them in the progress reports to the PMO.
- A.10. HTIC pays for the cost of Step A (i.e. mainly the work time of the HTIC finance officers).

STEP B: PROMOTE GREEN AGRICULTURE AND ECOTOURISM

- B.1. Worksheet 5 in ESMS-Appendix 3 identifies the types of green development activities the Green Investment Fund aims to support. Identify those relevant to the loan application. Improve the proposed subproject design to achieve sustainable and climate-smart design which meets the practices in Worksheet 5. Note: This step is primarily carried out by the applicant, in consultation with the PMO Environmental and Social Officers, LIEC and LISC as necessary.

- B.2. Check with the applicant (and if necessary the PMO) that Step B.1 has been conducted.
- B.3. Include the design measures for green agriculture and ecotourism in the equity investment conditions (see Step D).
- B.4. Include all information in Step B in the progress reports to PMO.
- B.5. Do not proceed to Step C until Step B is fully completed.

STEP C: CATEGORIZE THE LEVEL OF POTENTIAL IMPACTS

- C.1. Use the information in Step A to identify the level of potential environmental and social impacts and the “impact category” of the subproject, according to ADB and PRC criteria.

First categorization – environment (ADB criteria)

- C.2. ADB applies three impact categories to Projects: A, B, or C. See definitions in Worksheet 1 of ESMS-Appendix 3. In Worksheet 1, complete the final column in the table. Assign the ranking A, B, or C to each potential impact relevant to the loan application.
- C.3. Using these results, circle the summary impact category underneath the table. Clearly state the reasons for this conclusion.
- C.4. The project will only work with Category B or C subprojects. Preferably Category C. If the final category is A, reject the application, or, invite the applicant to re-apply after the application has been re-designed to meet B or C level.

Second categorization – environment (PRC criteria)

- C.5. The PRC defines three classes of impact assessment and reporting (based on scale, investment level, and environmental sensitivity): comprehensive environmental impact assessment report (EIAR; high potential impacts); environmental impact table (EIT; moderate potential impacts) and environmental impact registration form (EIRF; low potential impacts). See definitions in Table 2 in ESMS-Appendix 1.
- C.6. Use Table 2 in ESMS-Appendix 1 to identify which category the application is within.
- C.7. The Green Investment Fund can work with a subproject in any of these classes. Subprojects classed as EIT or EIRF are preferred as they may have lower environmental impacts.

Third categorization – involuntary resettlement

- C.8. ADB applies three impact categories to Projects: A, B, or C. Screening and categorization standards are defined in Worksheets 2 and 3 in Appendix 3.⁵⁷ Use these worksheets to assess the subproject category as A, B, or C.
- C.9. Reject all equity investment applications for subprojects which are Category A or B; and if they involve any involuntary resettlement issues from past land acquisition or existing facilities. These include subprojects which cause physical displacement and/or economic displacement or losses which result from involuntary acquisition of land or involuntary restriction of land use.

⁵⁷ See also: <http://www.adb.org/site/safeguards/safeguard-categories>

Fourth categorization – indigenous peoples (ethnic minorities)

C.10. ADB applies three impact categories to Projects: A, B, or C. Screening and categorization standards are defined in Worksheet 4 in Appendix 3.⁵⁸ Use these worksheets to assess the subproject category as A, B, or C.

C.11. Equity investment applications for subprojects which are Category A or B are not expected, neither any subprojects are expected to involve any issues of indigenous peoples or ethnic minority communities from past activities or existing facilities. Otherwise, invite the applicant to re-apply after the application has been re-designed to meet compliance.

Fifth categorization –land use rights transfer⁵⁹ issues

C.12. Any subproject that involves land with an existing or proposed land use rights transfer (LURT) agreement will be reviewed by the PMO and HTIC loan and social officers. Use Worksheet 3 in ESMS-Appendix 3 to determine whether there are any issues or pending disputes. If the answer is “yes”, reject the application, or, invite the applicant to re-apply after all such issues have been legally settled and such evidence is provided in accordance with the LURT Framework in ESMS-Appendix 7.

C.13. HTIC pays for the cost of Step C. This should mainly be the work time of the HTIC loan and social officers to meet the applicant and conduct a site visit.

Endorsement by Government and ADB of the Proposed Risk Categorizations

C.14. Include all information in Step C in the progress reports to PMO.

C.15. For the **first 2 applications under each new type of subproject category**, submit the screening documents and proposed risk categorizations to the PMO and ADB for endorsement. The PMO will provide the documents to ADB. The subproject categories include but are not limited to: tea plantations; bamboo forestry; orchards; and, ecotourism.

C.16. Do not proceed with the application until the Government and ADB has provided feedback and endorsement on the application.

C.17. Do not proceed to Step D until Step C is fully completed.

STEP D: IMPACT ASSESSMENT, MITIGATION, AND SUBPROJECT APPROVAL

Environmental assessment

D.1. If the subproject is ADB Category B for environment, an Initial Environmental Examination (IEE), including Environmental Management Plan (EMP), is required.

D.2. If the subproject is ADB Category C for environment, the following is required: (i) preparation of the relevant PRC environmental assessment (EIAR, EIT, EIRF; see Step C); and (ii) a brief environmental checklist to help manage potential impacts. A sample checklist is given in ESMS-Appendix 5.

D.3. Advise the applicant: (i) it is the responsibility of the applicant to arrange and pay for the IEE, EIAR, EIT or EIRF; (ii) the assessment must be prepared by an accredited EIA institute;

⁵⁸ See also: <http://www.adb.org/site/safeguards/safeguard-categories>

⁵⁹ See Section II.B for definition of “land use rights transfer”.

(iii) the assessment will be submitted to HTIC and PMO for review; (iv) for an IEE, the content will include the details listed in ESMS-Appendix 4 and include an English-language version; (v) for an IEE, PMO will submit the draft to ADB for review and approval; (vi) for the EIAR, EIT or EIRF, the contents will be in Chinese-language only and will be submitted to the local Ecology and Environment Bureau (EEB) for approval.

D.4. All domestic environmental assessment documents require the review and approval of the relevant county bureaus, including the EEB.

D.5. Preparing an IEE takes time and is expensive. The project will favor subprojects which are “Category C” and which only require domestic EIA documents (EIAR, EIT or EIRF).

D.6. If the applicant for a “Category B” subproject wishes to proceed, arrange a meeting between HTIC, PMO Environment and Social Officers, and applicant, and agree on: (i) the assessment process; and (ii) any changes in subproject design to achieve promotion of green agriculture and ecotourism development. HTIC will provide and (if necessary) pay for a venue for the meeting. For transport to/from the meeting, each party will pay for their own costs.

D.7. The applicant proceeds with preparation of the IEE (with EMP) and/or EIAR, EIT, or EIRT. The applicant is responsible for all costs of preparing the documents, including field surveys, baseline monitoring, and public consultation (see below).

Social assessments and preparation of mitigation actions

D.8. (i) If the proposed subproject involves land use rights transfer, the applicant must prepare a LURT agreement in accordance with the LURT Framework, and submit a copy to PMO and HTIC. (ii) If the proposed land has been the subject of any previous land transfer, the applicant must submit the LURT agreement and related evidence to confirm there are no pending disputes. Such due diligence will be done in accordance with the LURT Framework.

D.9. The subprojects should be implemented in accordance with the project Social Development Action Plan and Gender Action Plan (SDAP and GAP) that are included in the PAM. For the actions in the SDAP and GAP that are relevant to the subproject activities, HTIC will ensure the applicant implements them and reports on results, with assistance from PMO and LISC.

D.10. Include all relevant requirements (action) of the SDAP and GAP in the social conditions of the contract for the equity investment.

Information disclosure and public consultation and participation

D.11. For all subprojects, regardless of impact category, check with the applicant if they have publicized the proposed project within the project area.

D.12. If the answer is “no”, then inform the applicant that he or she must:

- publicize the basic project details – location, activities, potential impacts, contact details for the applicant, HTIC and PMO Environmental and Social Officers;
- publicize these details for at least 10 days to enable the general public sufficient time to submit any verbal or written comments;
- use disclosure materials and media which local communities near the project area can access e.g. signboard or poster in the village, website.
- at the end of the disclosure period, summarize any public comments received (by HTIC, PMO and/or applicant); and,
- address these comments in line with the EIT or EIRF or SDAP or GAP.

D.13. The applicant pays for the cost of the distribution materials.

D.14. For subprojects which are Category C for environment, involuntary resettlement and indigenous peoples, the above is sufficient.

D.15. For subprojects which are Category B for environment, ensure that the applicant undertakes information disclosure to the local community and meaningful public consultation. Instruct the applicant to tailor the scope and extent of information disclosure and public consultation to reflect the nature of the subproject and potential impacts, working also with the PMO Environment and Social Officers and EIA institute. The EIA institute preparing the IEE will coordinate the information disclosure and public consultation. The applicant will be responsible for the information disclosure and public consultation of relevant SDAP and GAP. The applicant pays for the costs and addresses any comments received.

D.16. Ensure that the applicant has: (i) submitted the draft IEE to PMO for disclosure on the PMO website; and (ii) publicized the draft IEE (or at least a Chinese-language summary) in the local media and/or village boards.⁶⁰

Endorsement by Government and ADB of the Documents

D.17. Include all information in Step D in the progress reports to PMO.

D.18. For all applications rated as category B for environment, submit the draft final IEE to the PMO and ADB for endorsement. The PMO will provide the documents to ADB. Do not proceed with the application until the Government and ADB has provided feedback and endorsement on the draft IEE.

D.19. Obtain and verify copies of other relevant documents and approvals for the application:

- local EEB approval and requirements;
- PMO concurrence of final subproject design; and,
- ADB approval of subprojects.

D.20. Do not proceed to Step E until Step D is fully completed.

STEP E: IMPLEMENT SAFEGUARD MEASURES

E.1. For the equity investment agreement with the applicant, prepare a Safeguard Commitment Letter (SCL), which lists all measures to be implemented by the applicant for mitigation, monitoring and reporting from the environmental assessments, SDAP and GAP as relevant.⁶¹ At this stage, the applicant is now a “qualified investee” i.e. is eligible to receive funding support under the Green Investment Fund.

E.2. The qualified investee begins the subproject, including the measures in the SCL. The qualified investee is responsible for paying these costs.

E.3. For subprojects which are “Category B” for environment, inform the qualified investee that if they hire a contractor: (i) the EMP, GRM, and Safeguards Commitment Letter must be

⁶⁰ The IEE will be submitted to ADB in English language. It will be based on the domestic environment assessment documents prepared in Chinese language.

⁶¹ Environmental impact mitigation measures are listed in the IEE Appendix 1: Environmental Management Plan. Many of the mitigation measures in the EMP for other project activities will be applicable to subprojects under the Green Investment Fund and ESMS. Social safeguard measures are listed in Step D.

included in the bidding documents; (ii) the contractor must agree to fulfill the EMP, GRM, and Safeguards Commitment Letter as a condition of accepting the contract, and should include the costs in their tender.⁶²

E.4. Support the PMO Environmental and Social Officers to implement the Grievance Redress Mechanism (GRM) throughout the implementation stage (see Section V).

E.5. Any changes to the design of the subproject that may potentially cause negative environmental impacts will be screened and assessed and additional environmental monitoring and/or mitigation measures will be developed as needed.

STEP F: MONITORING AND REPORTING

F.1. Monitor whether the qualified investee is implementing the measures in the Safeguards Commitment Letter.

