

# Project Administration Manual

Project Number: 53050-001  
Loan Number: {LXXXX}  
December 2020

People's Republic of China: Hunan Xiangxi Rural  
Environmental Improvement and Green  
Development Project

## CURRENCY EQUIVALENTS

(as of 27 October 2020)

Currency unit	–	yuan (CNY)		
CNY1.00	=	€0.1266	or	\$0.1496
\$1.00	=	CNY6.6846	or	€ 0.8462
€1.00	=	CNY7.8999	or	\$1.1818

## ABBREVIATIONS

ADB	–	Asian Development Bank
COVID-19	–	coronavirus disease
CQS	–	consultants' qualifications selection
CSC	–	construction supervision company
EMA	–	environmental monitoring agency
EMDP	–	ethnic minority development plan
EMP	–	environmental management plan
EURIBOR	–	EURO-interbank offered rate
FMA	–	financial management assessment
GAP	–	gender action plan
GDP	–	gross domestic product
GRM	–	grievance redress mechanism
HPFD	–	Hunan Provincial Finance Department
IEE	–	initial environmental examination
M&E	–	monitoring and evaluation
OCB	–	open competitive bidding
O&M	–	operation and maintenance
pm	–	person-month
PLG	–	project leading group
PMO	–	project management office
PRC	–	People's Republic of China
SDAP	–	social development action plan
SOE	–	statement of expenditures
SPS	–	Safeguard Policy Statement (2009)
Xiangxi	–	Xiangxi Tujia and Miao Autonomous Prefecture
XPG	–	Xiangxi Tujia and Miao Autonomous Prefectural Government
YREB	–	Yangtze River Economic Belt

## NOTE

In this report, "\$" refers to United States dollars.

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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 borrower, the Government of the People's Republic of China; and the 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 Xiangxi Tujia and Miao Autonomous Prefectural Government, the executing agency; and the Jishou City Government and the county governments of Baojing, Fenghuang, Guzhang, Huayuan, Longshan, Luxi, and Yongshun, the implementing agencies, are wholly responsible for the implementation of the ADB-financed projects, as agreed jointly between the borrower and ADB; and in accordance with the policies and procedures of the government and ADB. The ADB staff is responsible for supporting the implementation, including compliance by the Xiangxi Tujia and Miao Autonomous Prefectural Government; the Jishou City Government; and the county governments of Baojing, Fenghuang, Guzhang, Huayuan, Longshan, Luxi, and Yongshun 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's approval of the project's report and recommendations of the President to the Board of Directors, changes in the 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. As one of the three key economic growth engines in the People's Republic of China (PRC), the Yangtze River Economic Belt (YREB) and its nine provinces and two specially administered municipalities account for more than 40% of the PRC's population and freshwater resources, and 45% of the country's economic output.<sup>1</sup> While the YREB has benefited from extensive development since the 1990s, economic growth in the middle and upper reaches of the Yangtze River Basin significantly lags the lower reaches; the middle and upper reaches face particular challenges from (i) weak institutional capacities and poor coordination between institutions; (ii) increasing pollution and pressure on natural resources; (iii) slow transformation into green development; and (iv) limited integration of waterways, ports, and intermodal logistics.<sup>2</sup> To manage these challenges, the Government of the PRC formulated the YREB Development Plan, 2016–2030.<sup>3</sup> The Asian Development Bank (ADB) and the government have agreed to adopt a framework approach to support the plan, focusing on (i) institutional strengthening and policy reform, (ii) ecosystem restoration and environmental protection, (iii) green industrial transformation, and (iv) construction of an integrated multimodal transport corridor.

2. In many rural areas of the YREB, agricultural production and rural livelihoods have lagged behind industrial production and urban livelihoods, income inequality and poverty are still persistent. The majority of rural wastewater and other wastes are being directly discharged to waterways; and solid waste, particularly plastic waste, is increasing. To promote poverty reduction, rural development, and green and inclusive growth, the government formulated the National Strategic Plan for Rural Vitalization, 2018–2022.<sup>4</sup> The strategic plan focuses on agricultural modernization; rural wastewater and waste management; rural–urban integration; ecosystem services protection; rural health and education services development; rural governance reform, including enhancement of policy frameworks; institutional and organizational development; and capacity building.

3. As part of the YREB, the Xiangxi Tujia and Miao Autonomous Prefecture (Xiangxi) is in Hunan Province, and is between the Yangtze River and the PRC's designated special economic zones.<sup>5</sup> Xiangxi is also at the border between the central and western PRC and is the only part of Hunan that is targeted under the China Western Development policy.<sup>6</sup> Xiangxi has one city and seven counties; and a land area of 15,462 square kilometers which is dominated by mountains; about 70.2% of the mountainous area is forest; and urban areas comprise 556 square kilometers.<sup>7</sup> At the end of 2018, the total registered population of Xiangxi was 3.0 million, with 54% being rural residents. The ethnic population, mainly the Miao and Tujia people, accounts for 80% of the total population of Xiangxi. The total production value in Xiangxi was CNY58.3 billion in 2017, of which

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<sup>1</sup> The other key economic growth engines are the Belt and Road Initiative and the Beijing–Tianjin–Hebei Integrated Regional Development Strategy.