F.2. Develop and maintain an internal FI recording system for the results of Steps A-F for each equity investment application and approved subproject. This should be a simple database (e.g. in excel).

F.3. For subprojects which require an IEE, an environmental monitoring plan is described in the EMP. This should be implemented by the qualified investee. The results should be reported to HTIC at the frequency described in the EMP.

F.4. The PMO is responsible for overall project monitoring of the SDAP and GAP implementation. The Loan Implementation Consultants will help the PMO to develop the monitoring and reporting mechanism.

F.5. During at least the first two years of the project, the following agencies meet every six months, and then at least annually from year 4 onwards:

- HTIC and qualified investee meet, to review progress against the equity investment contract conditions in the Safeguards Implementation Commitment; and,
- HTIC, PMO and relevant county bureaus, meet, to review safeguard compliance of all the subprojects being supported and lessons learned.

F.6. HTIC submits a semi-annual safeguard progress report to the PMO, which includes progress with HTIC's ESMS, GRM and safeguard training. Submission dates: for the report for January-June – submit by 31 July latest; for the report for July-December – submit by 31 January latest.

F.7. The PMO submits a semi-annual safeguard progress report to ADB, which includes progress with HTIC's ESMS. Submission dates: for the report on January-June – by 15 August latest; for the report on July-December – by 15 February latest (i.e. two weeks after HTIC submits its reports to the PMO).

F.8. The reporting procedure is shown in Figure III.1.

F.9. HTIC pays for the costs of internal ESMS monitoring and reporting. The PMO pays for the costs of preparing semi-annual progress reports to ADB.

F.10. **Penalties.** The failure of a qualified investee to implement the environmental and social

⁶² The bidding documents will show if the contractor has included costs for these conditions. A construction supervision company will monitor contractor performance.

requirements set out in the equity investment conditions will result in penalties e.g. equity investment foreclosure, accelerated repayments, and/or other measure deemed appropriate by HTIC and under PRC law.

Table III.1: Reporting Plan for ESMS

Report	Timing	Responsibility
For environment category B subproject, report on results of EMP implementation and monitoring	As required in the project EMP for reporting	Qualified investee submits to HTIC
HTIC semi-annual safeguard report to PMO, including ESMS progress, SDAP and GAP	Semi-annual. For January-June: by 31 July. For July-December: by 31 January	HTIC submits to PMO
PMO semi-annual safeguard report to ADB	Semi-annual. For January-June: by 15 August. For July-December: by 15 February	PMO submits to ADB. ADB reviews; discloses on ADB website

ADB = Asian Development Bank, HTIC = Huangshan Trust Investment Company, EMP = environmental management plan, ESMS = environmental and social management system, PMO= Huangshan Municipal project management office, SDAP = social development action plan, GAP = gender action plan.

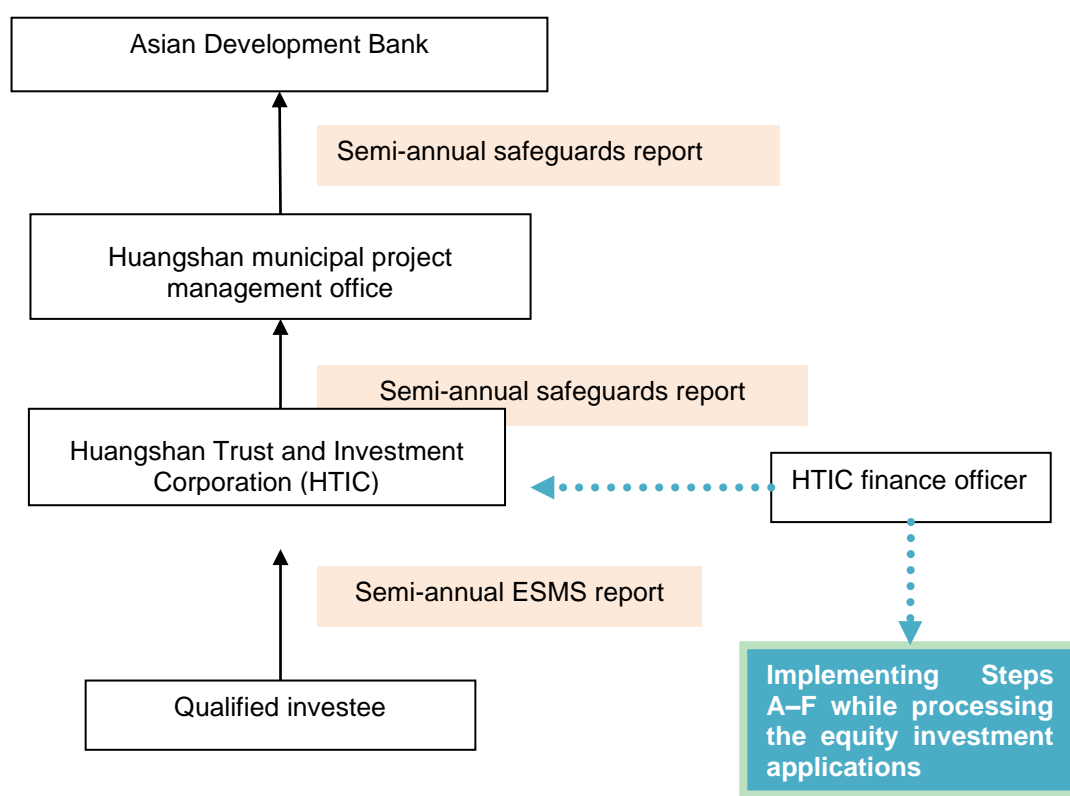


Figure III.1. Reporting Procedures for the Environmental and Social Management System

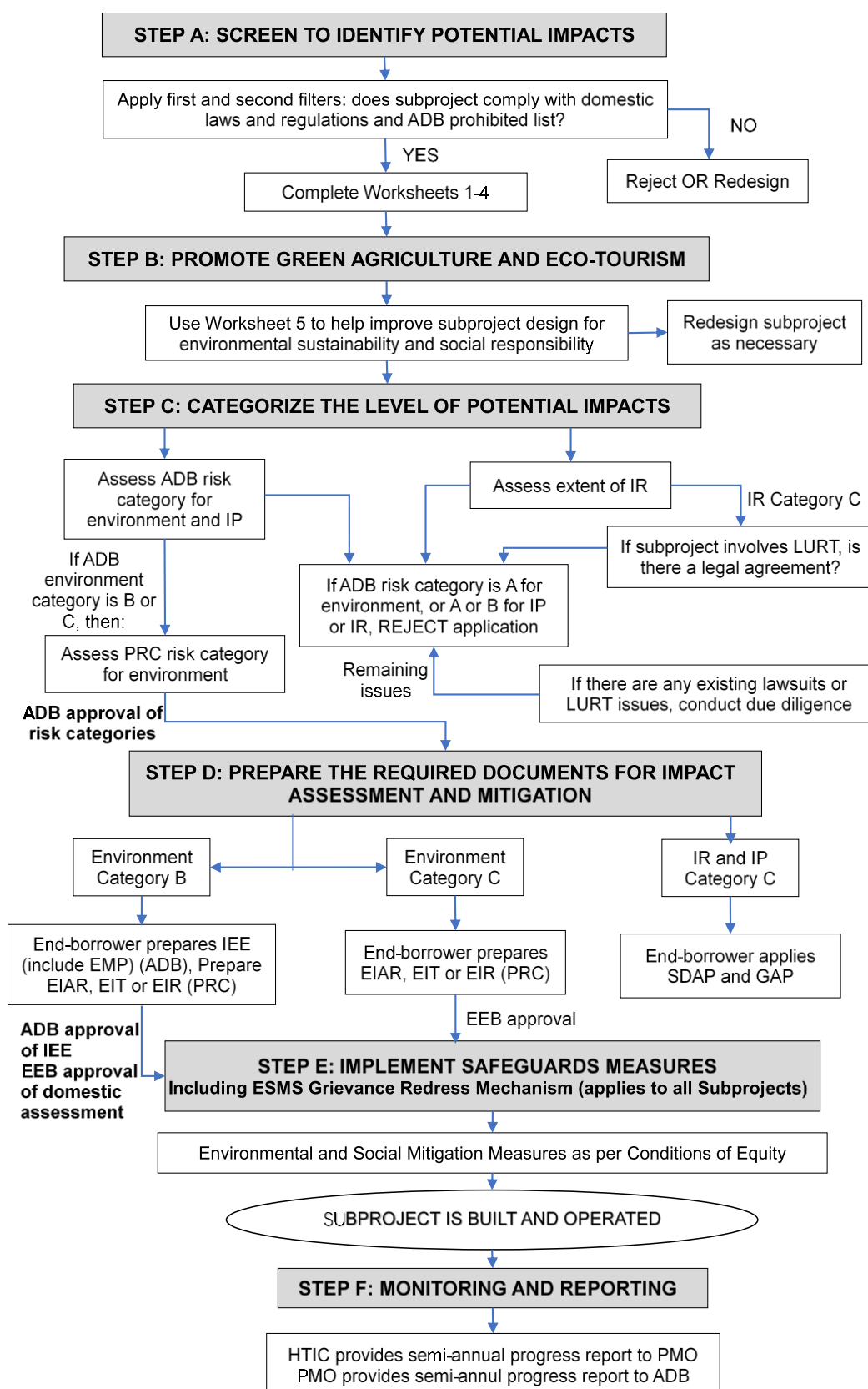


Figure III.2. Steps A–F of the Environmental and Social Management System

ADB = Asian Development Bank, EEB = ecology and environment bureau, EIAR = environmental impact assessment report, EIR = environmental impact report, EIT = environmental impact table, EMP = environment management plan, ESMS = environment and social management system, GAP = gender action plan, HTIC = Huangshan Trust Investment Company, IEE = initial environmental examination, IP = indigenous peoples, IR = involuntary resettlement, PMO = Huangshan Municipal project management office, PRC = People's Republic of China, SDAP = social and development action plan.

IV. INTEGRATION OF THE ESMS INTO FI BUSINESS PROCEDURES

A. Existing safeguard capacity and procedures of HTIC

20. The Huangshan Trust Investment Company (HTIC) is a state-owned enterprise (SOE), fully owned by Huangshan Municipality Government. It was incorporated in January 2016 in Huangshan Municipality, with a registered capital of CNY20 million. The business of HTIC covers investment management, investment consulting, and cooperate equity investment. HTIC is operating under PRC's commercial law and is financially autonomous. HTIC has a track record of operating funds and equity financing and is expected to provide a sound base for the Green Investment Fund.

21. The HTIC comprises a Board of Directors, a Management Committee, and seven departments: General, Legal, Human Resources, Business Operation, Risk, Finance, and Information Technology. As of August 2019, HTIC had 48 employees, comprising 5 managers, 11 administrative personnel and 32 business personnel. There are currently no staff with qualifications or experience in environmental or social safeguards.

22. When a loan application is received by HTIC, it is categorized as for “operating capital” or a “project”. If the investment is for a project (i.e. new construction or expansion or intensification of existing development), a feasibility study report (FSR) approved by the Development and Reform Commission (DRC; provincial or county level depending upon scale) is required. Before DRC will approve a FSR, an environmental assessment, approved by the Huangshan Ecology and Environment Bureau (EEB), must be obtained. The environmental approval is appended to the DRC approval.

23. The finance officer at HTIC receiving the application conducts the following safeguard due diligence: (i) whether the proposed application has DRC and environmental approvals; (ii) whether any land use rights are involved; (iii) whether any resettlement is involved; and (iv) preliminary assessment of potential impacts on livelihoods and welfare of people in the project area. Processing of the application does not proceed without the DRC and environmental approvals and/or if unresolved issues of land use rights transfer or resettlement are identified. Copies of the DRC and environmental approvals are held by HTIC. The current business procedure of HTIC in approving loan applications is summarized as follows:

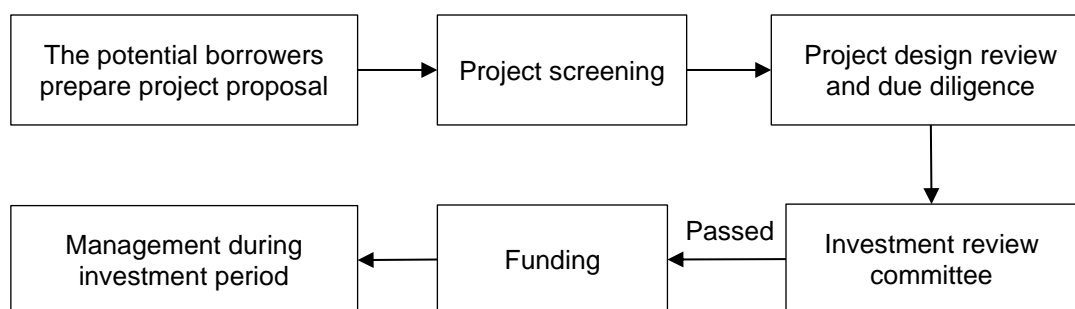


Figure IV-1 Current Business Procedures of HTIC for Investment Applications

24. As required under the PRC *Tentative Procedure of Project Completion Environmental Inspection and Acceptance for Construction Project (2017)*, within three months of project completion, the qualified investee or its commissioned technical agency assesses if the subproject has been constructed in compliance with the environmental approval conditions; submits related documents to the Huangshan EEB; and uploads required information onto the national project completion environmental acceptance platform. EEB is responsible for supervision. HTIC is not involved in this step. If the subproject is not compliant, the qualified

investee is required to take corrective actions. Without this it will not obtain final environmental approval and cannot become operational.

25. Monitoring by HTIC during the duration of an equity investment includes site visits and meetings with the management and chief accountant of the qualified investee, one to two times in the first month and subsequent inspections dependent on the risk judgment of the HTIC finance officer. There is no monitoring of safeguards.

B. Integrating the ESMS

26. HTIC has clarified that there are no existing policies or practices within its operations which would constrain the adoption and implementation of the ESMS. To establish the ESMS and ensure its operation, HTIC will recruit one qualified environment officer and one qualified social officer. These personnel will facilitate the establishment of the ESMS and integration into the existing HTIC business procedures, and, support the HTIC finance officers to complete the ESMS requirements for individual loan applications.

27. To integrate the ESMS into the HTIC business procedures, HTIC will issue a formal Presidential Directive at least three months prior to establishing of the Green Investment Fund and receiving loan proceeds from the project. This period also includes prior review and approval of HTIC's ESMS by the PMO and ADB.

28. This Directive will:

- i. officially recognize the ESMS as HTIC policy in the project districts and counties from the date of the Directive;
- ii. instruct the finance officers of the Green Investment Fund that the ESMS steps are now part of equity investment assessment and approval procedures;
- iii. identify by name and position the managerial and review arrangements for steps and decisions taken while implementing the ESMS;
- iv. confirm that breaches of environmental and social conditions by qualified investees will be treated by HTIC in the same way as breaches in other loan conditions – attracting similar penalties;
- v. confirm the working relationship between HTIC and PMO and its loan implementation consultants;
- vi. ensure the wide dissemination within HTIC of Chinese-language ESMS documents;
- vii. instruct finance officers to print copies of the ESMS Workbook (ESMS-Appendix 3) to use in the field and fill out as part of their duties; and,
- viii. commit to the training plan in the ESMS by facilitating HTIC officers' attendance at training courses as required.

29. At least three months before the first equity investment disbursement, HTIC will recruit the HTIC environment officer and social officer. These officers will oversee the ESMS implementation. They will work directly with the HTIC finance officers to guide their activities, undertake regular checks of ESMS implementation internally, and provide and participate in the training. They will prepare the ESMS progress reports for submission by HTIC to the PMO. The HTIC environment officer and social officer will also work with the LIEC and LISC to establish the ESMS.

30. Upon receipt of an application for an equity investment, a HTIC finance officer will commence the safeguard screening procedure. The screening and categorizing will be integrated into the initial site visit and due diligence examination of the equity investment application. After the qualified investee has completed the required assessments, impact mitigation measures and other relevant actions will be formulated as contractual conditions and signed by the qualified investee in a Safeguards Commitment Letter. As far as possible, the same HTIC finance officer (to maintain consistency) will check if the measures have been fully and properly undertaken as part of HTIC's internal monitoring of individual equity investments that are being implemented.

31. Where a subproject needs to be redesigned, the HTIC finance officer will discuss with the qualified investee and consult with the HTIC environment and social officers, and other technical personnel as needed (e.g. agricultural extension staff of the local Agriculture Bureau) and PMO to guide the re-design. After re-design, the application will progress step by step through the ESMS procedures as before.

32. During the project implementation period (six years), HTIC will receive technical support from the LIEC and LISC to implement the ESMS and overall monitoring from the PMO and ADB. The maximum potential life of the Green Investment Fund is estimated to be about 15 years (assuming no future replenishments; and pending capital expenditures and success during implementation of the ADB-funded project). Therefore, it is possible the Green Investment Fund might continue to be implemented for another 10-11 years after completion of the ADB-funded project. This future phase of the Green Investment Fund might not be subject to ADB guidance or technical or financial support. At this early stage, there is no viable mechanism to ensure the HTIC will continue to implement the ESMS after the project. The success of the ESMS will be assessed by the government, HTIC, and ADB during project implementation and the ADB project completion report (one year after project completion) and recommendations for future management will be identified as relevant.

V. GRIEVANCE REDRESS MECHANISM

33. The project includes a Grievance Redress Mechanism (GRM) to identify, address and resolve any public concerns for environmental and/or social issues of the project activities. The GRM comprises a series of steps to receive, document, and address the concerns of any affected persons. The GRM is accessible to all members of the community. Multiple entry points are available, as well as multiple ways to convey issues/ grievances including face-to-face meetings, written complaints, telephone conversations, e-mail, and social media. The GRM will be implemented for the 6-year life of the project.

34. The PMO Environmental and Social Officers and HTIC Environmental and Social Officers will be the lead coordinators for GRM implementation. All project related staff will be trained in the GRM and will take an active role in supporting these officers as and when necessary.

35. At the PMO level, the PMO Environmental Officer and Social Officer will establish a GRM tracking and documentation system, conduct daily coordination with the FI's officers, arrange meetings and conduct site visits as necessary, maintain the overall project GRM database, and prepare the reporting inputs for progress reports to ADB. Within HTIC, the environment and social officers will instruct qualified investees, contractors and construction supervision companies (CSCs) on the GRM procedures, and coordinate with the local EEBs and other government divisions as necessary. PMO and HTIC staff will be trained and supported by the LIEC and LISC.

36. The contact persons for different GRM entry points, such as the PMO and HTIC

Environmental and Social Officers, contractors, operators of project facilities, and local EEBs, will be identified prior to construction. The contact details for the entry points (phone numbers, addresses, e-mail addresses) will be publicly disclosed on information boards at construction sites and on the websites of the local EEBs.

37. Once a complaint is received and filed, the PMO and HTIC officers will identify if complaints are eligible for management under the GRM. Eligible complaints include those where (i) the complaint pertains to the subproject; and (ii) the issues arising in the complaint fall within the scope of ESMS issues that the GRM is authorized to address. Ineligible complaints include those where: (i) the complaint is clearly not project-related; (ii) the nature of the issue is outside the mandate of the ESMS GRM (such as issues related to allegations of fraud or corruption); and (iii) other procedures are more appropriate to address the issue. Ineligible complaints will be recorded and passed to the relevant authorities, and the complainant will be informed of the decision and reasons for rejection.

38. HTIC will support the PMO to implement the GRM, including immediate reporting to the PMO of any grievance issues identified. Other key agencies that will support the PMO to implement the GRM are the county EEBs, township governments, and village committees.

39. The PMO will provide progress of the GRM in the semi-annual environmental and social progress reports to ADB.

40. The PMO Environmental and Social Officers coordinate the GRM and work directly with the HTIC Environmental and Social Officers responsible for the ESMS, to handle complaints and implement corrective actions.

41. The following scheme outlines the main elements of the GRM. It will be reviewed during project implementation by the LIEC and LISC and revised if necessary.

42. The procedure for the GRM involves two pathways: environmental issues (three stages) and social (ethnic minority and LURT) issues (four stages) (Figure V.1 and Figure V.2). Upon receiving a complaint, a project agency will report it immediately to HTIC and PMO. The PMO Environment and Social Officers will assess which GRM (environment or social) is to be applied.

43. **Environmental Issues (three stages).** Note that the design of the environmental GRM is similar to the overall project GRM (described in the IEE Appendix 1: EMP), but places more responsibility in stages 2 and 3 on HTIC rather than PMO. This is to help build accountability and self-sufficiency within HTIC and to further embed the ESMS procedures into HTIC operations.

- **Stage 1 (5 calendar days):** If a concern arises during construction or operation, the affected person may submit a written or oral complaint to the contractor or equity investment owner, family (if onsite) or representative. The person receiving the complaint will: (i) respectfully acknowledge the issue and immediately stop the causal activity (e.g. on-site construction causing high noise levels to a nearby household); (ii) not resume the activity until the complaint has been resolved; (iii) inform the PMO and HTIC finance officer of the incident on the same day of the incident occurring and how the contractor has responded or will respond; (iv) give a clear reply to the affected person within two calendar days; and (v) as far as possible, resolve the problem within five calendar days from receiving the complaint. In stage 1, the contractor (or other persons receiving the complaint) will as far as possible resolve the issue directly with the affected person. The contractor will keep the HTIC finance officer fully informed at all stages. The HTIC will: inform the PMO, local village committee, and local EEB of the incident within one working

day of being informed by the contractor; and, subsequently keep the PMO informed at all stages.

- **Stage 2 (5 calendar days):** If the issue cannot be resolved in Stage 1, after five calendar days, the HTIC finance officer and environmental and social officers, with support and facilitation by the PMO, will take over responsibility. Eligibility of the complaint will be assessed and a recommended solution given to the complainant and contractors within two calendar days. If the solution is agreed by the complainant, the contractors and/or facility operators (in operation) will implement the solution within five calendar days from HTIC taking over responsibility of the complaint. Written records will be made of all stages and outcomes. At the expiration of Stage 2, PMO will inform ADB of the outcome.
- **Stage 3 (15 calendar days):** If no solution can be identified by HTIC, and/or the complainant is not satisfied with the proposed solution, HTIC will organize, within seven (7) calendar days, a stakeholder meeting. This will include the complainant, contractor and/or operator of the facility, EEB, and PMO. A solution acceptable to all shall be identified including clear steps. The contractors (during construction) and facility operators (during operation) will immediately implement the agreed solution. All attempts will be made to fully resolve the issue within 15 calendar days. Written records will be made of all stages and outcomes. At the expiration of Stage 3, PMO will inform ADB of the outcome.

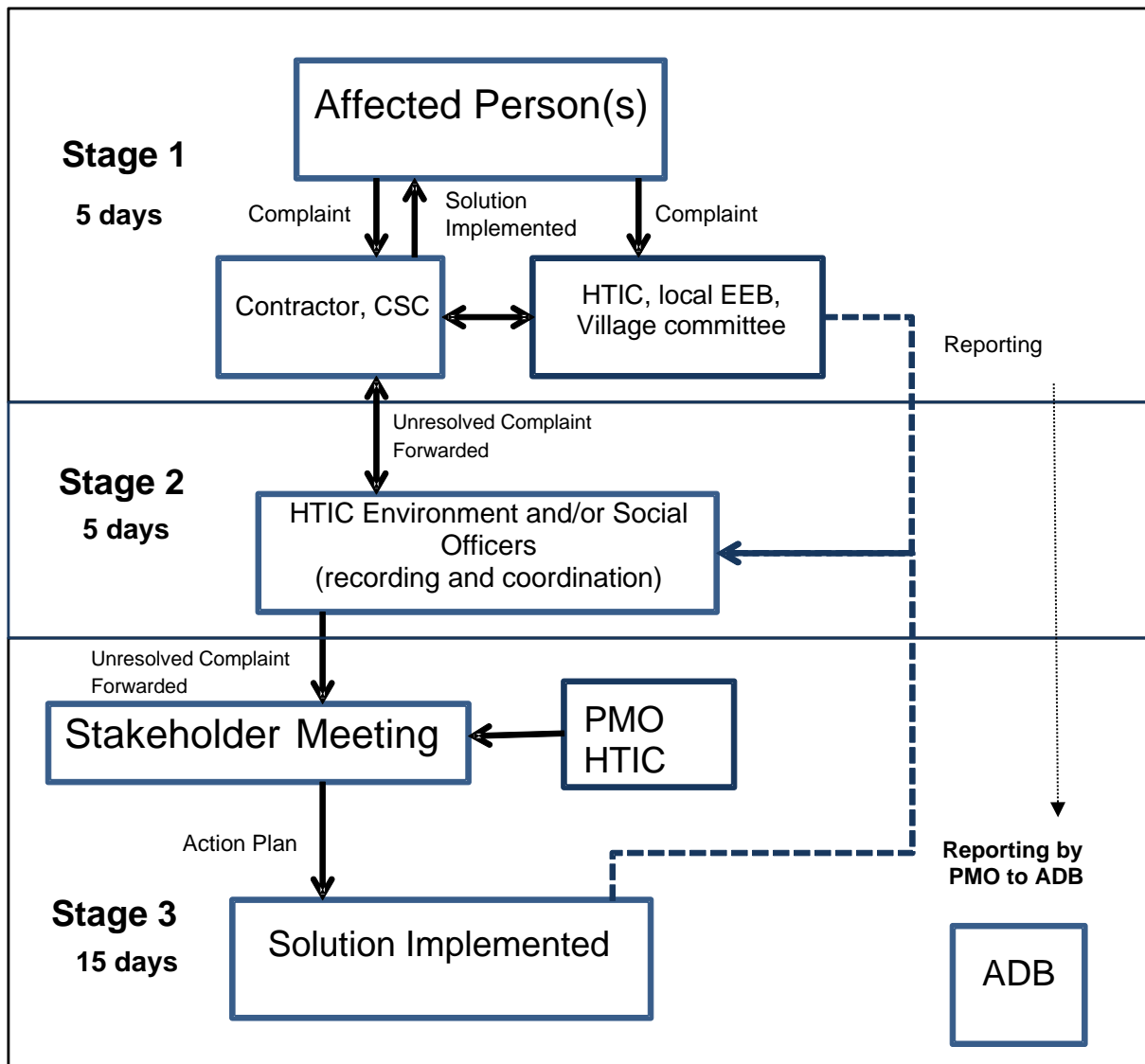


Figure V.1: The Grievance Redress Mechanism for Environment Safeguards

ADB = Asian Development Bank, CSC = construction supervision company, EEB = ecology and environmental bureau, GRM = grievance redress mechanism, HTIC = Huangshan Trust Investment Company, PMO = Huangshan Municipal project management office.

44. The GRM does not affect the right of an affected person to submit their complaints to any agency they wish to, for example the local village committee, community leaders, courts, PMO, HMG, district/county government, and/or ADB. At any time in the GRM, affected persons may also contact the local courts and/or ADB East Asia Department. The GRM does not affect public rights under the PRC *Regulations on Letters and Visits* (ESMS-Appendix 1), which requires a complaint acceptance mechanism at all levels of government and protects complainants from retaliation. If the complaint is still unresolved after all stages, the affected person and/or PMO may refer to the ADB Accountability Mechanism.⁶³

45. All stages of the GRM are time-bound with maximum periods set for advising, finding and implementing corrective actions. All complaints and processes are documented and reported to the ADB in the semi-annual PMO safeguard progress reports.

46. HTIC shall bear any and all costs of implementing the ESMS GRM, including meeting,

⁶³ See: www.adb.org/accountability-mechanism

travel, and/or accommodation costs of the project staff or affected person. The HTIC finance officer and environmental and social officers shall pay close attention to subproject design and implementation to ensure that complaints are minimized.

47. Land use rights transfer issues (four stages).

Stage 1: Complaints are submitted to the village committee. In case of an oral appeal, the village committee shall make a written record. The village committee shall make a decision to resolve the problem within 15 days.

Stage 2: If the affected person is dissatisfied with Stage 1, they may file an appeal to the township government. The township government shall make a decision to resolve the problem within 15 days.

Stage 3: If the affected person is dissatisfied with Stage 2, they may file an appeal to the county/district government and HTIC, who shall resolve the issue within 20 days.

Stage 4: If the affected person is dissatisfied with Stage 3, they may file for arbitration in the Rural Land Use Rights Transfer Disputes Tribunal for final resolution.

At each stage, the receiving agency will report the complaint, and progress resolving it, to the PMO. HTIC will send consolidated reports on GRM activity to the PMO for semi-annual reporting.

Based on the PRC *Law on Mediation and Arbitration of Rural Land Contract Disputes*, charges for disputes arbitration of rural land contracts are not allowed. Reasonable expenses will be paid by the local government.

48. Ethnic minority safeguard issues (four stages).⁶⁴

Stage 1: If the affected people are dissatisfied with the project, they can make either oral or written complaint to the village committee or cultural leaders; if they use verbal complaints, the community committee or cultural leader should handle and record it. Complaints will be addressed within 15 days.

Stage 2: If the complainant is not satisfied with the result of the first phase, he/she can appeal to the township government after receiving the result; the township government should make decision within 15 days.

Stage 3: If the complaint is not satisfied with the result of the second phase, he/she can appeal to HTIC after receiving the result; HTIC should make decision within 30 days.

Stage 4: If the complainant is not satisfied with the results of any above phases, he/she can appeal to the government departments applying for administrative reconsideration after receiving the result.

⁶⁴ <http://www.adb.org/Accountability-Mechanism/default.asp>.

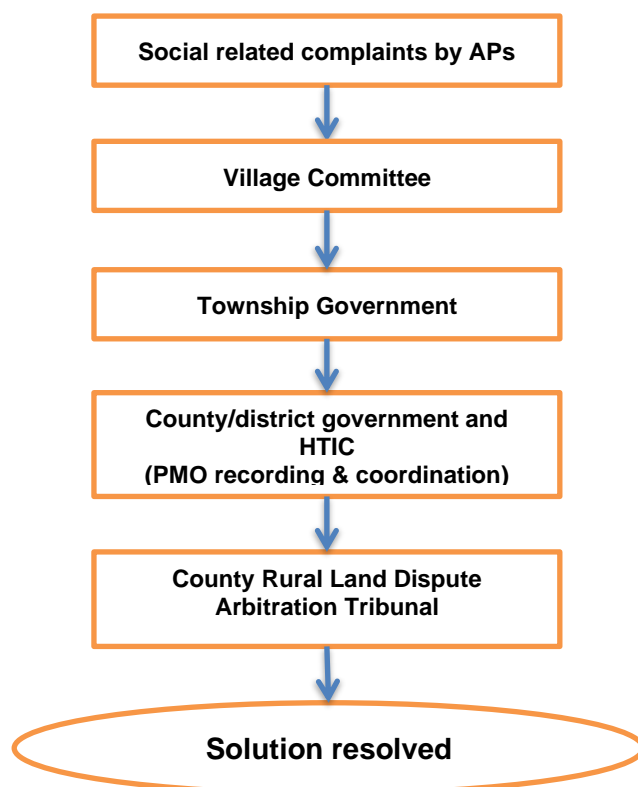


Figure V.2: The Grievance Redress Mechanism for Social Safeguards

AP = affected person, HTIC = Huangshan Trust Investment Company, PMO = Huangshan Municipal project management office.

VI. CAPACITY BUILDING AND TRAINING

49. The capacity of HTIC to implement the ESMS is currently low. Prior to the project, HTIC had no staff qualified in environmental or social management or safeguards. The PMO will work with HTIC to implement the ESMS over the 6 years of the project life. The project includes a training program (Table VI.1) to build capacity of HTIC, with the aim that HTIC can independently conduct the following without PMO or ADB support after the first five years of the project: (i) implement the ESMS; (ii) understand the principles and practice of environmental and social impact assessment in the agriculture and ecotourism sectors; and (iii) incorporate green agriculture and ecotourism best practices into project design to minimize potential environmental and social adverse impacts. Most training will occur within the first two years of the project. Training will be conducted by the loan implementation environment consultant (LIEC) and loan implementation social consultant (LISC) (see terms of reference in EMP Appendix 1-1 and the PAM), supported by other technical loan implementation consultants.

Table VI.1: Five-year training program for the ESMS.

Includes a mid-term review of the ESMS and grievance redress mechanism in Year 3.

Trainees	Training	Trainer	Year 1	Year 2	Year 3	Year 4	Year 5	Cost (CNY x10,000)
HTIC staff	Maintain and implement ESMS	LIEC, LISC	Full-time	tbc	tbc	tbc	tbc	tbc
PMO, HTIC staff	Maintain and implement GRM	LIEC, LISC	Full-time	tbc	tbc	tbc	tbc	tbc

PMO, HTIC staff	Implement ESMS Steps A–F (screening, design, categorization, impact assessment); and inclusion of safeguards into equity investment contracts (mitigation, monitoring, reporting, SDAP, GAP, land transfer)	LIEC, LISC	Full-time	Full-time	tbc	tbc	tbc	tbc
PMO, HTIC staff	ESMS monitoring and reporting– spreadsheet data, HTIC reporting to PMO; reporting by PMO to ADB	LIEC, LISC	Full-time	Semi-annually	tbc	tbc	tbc	tbc
PMO and HTIC environmental and social officers	Introduction to environmental and social impact assessment in the agriculture and tourism sectors	LIEC, LISC	Full-time	Quarterly	Semi-annual	tbc	tbc	tbc
HTIC staff, qualified investees	Introduction to best practices for green agriculture and ecotourism design	LIC	Full-time	Full-time	tbc	tbc	tbc	tbc
PMO, HTIC staff	Mid-term review of ESMS – progress, challenges, lessons learned	LIEC, LISC	0	0	tbc	0	0	In-kind support

ESMS = environmental and social management system, GRM = grievance redress mechanism, HTIC = Huangshan Trust Investment Company, LIC = loan implementation consultant, LIEC = loan implementation environmental consultant, LISC = loan implementation social consultant, PMO = Huangshan Municipal project management office, SDAP = social development action plan, GAP = gender action plan; tbc = to be confirmed.

VII. PROJECT ASSURANCES

50. HTIC and implementation of the ESMS will be subject to loan- and project-specific assurances to support efficient and timely project management. The loan assurances are described in Section X of the IEE. Refer to the loan and project agreements for the final wording of the assurances.

VII. ESMS-APPENDIX 1. LEGISLATION AND POLICIES

Table 1: PRC Laws and Regulations on Agriculture, Environment and Social Issues Relevant to the ESMS

Laws, Regulations and Standards	Relevance to Project
ENVIRONMENT PROTECTION AND PLANNING and LAND USE MANAGEMENT	
Environmental Protection Law (2015, amended)	Subprojects avoid any significant environmental impact.
Land Administration Law (2004, amended)	Subprojects comply with provincial, county and local land use plans, which are made to protect and develop land resources.
Noise Pollution Prevention and Control Law (2018, amended)	Noise during construction and operation of the proposed subprojects to be mitigated or avoided.
Water Pollution Prevention and Control Law (2018, amended)	Water pollution during construction and operation of the proposed subprojects to be mitigated or avoided.
Air Pollution Prevention and Control Law (2018, amended)	Air pollution during construction and operation of the proposed subprojects to be mitigated or avoided.
Solid Waste Pollution Prevention and Control Law (2016, amended)	Solid waste pollution during construction and operation of the proposed subprojects to be mitigated or avoided.
ENVIRONMENTAL IMPACT ASSESSMENT	
Environmental Impact Assessment Law (2018, amended)	Overarching law for EIA, setting out procedures for EIA and approvals needed before construction.
Management Regulation on EIA Categories of Construction Projects (2018)	Defines assessment and reporting requirements for three EIA classes, based on scale, investment level, and

Laws, Regulations and Standards	Relevance to Project
	environmental sensitivity: comprehensive environmental impact assessment report (EIAR); environmental impact table (EIT); and, environmental impact registration form (EIRF). See Table 2. All subprojects are expected to require EIT or lower.
Regulation on Public Participation of Environmental Impact Assessment (2017)	Guideline and requirement for conducting public participation and consultation during the environmental impact assessment of a project
Provisional Methods of Management of Projects Financed by International Financial Institutions and Foreign Governments (2005)	Project funds are sourced from an international organization (ADB), the provisions of this method apply for aspects of the environmental impact assessment.
Technical Guideline for EIA: General principle (HJ 2.1-2016)	Guideline for conducting EIA preparation. Provides information on the scope and content of environmental impact assessment.
Technical Guideline for EIA: Surface Water (HJ/T 2.3-2018)	Guideline for surface water pollution prediction and analysis for projects where wastewater discharge is a potential impact.
Technical Guideline for EIA: Atmospheric Environment (HJ2.2-2018)	Guideline for air pollution prediction and analysis for projects where gaseous emissions are a potential impact.
Technical Guideline for EIA: Acoustic Environment (HJ2.4-2009)	Guideline for noise level prediction and analysis for impact assessments.
Technical Guideline for EIA: Ecological Impact Assessment (HJ19-2011)	Guideline for ecological impact prediction and analysis for impact assessments.
Technical Guideline for EIA: Groundwater Environment (HJ 610-2016)	Guideline for groundwater pollution prediction and analysis for impact assessments.
WATER	
Water Law (2016)	Regulation and management of water resources.
Environmental Quality Standard for Surface Water (GB 3838-2002)	Assigns a water quality class to waterbodies according to their use. There are 5 classes, ranging from I (drinking water) to V (industrial use only). Waterbodies in subprojects will be classed to assess the permitted use of the water and discharge of wastewater.
Environmental Quality Standard for Groundwater (GB/T14848-2017)	Standards for groundwater quality which must be maintained.
Water Pollution Prevention and Control Law (2018, amended)	Enabling legislation for rules and regulations preventing water pollution.
Regulation on Pollution Prevention of Drinking Water Source (2010)	Sets aside areas adjoining drinking water sources to protect water quality. Subprojects should not be within or bordering these zones.
Measures on Monitoring of Pollutant Discharge Outlets Entering Rivers (2015, amended)	Environmental monitoring in the wastewater discharge outlet may be required for the subproject if necessary.
Integrated Wastewater Discharge Standard (GB 8978-2002)	Requirements for wastewater discharge.
Water Quality Standard for Sewage Discharged into Municipal Sewers (CJ343-2010)	Wastewater should not be discharged to municipal wastewater treatment plant if indicators exceed the limits in this standard.
Regulations for Water Extraction Permitting and Collection of Water Resource Fees (2017, amended)	Subprojects need to obtain water resource extraction permission from local BWR before accessing water resource.
SOIL	
Water and Soil Conservation Law (2010, amended 2011)	Provisions to combat soil erosion and land degradation in construction and agriculture.
AIR	
Air Pollution Prevention and Control Law (2018, amended)	Enabling legislation for rules and regulations preventing air pollution.
Emission Standards for Odor Pollutants (GB 14554-1993)	Limits for odors from enterprises and activities.
Integrated Emission Standard for Air Pollutants (GB 16297-1996)	Limits for air pollutants emission from enterprises and activities.
Technical Guidelines for Fugitive Emission Monitoring of Air Pollutants (HJ/T 55-2000)	Guidance on how to predict and measure air pollutants for environmental impact assessments.
Ambient Air Quality Standard (GB3095-	Standards for ambient air quality of an area (urban, rural,

Laws, Regulations and Standards	Relevance to Project
2012)	industrial etc.)
SOLID WASTE	
Solid Waste Pollution Prevention and Control Law (2016, amended)	Requirements for solid waste handling and disposal. To be used for management measures in subprojects.
Classification and Assessment Standards for Municipal Solid Waste (CJJ/T 102-2004)	Solid waste quality and contamination limits for a range of permissible disposal options.
FLORA, FAUNA, AND CULTURAL RESOURCES	
Wild Animal Protection Law (2018, amended)	Protection of listed fauna and flora. Subprojects must ensure they do not threaten any animals on the lists.
Cultural Relics Protection Law, 2011	Procedures to record, protect any relics found during construction.
SOCIAL DEVELOPMENT / SAFEGUARDS	
Law on Protection of the Rights and Interests of Women (2018, amended)	Protection of employment, welfare, occupational health and workplace equality of women; equal rights for allocation of farmland and approval of housing sites in rural areas. These rights endure after marriage or divorce.
Decree 431– Regulation on Letters and Visits (2005); Decree 34 – Measures on Environmental Letters and Visits (2006)	Codifies a complaint acceptance mechanism at all levels of government and protects the complainants from retaliation.
LAND	
Land Contract Law for Rural Areas (2019, amended)	Legislative requirements covering all land contract signing.
Law on Arbitration and Dispute over Management of Contracted Rural Land (2009)	Enabling law setting up an arbitration system for disputes in land transfers.
Administration Methods on Rural Land Use Rights Transfer, Ministry of Agriculture, 2005	Land use right transfers to follow this guideline.
Arbitration Rules of Disputes over Management of Contracted Rural Land, Ministry of Agriculture and State Forestry Administration, 2010	Provides rules and procedures for resolving disputes in cases of land use right transfer.
Provincial, county and local land use plans	Plans to be consulted to ensure that proposed subprojects are not prohibited or constrained in the site locality and do not cause land use conflicts with adjoining uses.

Table 2. PRC EIA documentation requirements for agricultural and ecotourism activities.

Type of subproject	EIAR	EIT	EIRF
Agricultural reclamation	N/A	Affecting an environmentally sensitive area	Others
Agricultural base project (including medicinal herb base)	N/A	Affecting an environmentally sensitive area	Others
Economic forest base project	N/A	Involving raw material forest	Others
Park development	Super large-scale and large-scale theme park	Others	City park and botanic garden
Tourism development	Construction of cable car or cableway in environmentally sensitive area; maritime entertainment, sports and landscape exploitation.	Others	N/A

Source: Directory for the Management of Different Categories of Construction Project Environmental Impact Assessment (2018). EIAR = environmental impact assessment report; EIT = environmental impact table; EIRF = environmental impact registration form. N/A = not applicable.

VIII. ESMS-APPENDIX 2. ADB LIST OF PROHIBITED INVESTMENT ACTIVITIES

The use of ADB funds is strictly prohibited for the following activities (ADB Safeguard Policy Statement, 2009).

11. Production or activities involving harmful or exploitative forms of forced labor⁶⁵ or child labor.⁶⁶
12. Production of or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements or subject to international phase-outs or bans, such as (a) pharmaceuticals,⁶⁷ pesticides, and herbicides,⁶⁸ (b) ozone-depleting substances,⁶⁹ (c) polychlorinated biphenyls⁷⁰ and other hazardous chemicals,⁷¹ (d) wildlife or wildlife products regulated under the Convention on International Trade in Endangered Species of Wild Fauna and Flora,⁷² and (e) transboundary trade in waste or waste products.⁷³
13. Production of or trade in weapons and munitions, including paramilitary materials.

⁶⁵ All work or services not voluntarily performed i.e. extracted from individuals under threat of force or penalty.

⁶⁶ Employment of children whose age is below the host country's statutory minimum age of employment, or, in contravention of International Labor Organization Convention No. 138 "Minimum Age Convention" (www.ilo.org).

⁶⁷ A list of pharmaceutical products subject to phaseouts or bans is available at <http://www.who.int>.

⁶⁸ A list of pesticides and herbicides subject to phaseouts or bans is available at <http://www.pic.int>.

⁶⁹ A list of the chemical compounds that react with and deplete stratospheric ozone resulting in the widely publicized ozone holes is listed in the Montreal Protocol, together with target reduction and phaseout dates. Information is available at <http://www.unep.org/ozone/montreal.shtml>.

⁷⁰ A group of highly toxic chemicals. Likely to be found in oil-filled electrical transformers, capacitors, and switchgear dating from 1950 to 1985.

⁷¹ A list of hazardous chemicals is available at <http://www.pic.int>.

⁷² A list is available at <http://www.cites.org>.

⁷³ As defined by the Basel Convention; see <http://www.basel.int>.

14. Production of or trade in alcoholic beverages, excluding beer and wine.⁷⁴
15. Production of or trade in tobacco.
16. Gambling, casinos, and equivalent enterprises.
17. Production of or trade in radioactive materials,⁷⁵ including nuclear reactors and components thereof.
18. Production of, trade in, or use of unbonded asbestos fibers.⁷⁶ NOTE: see project-specific assurance (ESMS Section VII) for use of asbestos.
19. Commercial logging operations or the purchase of logging equipment for use in primary tropical moist forests or old-growth forests.
20. Marine and coastal fishing practices, such as large-scale pelagic drift net fishing and fine mesh net fishing, harmful to vulnerable and protected species in large numbers and damaging to marine biodiversity and habitats.

⁷⁴ Does not apply to project sponsors who are not “substantially involved” in these activities i.e. the activity concerned is ancillary to a project sponsor's primary operations.

⁷⁵ Does not apply to the purchase of medical equipment, quality control (measurement) equipment, and any equipment for which ADB considers the radioactive source to be trivial and adequately shielded.

⁷⁶ Does not apply to purchase and use of bonded asbestos cement sheeting where the asbestos content is <20%.

IX. ESMS-APPENDIX 3. WORKBOOK FOR SCREENING AND CATEGORIZING SUBPROJECTS

This workbook comprises five worksheets. The worksheets are to be filled out by HTIC staff in consultation with the qualified investee.

The workbook can be printed out and carried into the field by HTIC staff, for site assessments and discussions with applicants. The workbook is retained by HTIC in their records for each equity investment application.

Each subproject is recorded in a separate workbook. Complete the details below.

Name of FI	Huangshan Trust Investment Company
Subproject title (name of entity)	
Name of equity investment applicant	
Name of applicant (if same as applicant write "as above")	
Information on the proposed subproject	
Proposed subproject activity	
County	
Town/Township	
Village	
Date of site visit	
Name of assessor	
Geographic coordinates (if available)	
If the subproject is a production base (otherwise write "not applicable"):	
Area of production base	
# farmer households involved	
#farmers involved	
# poverty households involved	
# poverty people involved	
# EM households involved	
# EM people involved	
Name of ethnic minority group	
# women involved	
Notes:	

EM = Ethnic minority, HTIC = Huangshan Trust Investment Company.

A. WORKSHEET 1: Rapid Environmental Assessment Checklist

1. Answer the first question (“Will it happen?”) assuming that no mitigation measures will be conducted. The purpose is to identify potential impacts.
2. If the answer is “Yes” then fill out the next two columns, “is it irreversible?” and “can it be minimized?”
3. If the answer is “No” then place a “C” in the final column.
4. The first three columns (“will it happen?”, “is it irreversible?”, “can it be minimized?”) should be filled out by discussions with the applicant and a site inspection.
5. The final column refers to the ADB categories “A”, “B” and “C” for environmental impacts. They are defined below. Use these definitions to decide on the category.

Category A. Subproject likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. Impacts may extend beyond the subproject sites. Environmental impact assessment (EIA) including environmental management plan (EMP) is required. Examples: conversion of wetlands; subprojects in or next to protected areas; large scale pollution of water resources.

Category B. Potential adverse environmental impacts are site-specific, few if any are irreversible. In most cases mitigation measures can be designed more readily than for Category A subprojects. Initial environmental examination (IEE) including EMP is required. Examples: crop farming on land already used for the same crop type; farming which does not result in increased pressure on water resources.

Category C. Subproject likely to have minimal or no adverse environmental impacts. EIA or IEE not required. Environmental implications need to be reviewed. Examples: construction of small offices, financing, training, or planning activities.

Screening and Impact Questions	Will it happen? Y/N	If YES		ADB Category
		Is it irreversible? Y/N	Can it be minimized?	
project Siting				
Is project in or next to (i) a cultural heritage site, (ii) a protected area, (iii) wetland or (iv) special area for protecting biodiversity?				
Is siting of the project likely to be affected by climate conditions including extreme weather-related events such as floods, droughts, storms, landslides?				
Potential Environmental Impacts				
Will the project cause...				
• damage to historical/cultural areas or physical cultural resources?				
• disturbance to precious ecology (e.g. sensitive or protected areas)?				
• alteration of surface water hydrology of waterways resulting in increased sediment in streams affected by increased soil erosion at construction site?				
• deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?				
• increased air pollution due to project construction and operation?				
• noise and vibration due to project construction or operation?				

Screening and Impact Questions	Will it happen? Y/N	If YES		ADB Category
		Is it irreversible? Y/N	Can it be minimized?	
• generation of solid waste and/or hazardous waste?				
• use of chemicals?				
• generation of wastewater during construction or operation?				
In land leveling and other earthworks as necessary will there be:				
• construction dust and erosion				
• loss of micro-habitat for local biodiversity				
• changes to local drainage				
In the upgrade or establish irrigation system, including wells, canals, pipes. Installation of quota irrigation systems will there be:				
• Unsustainable use of local water resources				
• Water use conflicts				
• Cumulative impacts on limited water resource				
For construction of livestock pens and other livestock structures will there be problems with:				
• location (too close to residences / waterways)				
• construction impacts - dust, noise				
• operational impacts – noise, odor				
In electricity use for machinery, greenhouses, pumps, ventilation will there be:				
• GHG emissions from electricity use				
• GHG emissions and flue gas emissions from on-site electricity generator				
In the establishment of on-site wells for process water and drinking water will there be:				
• unsustainable use of local water resources				
• water use conflicts				
• cumulative impacts on limited water resource				
For handling, transport, and storage of materials and inputs of seeds, seedlings, fertilizers and chemicals will there be:				
• application of chemicals and fertilizer not carefully managed - increased volumes enter soil and water				
• noise, dust, pollution from haulage, handling and storage of materials				
• extensive residue of plastic mulch material in soil and water				
• loss of crop diversity and self-sustaining household plots				
In the collection, treatment, disposal / reuse processes built as part of the facilities will there be:				
• pollution of land and rivers from wastewater disposal or via land application as liquid fertilizer				

Overall conclusion on Environment Category (circle one):

A

B

C

Reason for conclusion:

Notes

WORKSHEETS 2 – 4: Land Acquisition, Involuntary Resettlement, Land Use Rights, Ethnic Minorities

Does the subproject involve physical changes to the land or changes to land user rights (land adjustment within the group or formal land use rights transfer to a third party?) If no, skip to Worksheets 4 and 5. If yes, proceed to Worksheets 2, 3, and 4.

Yes ☐No ☐

What is the current status of land ownership and land use rights of the land to be used?

- 1) **Ownership:** state-owned farm ☐; collective land ☐
 2) **User rights:** enterprise ☐; cooperative ☐; village/group ☐; or household ☐

B. WORKSHEET 2: Land Acquisition and Involuntary Resettlement Checklist

INVOLUNTARY RESETTLEMENT ISSUES FROM PAST ACQUISITION OR EXISTING FACILITIES

Involuntary Issues	Yes*	If Yes, give information	No
Are there any involuntary resettlement issues from past land acquisition?			
Are there any involuntary resettlement issues from existing facilities?			

*If “yes”, the subproject should be excluded e.g. in case there are outstanding land acquisition and/or resettlement issues that would present legacy issues or risks to the project.

NEW LAND ACQUISITION UNDER EQUITY INVESTMENT

Probable Involuntary Resettlement Effects		If Yes, give number of affected persons and households	
Will there be land acquisition for this subproject?*			
Will there be loss of land use rights due to change in land use resulting from the subproject (e.g., expanded village road)?			
Will there be residential house demolition causing loss of shelter to people due to land acquisition or construction activities?			
Will there be any temporary occupation of land that affects the land, housing, assets or livelihoods/business of people?			
Will there be losses of crops, trees, graves and fixed assets?			
Will people lose access to natural resources, communal facilities and services?			
If land use is changed, will it have an adverse impact on social and economic activities?			
Will access to land and resources owned communally or by the state be restricted?			

* Check if there will be land acquisition per local development planning (especially urban development planning).

Overall conclusion on Involuntary Resettlement Category (circle one):

A

B

C

Note: for a subproject to be approved for HTIC equity investment, it should be category C and any due diligence for prior land acquisition should confirm there are no remaining issues.

Reason for conclusion:

Notes:

C. WORKSHEET 3: Land Use Rights Transfer Impact Checklist

Will subproject require land use rights transfer or is there a pre-existing land use rights transfer agreement? (Y/N) If yes, complete form. If no, leave form blank.

Types of activity*	Cooperatives involved	Enterprises involved	Production bases involved	HHs involved	Farmland area (mu)
Total					

*Cropping, animal processing etc. HH=household.

Land use rights transfer (LURT) agreement

New LURT agreement			If no, explain
Has the agreement been prepared in accordance with the LURT Framework in ESMS-Appendix 5?			
Has third party due diligence been conducted? If yes, give results in the "Notes" section.			
Has the agreement been endorsed by the Township Agriculture Station or higher authority?			
Has the agreement been signed by all affected households?			
Has the agreement been signed by at least 70% of spouses?			

Pre-existing LURT agreement			If no, explain
Was the agreement prepared in accordance with the LURT Framework in ESMS-Appendix 5?			
Has third party due diligence been conducted? If yes, give results in the "Notes" section.			
Was the agreement endorsed by the Township Agriculture Station or higher authority?			
Has the agreement been signed by all affected households?			
Has the agreement been signed by at least 70% of spouses?			

Are there any outstanding issues? If yes, give details in the "Notes" section.			
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Overall conclusion on LURT Agreement

Agreement is in place and acceptable (in accordance with LURT Framework) ☐

Agreement requires further due diligence ☐

Agreement requires resolution of outstanding issues ☐

Agreement is not acceptable (not in accordance with LURT Framework) ☐

Reason for conclusion:

Notes:

D. WORKSHEET 4: Ethnic Minorities Impact Checklist

Will subproject involve any ethnic minority communities? (Y/N) If yes, complete form. If no, leave blank.

Name of ethnic minority:

Include consideration of: (i) magnitude of impact (including customary rights for use and access to land and/or resources, socioeconomic status, cultural and communal integrity, health, education, livelihoods, social security, indigenous knowledge); (ii) the vulnerability of the affected community.

ETHNIC MINORITY ISSUES FROM PAST ACTIVITY OR EXISTING FACILITIES

Involuntary Issues	Y e s *	If Yes, give information	
Are there any ethnic minority issues from past activity?			
Are there any ethnic minority issues from existing facilities?			

*If "yes", the subproject should be excluded e.g. in case there are outstanding ethnic minority community-related issues that would present legacy issues or risks to the project.

NEW IMPACTS TO ETHNIC MINORITY COMMUNITY UNDER EQUITY INVESTMENT

Potential Impacts to Ethnic Minorities (EM)		If Yes, give information about affected EM community
Will the subproject directly or indirectly benefit or target EM community?		
Will the subproject affect the livelihood systems of EM community? (e.g., food production, natural resource management, crafts, trade, employment)		
Is there commercial development of the cultural resources and knowledge of the EM?		
Is there commercial development of natural resources (e.g. forests, river, lake) in customary		

lands under use, that would impact the livelihoods or cultural, ceremonial, and/or spiritual uses by the EMs?		
Will the subproject involve a pre-existing or new land use rights transfer agreement that are owned by EM communities?		

Proposed activities	No. of villages	No. of EM communities	EM population	Beneficial and/or Adverse Impacts
1.				
2.				
3.				
4.				
5.				

Overall conclusion on Indigenous Peoples Category (circle one):

A

B

C

Note: The overall project has been categorized C based on due diligence during the project preparation. Category A and B subprojects are not expected. Only Category C subprojects are expected.

Reason for conclusion:

Notes:

E. WORKSHEET 5: Green Agriculture and Ecotourism Design and Best Practice

This worksheet is to improve the technical design and operation of the subprojects. HTIC will encourage and favor loans which contribute to non-point source pollution control and reduction, organic farming shifting, green economy development and climate change adaption uplift, including reduced use and proper disposal of agricultural chemicals, improved efficiency of water and/or energy use, soil conservation practices and principles, accurate pest control and fertilizing methods, recycling natural resources, creation of economic opportunities through low-impact tourism, conservation of biological diversity and cultural diversity, promotion of sustainable use and preservation of ecosystem.

Use the worksheet to identify which features below are most suitable for the subprojects. Instruct the applicant to work with the HTIC Environmental Officer to include these as relevant in the project design.

Type and content	Sustainable key features
Ecological agriculture: organic farming, e.g. tea, rice.	
Land preparation and leveling	Soil conservation principles including: (1) shallow ploughing and ripping; (2) fallow or green manure inter-cropping; (3) terrace-forming on slopes; (4) check dams on drainage swales; (5) gully head protection
Irrigation facilities: wells, canals, irrigation pipes, water use quota system and monitoring	Water saving technologies including: (1) pipe irrigation system rather than open canal; (2) drip or sprinkler irrigation systems; (3) irrigation system maintenance Irrigation schedule based on crop need; (4) irrigation sustainability demonstrated by seasonal water balances
Production materials	Including: (1) certified seed and seedlings sourced; (2) certified inorganic fertilizer; (3) organic fertilizer; (4) certified pesticides; (5) low-toxicity herbicides
Production practices: soil preparation, sowing, crop nutrition, pest management, harvesting	Including: (1) organic manures; (2) organic mulches; (3) minimum tillage; (4) chemical waste disposal plan
Technical support	The following technical support must be accessible: (1) crop-specific land preparation; (2) cultivation standard; (3) fertilization; (4) irrigation; (5) pest and disease control; (6) management techniques.
Ecological tourism: tourism infrastructure; natural resource conservation; biological and cultural diversity conservation	
Construction: embarkments, building, pavements, etc.	Including: (1) ecological embarkment, e.g. stone gabion; (2) low impact development practices, e.g. porous pavement, green roof, rain garden, bio-swale, vegetated filter strip
Energy supply	Including: (1) clean energy preferred, e.g. solar and hydro energy; (2) low energy consumption practices; (3) energy recycling plan
Materials	Including: (1) environment friendly construction materials; (2) environment friendly decoration materials; (3) degradable disposable materials
Guideline and education	Including: (1) mitigation of negative environmental impacts; (2) improving awareness of tourists to protect the environment; (3) promotion of small scale, slow growth and local control in tourism
Nature conservation	Including: (1) water and other natural resource management; (2) biodiversity conservation; (3) environmental impact mitigation; (4) ecosystem restoration after construction
Technical support	The following technical support must be accessible: (1) engineering best practice; (2) energy recycling; (3) natural resource management; (4) ecosystem preservation; (5) low-impact development strategy; (6) environmental risk mitigation plan.

X. ESMS-APPENDIX 4. OUTLINE OF AN INITIAL ENVIRONMENTAL EXAMINATION REPORT

Under the ADB Safeguard Policy (SPS, 2009), an initial environmental examination report is required for all Projects classified as “Environment Category B”. This appendix provides the outline for an initial environmental examination report. No “Category A” Projects will be supported by the loan.

A. Executive Summary

This section describes concisely the critical facts, significant findings, and recommended actions.

B. Policy, Legal, and Administrative Arrangement

This section discusses the national and local legal and institutional arrangement within which the environmental assessment is carried out. It also identifies Project-relevant international environmental agreements to which the country is a party.

C. Description of the project

This section describes the proposed Project; its major components; and its geographic, ecological, social, and temporal context, including any associated facility required by and for the project (for example, access roads, power plants, water supply, quarries and borrow pits, and spoil disposal). It normally includes drawings and maps showing the project's layout and components, the project site, and the project's area of influence.

D. Description of the Environment (Baseline Data)

This section describes relevant physical, biological, and socioeconomic conditions within the study area. It also looks at current and proposed development activities within the project's area of influence, including those not directly connected to the project. It indicates the accuracy, reliability, and sources of the data.

E. Anticipated Environmental Impacts and Mitigation Measures

This section predicts and assesses the project's likely positive and negative direct and indirect impacts to physical, biological, socioeconomic (including occupational health and safety, community health and safety, vulnerable groups and gender issues, and impacts on livelihoods through environmental media, and physical cultural resources in the project's area of influence, in quantitative terms to the extent possible; identifies mitigation measures and any residual negative impacts that cannot be mitigated; explores opportunities for enhancement; identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions and specifies topics that do not require further attention; and examines global, transboundary, and cumulative impacts as appropriate.

F. Analysis of Alternatives

This section examines alternatives to the proposed Project site, technology, design, and operation—including the no Project alternative—in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. It also states the basis for selecting the particular Project design proposed and, justifies recommended emission levels and approaches to pollution prevention and abatement.

G. Environmental Management Plan

This section deals with the set of mitigation and management measures to be taken during Project implementation to avoid, reduce, mitigate, or compensate for adverse environmental impacts (in that order of priority).

H. Conclusion and Recommendation

This section provides the conclusions drawn from the assessment and provides recommendations.

XI. ESMS-APPENDIX 5. ENVIRONMENTAL SITE INSPECTION CHECKLIST

Note: This form is designed for use by the Huangshan Trust Investment Company environmental officer and financial officers during site inspections, and may not be exhaustive. Modifications and additions may be necessary to suit individual subproject activities and to address any specific environmental issues.

Location: _____
 Inspection Date: _____
 Inspection Time: _____
 Inspection by: _____

Inspection Item	Yes	No	N/A	Remarks (i.e. problem observed, possible cause of problem, and/or proposed corrective/ preventative actions)
1. Has contractor appointed a construction supervisor and is the supervisor on-site?				
2. Is information pertaining to construction disclosed at construction site (construction period, contractor information, etc.)?				
3. Are chemicals/hazardous products and waste stored on impermeable surfaces in secure, covered areas?				
4. Is there evidence of oil spillage?				
5. Are chemicals stored and labeled properly?				
6. Is construction equipment well maintained? (any black smoke observed)				
7. Is there evidence of excessive dust generation?				
8. Are there enclosures around the main dust-generating activities?				
9. Does contractor regularly consult with residents to identify concerns?				
10. Is there evidence of excessive noise? If yes, describe location and equipment.				
11. Any noise mitigation measures adopted (e.g. use noise barrier / enclosure)?				
12. Is construction wastewater and domestic wastewater discharged to sewer systems (if possible), or are on-site treatment facilities (e.g. septic tank, portable latrine) provided?				
13. Is there any wastewater discharged to soil or surface water?				
14. Is the site kept clean and tidy? (e.g. litter free, good housekeeping)				
15. Are separated labeled containers/ areas provided for facilitating recycling and waste segregation?				
16. Are construction wastes / recyclable wastes and general refuse removed off site regularly?				
17. Have hazardous wastes been identified (such as asbestos, PCBs)?				

Inspection Item	Yes	No	N/A	Remarks (i.e. problem observed, possible cause of problem, and/or proposed corrective/ preventative actions)
18. Is safe supply of clean water and an adequate number of latrines provided for workers?				
19. Is personal protection equipment (PPE) provided for workers?				
20. Are clear information and warning signs placed at construction sites?				
21. Are construction sites secure, to discourage access?				
22. Are fire extinguishers / fighting facilities properly maintained and not expired? Escape not blocked / obstructed?				
23. Is there any evidence of damage to vegetation, habitats, Khuvsgul Lake, or streams?				
24. Are disturbed areas properly re-vegetated after completion of works?				
25. Any other problems identified or observations made?				

N/A = not applicable.

Date, Name, and Signature

XII. ESMS-APPENDIX 6. TERMS OF REFERENCE FOR ESMS POSITIONS

I. BACKGROUND

The Huangshan Municipal Government will apply a \$100 million loan from the Asian Development Bank (ADB) to implement the Anhui Huangshan Xin'an River Ecological Protection and Green Development Project (the project). Project implementation will be coordinated by the Huangshan Municipal project management office (PMO). Of the loan, \$8 million will be on-lent to the Huangshan Trust Investment Company (HTIC) to help establish a Green Investment Fund. HTIC will on-lend the funds directly to qualified investees (small and medium-sized enterprises in green farming and ecotourism). All subprojects supported under the Green Investment Fund will be used for "green" development, including tea gardens, organic rice, bamboo forestry, orchards, and ecotourism. An Environmental and Social Management System (ESMS) has been developed to regulate safeguards for the Green Investment Fund and will be established by HTIC within its business procedures. The ESMS is the key guiding document to assess and manage the potential environmental and social impacts of subprojects. This is the first ESMS to be conducted by the HTIC. HTIC will recruit one environmental officer and one social officer to guide and oversee ESMS establishment and implementation. These terms of reference describe the requirements for these two positions.

II. SCOPE AND DURATION OF WORK

The HTIC Environment Officer and Social Officer will work with the HTIC finance officers, PMO Environment Office and Social Officer, and other relevant personal, to establish and implement the ESMS. Duration: entire project (6 years).

III. QUALIFICATIONS

The HTIC Environment Office and Social Officer will have: (i) an undergraduate degree or higher in a relevant field (i.e. environmental and social sciences or related topics, respectively); (ii) ability to compile and prepare progress reports, including critical review and checking of reports and data from county branches; (iii) at least some familiarity with environmental, social, agricultural, and/or natural resource management; (iv) preferably, proficiency in spoken and written English. The HTIC finance officers implementing the ESMS will have demonstrated ability to: (i) communicate and work effectively with local communities, contractors, and government agencies; (ii) analyze data and prepare technical reports; at least some familiarity with environmental, social, agricultural, and/or natural resource management (iii) willingness and health to regularly visit the subproject sites.

IV. DETAILED TASKS

HTIC Environmental and Social Officers and HTIC finance officers:

1. Develop a high level of familiarity with the ESMS and range of supporting documents to be produced (environmental and social checklists, categorization forms, the different types of PRC environmental assessment reports, land use rights transfer framework, social and gender action plan, etc).
2. Implement the ESMS, from daily implementation with qualified investees to reporting to HTIC.

HTIC Environment Office and Social Officer:

3. Ensure quality assurance and control for establishment and implementation of the ESMS, for the environmental and social components of the ESMS respectively.
4. Lead the integration of the ESMS in the HTIC business procedures.
5. Report on ESMS progress to HTIC senior management.

6. Represent the HTIC regarding the ESMS, in discussions with the PMO and other relevant agencies.
7. Support the PMO to implement the safeguard-related training for HTIC staff.
8. Incorporate the ESMS progress into the semi-annual reports to be submitted to PMO.

HTIC finance officers:

9. Implement Steps A–F of the ESMS for each equity investment application under the Green Investment Fund, working with applicants, the PMO and other agencies as relevant.
10. For subprojects categorized as environment Category B, ensure that applicant prepares an initial environmental examination (see Appendix 4).
11. Instruct and guide qualified investees on their requirements under the ESMS. Including: (i) coordination with qualified investees and/or other relevant agencies to re-design (or relocate) subprojects to comply with the ESMS; (ii) assist in the training of qualified investees to facilitate implementation of the ESMS.
12. During the implementation phase of subprojects, liaise with qualified investees to ensure all safeguard related conditions of the equity investments (as stated in the Safeguard Commitment Letter attached to the equity investment) are being met.
13. Support the PMO to implement the project grievance redress mechanism (GRM) at the local level, and help ensure that potentially affected communities know about the GRM before the subproject commences.
14. Support the PMO to implement the safeguard-related training for HTIC staff.

V. REPORTING REQUIREMENTS

From HTIC to the PMO: semi-annual ESMS reports, using a template provided by ADB or a domestic format reviewed and approved by ADB.

XIII. ESMS-APPENDIX 7. LAND USE RIGHTS TRANSFER FRAMEWORK

1. Main Principles

This Land Use Rights Transfer Framework (LURTF) is to help the Huangshan Trust Investment Company (HTIC; the project financial intermediary responsible for implementation of the Green Investment Fund) and qualified investees mitigate, monitor and report, potential negative impacts caused by land use rights transfer, and to satisfy the requirements of ADB's SPS (2009). The LTF guiding principles are:

- (i) Equality, voluntary, legal procedure, and, fair compensation. Equality means both of parties have equal legal status. Voluntary means the transfer of land contracting management right must be completely voluntary for both parties, and one party shall not force another party to transfer or accept transfer of land. Legal procedure means that land use rights transfer must be concluded per legal procedure with legal agreement. Fair compensation means the transferred land shall be compensated at negotiated market price.
- (ii) Unchanged ownership and agricultural use of transferred land. Land use rights transfer means transferring use right, not ownership, therefore ownership of transferred land shall remain unchanged. Yet future users of transferred land shall not change the agricultural land use nature, i.e., shall not convert transferred land for non-agricultural uses.
- (iii) Priority to fellow-community members. Under the same conditions, priority shall be given to members of the collective economic organization (community) to obtain land use rights through transfer.
- (iv) Government's direction and administration. Department of agriculture of county government shall direct and administrate legal transfer of rural land
- (v) Conflict resolution through GRM. The grievance redress system of Project counties shall be used to resolute complaints and conflicts, if any.

2. Legal Framework

All subprojects must comply with the PRC Rural Land Contract Law and Rural Land Management Right Transfer Management Method, other relevant policies of Anhui Province and local governments, and ADB's SPS. These are listed in Appendix 1. Key laws and policies are as follows:

- (i) Law of the People's Republic of China on Land Contract in Rural Areas – no change of collective ownership; no change of agricultural land use (not allowed to convert farmland into construction land for establishment of permanent structures).
- (ii) Administration Methods on Rural Land Use Rights Transfer, Ministry of Agriculture of PRC, relevant regulations of Anhui Province and Project district/county governments:
 - Land use rights transfer duration without the land contract period;
 - Negotiated settlements between transferor and transferee;
 - Land use rights transfer per legal procedures;
 - Standard contract (with endorsement by a third party if transferor and transferee feel necessary).
 - Official registration and documentation for land use rights transfer.
 - If necessary, the township agricultural station endorses the contract.
- (iii) PRC Law on the Mediation and Arbitration of Rural Land Contract Disputes, and relevant implementation methods of Anhui provincial and Project district/county governments – mediation and arbitration of disputes per a bottom-up Grievance Redress Mechanism (GRM).
- (iv) ADB's SPS – requirements on IR does not apply to LURT. The good practice on voluntary agreements include meaningful consultations; negotiated agreements; establishment and functioning of a GRM; record-keeping; and; independent monitoring.

In addition, the best practices in the project area also have good applications for the land use rights transfer under the project, such practices include:

- Land use rights transfer period of 5-10 years, within the land contraction period (1998-2028);
- Land use rights transfer rate (or land rental rate) calculated in equivalent output value of grain (wheat, rice); this protects transferees from price fluctuations;
- Endorsement of land use rights transfer contract by the township agriculture station.

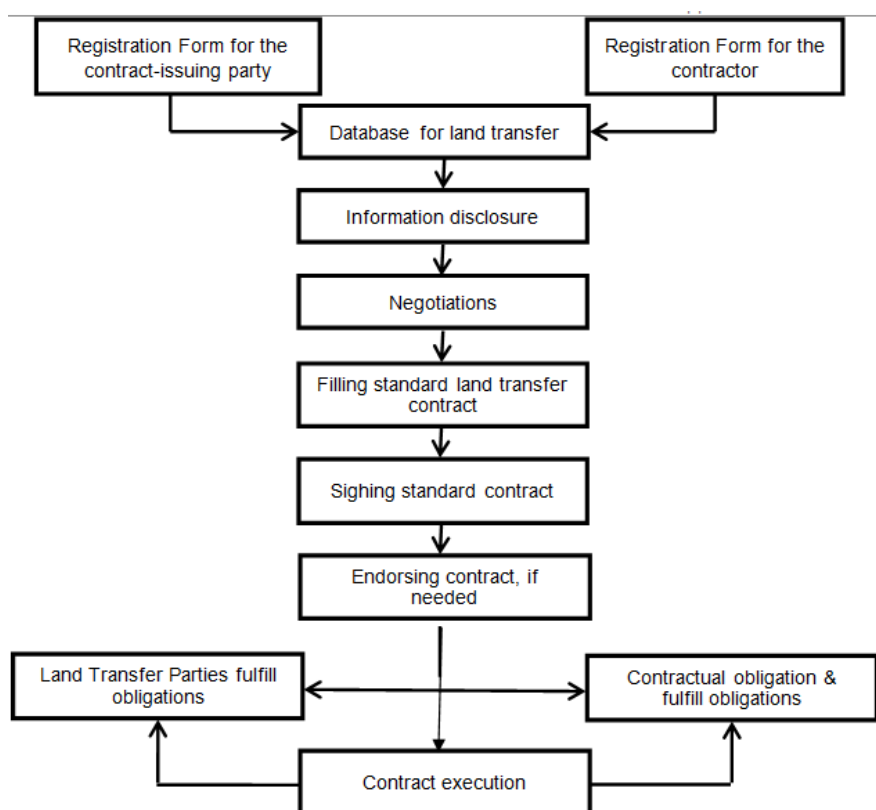
3. Legal Procedures of Land use rights transfer

Legal procedures are as follows (also the following chart):

- (i) Information collection. Farmers with intention to transfer land present the details of the land, like location, area, usage, and reference price to village committee, which will then report to the township agricultural station. They can also entrust the contracted or intermediary organizations to transfer their land, and the letter of attorney will be issued by land transferee, illustrating the entrusted matters, authority and deadlines, etc., with the signature of the principal.
- (ii) Information disclosure. Township agricultural station, after collecting data, will sort out information about land use rights transfer of different villages and establish a database. The sorted information will be disclosed timely by means of network, radio, newspapers, board, electronic display, and etc. The township station will also report to the county (district) agricultural bureau for updating land use rights transfer databases.
- (iii) Negotiation between transferor and transferee. With the arrangement of township agricultural station, both sides negotiate about the land use rights transfer conditions and price based on the principle of equality, voluntariness and mutual benefiting.
- (iv) Signing land use rights transfer contract. When both parties agree on conditions and price, township agricultural station provides 4-5 copies of a standard contract (the fifth copy for endorsement, if needed), for both parties to sign. Township agricultural station also endorses the contract.

- (v) Endorsing land use rights transfer contract. The township agricultural station endorses the contract.
- (vi) Registration for land use rights transfer. Township agricultural station registers the land use rights transfer information timely and exactly, and submits the relevant materials to the county agriculture bureau for documentation.
- (vii) Documentation. County agricultural bureau documents all relevant materials for land use rights transferred.

Supervising contract implementation. Both parties should perform the contract positively, and township agricultural station supervises the contract execution. In case of conflicts or disputes, the township station will timely report to the county station, and the latter will inform HTIC synchronously.



Land Use Rights Transfer Procedure Chart

4. Institutional Arrangement and Responsibility

According to relevant laws and regulations, county agricultural bureau and township agricultural stations should manage and guide rural land use rights transfer (LURT) in their administrative areas.

Responsibilities of municipal agricultural bureau:

- (i) publicity rural land use rights transfer policies;
- (ii) direct the land use rights transfer legally and orderly;
- (iii) guide disputes arbitration and resolution;
- (iv) strengthen and standardize rural LURT; and
- (v) propose solutions to problems in LURT, and develop a new mechanism for LURT.

Responsibilities of county agricultural bureau:

- (i) direct rural LURT and contracting;
- (ii) set up a service center for LURT, and establish information network platform, online trading and/or open trading of land to be transferred;

- (iii) accept, manage and guide the application from rural LURT agencies;
- (iv) settle the disputes; and
- (v) provide consultation services for LURT policies.

Responsibilities of township agricultural station:

- (i) information collection, analysis and disclosure, LURT can be conducted by county or township;
- (ii) providing a standard contract for parties who have reached agreements on contract conditions and terms, and assisting them to sign contract signing;
- (iii) functioning as a third party to endorse the signed contract, if requested by land use rights transferor and transferee;
- (iv) formulating a system for registering the rural LURT, and record the relevant information timely and exactly;
- (v) documenting land use rights transfer materials;
- (vi) investigating and rectify illegal LURT;
- (vii) settling disputes about rural LURT;
- (viii) guide and administrate LURT legally; and
- (ix) provide consultancy services.

Responsibilities of village committee:

- (i) information collection and classification on LURT, to be reported to township agricultural station;
- (ii) assisting township in settling disputes.

Responsibilities of district/county PMO:

- (i) supervising contract execution; and
- (ii) participating in conflict/dispute resolution at county level if not resolved at township level.

5. Land Use Rights Transfer Contract

Land use rights transfer contract shall include the following clauses:

- (i) names and domiciles of two parties;
- (ii) location, borders, area and quality of the land for transferring;
- (iii) term of transfer and dates of beginning and completion;
- (iv) ways of transfer;
- (v) usage of land;
- (vi) rights and obligations of two parties;
- (vii) land use rights transfer expense and method of payment;
- (viii) handling of appurtenance and relevant facilities after expiry of contract;
- (ix) liabilities for breach of the contract;
- (x) method of conflict resolution;
- (xi) other clause that both parties thought necessary;
- (xii) stamping of endorsing agency; and
- (xiii) date of contract conclusion.

Contract used in the Project, as well as in Anhui Province, is normative, which is prepared by the Anhui Department of Agriculture and Animal Husbandry.

6. Measures to Safeguard Interests of Contract Parties

The following measures will be taken to safeguard the interests of contract parties:

- (i) In case of severe damage of transferred land due to natural disasters or force majeure during the contract term, both parties can terminate or change the contract through negotiation, and the land shall be returned to the original users for cultivation. When there are specific contract provisions on severe damage of land, the provisions prevail.
- (ii) Contract agreement regarding policy subsidies to farmers for grain production and production masteries.
- (iii) At least 70% of the land leasing contracts will be signed by both husband and wife in case of involving individual households.
- (iv) Contract endorsement by township per request of contract parties, free of charge.
- (v) According to the PRC's Rural Land Contract Law and Rural Land Management Right Transfer Management Method and other relevant LURT laws and regulations of Anhui Province and districts/counties, the LURT duration shall be negotiated equally by both parties, but within the

limit of the rural land contract (duration from 19980-2028 or so).

- (vi) The LURT rate will be ensured according to land type, feasibility, grade, and condition of referential corps, or even the price of LURT in nearby villages. Taking farmer's interest into consideration, both transferor and transferee should set a time to renegotiate land price in case of LURT for over 5 years. It is recommended to adjust the rate after five years.

7. Grievance Redress Mechanism (GRM) for Social Safeguards

Where LURT contract is based on negotiations and mutual agreement, complicated disputes are unlikely to occur. However, there might be some unexpected issues during and after land being transferred. According to *Law of the People's Republic of China on the Mediation and Arbitration of Rural Land Contract Disputes*, the project has set up a transparent and efficient grievance redress procedure to settle such disputes and defaults after land use rights transfer. The GRM for social safeguards is described in Section V of the ESMS.