<sup>2</sup> Green development is a sustainable development concept underpinned by three pillars: (i) environmental responsiveness, (ii) resource efficiency, and (iii) community and cultural inclusiveness. It enables a single project to approach environmental protection and inclusive economic development in an integrated manner.

<sup>3</sup> Government of the PRC. 2016. *Outline of the Yangtze River Economic Belt Development Plan, 2016–2030*. Beijing.

<sup>4</sup> Government of the PRC. 2018. *National Strategic Plan for Rural Vitalization, 2018–2022*. Beijing.

<sup>5</sup> The PRC designated Shantou, Shenzhen, and Zhuhai in Guangdong Province; Xiamen in Fujian Province; and all of Hainan Province as special economic zones during 1980–1984. The special economic zones are given special economic policies and flexible governmental measures, which attract firms to do business there.

<sup>6</sup> China Western Development is a policy adopted in 1999 to develop the western regions that were severely lagging behind.

<sup>7</sup> Xiangxi's one city is Jishou City and its seven counties are Baojing, Fenghuang, Guzhang, Huayuan, Longshan, Luxi, and Yongshun counties.

CNY8.4 billion was by the primary industry, CNY17.9 billion by the secondary industry, and CNY31.9 billion by the tertiary industry. The per capita gross domestic product (GDP) was CNY22,094 in 2019.

4. Xiangxi is one of the poorest regions in the PRC. All of its seven counties are national poverty counties designated by the Government of the PRC. At the end of 2018, the incidence of rural poverty in Xiangxi was 5.2% and urban poverty 4.3%. Of the 49.2 million cubic meters per year of wastewater in Xiangxi, only 7.4 million cubic meters per year are treated. About 24.7% of the villages do not have solid waste collection or processing facilities. Garbage classification is not practiced; but is needed for the reduction and recycling of garbage, particularly for plastic waste. Residents do not have adequate capacity for solid waste management, including classification and recycling, and institutional capacities for solid waste management is still weak. About 48.2% of households do not have sanitary toilets. The lack of wastewater and solid waste management negatively impacts the living environment and health of Xiangxi's rural residents.

5. The mountainous landscape in Xiangxi makes farming less suitable and profitable. There are 135,000 hectares of arable land, which is only 8.7% of the total land area. Xiangxi has rich local-featured vegetation. Agricultural GDP is CNY14 billion, or 14.4% of the total GDP in Xiangxi. About 60% of the agricultural GDP is from local-featured products, given the prefecture's unique climate and biosphere.<sup>8</sup> These products include citrus, kiwifruit, camellia, tea, and herbal medicine. However, yields are highly variable and of low value because of the poor quality of seeds and seedlings, use of chemical fertilizer and pesticide (resulting in nonpoint source pollution), outdated agricultural and forestry production and management systems, and inadequate cold chains.

6. The Government of the PRC designated Xiangxi as Tujia and Miao Cultural Ecosystem Conservation Area, one of the seven National Cultural Ecosystem Conservation Areas in the PRC.<sup>9</sup> There are three national nature reserves, three national forest parks, three national geological parks, two national scenic spots, one national wetland park, and a World Heritage Site of the United Nations Educational, Scientific, and Cultural Organization (the Tusi site at Laosicheng in Yongshun County). All these reserves and parks are of high ecological and cultural value, attracting 57.2 million visitors in 2019. Seven expressways connecting local cities and counties have been opened successively in Xiangxi. Xiangxi is becoming part of an economic circle, including Changsha, Chongqing, Guilin, and Guiyang, with the construction of the Zhang–Jihuai high-speed railway and the Xiangxi Airport.<sup>10</sup> Xiangxi also plays a leading role in industrial integration in the PRC with a national agricultural technology zone in Huayuan County and a pilot industrial zone in Yongshun County.

7. However, Xiangxi's unique combination of natural and cultural diversity (with high ecological and cultural value) as well as its transportation and agricultural advantages have not been fully utilized to enhance residents' living conditions and livelihood opportunities. The poverty ratio remains high; institutional capacities are weak; and job opportunities are limited, especially for women in Xiangxi. To increase rural industrial productivity, generate job opportunities, reduce poverty and inequality, and empower women and enhance gender equality, Xiangxi's approach to rural vitalization includes (i) producing organically certified ecological agricultural and forestry

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<sup>8</sup> For this project, local-featured products refer to products which are produced or harvested in a local area, making the best use of the local climate, geographic conditions, and resources; represent and make the area famous; are demanded by other areas; and provide livelihood opportunities and develop economy in the area.

<sup>9</sup> National Cultural Ecosystem Conservation Area is a specific area designated by the Ministry of Culture and Tourism of the PRC.

<sup>10</sup> The Zhang–Jihuai high-speed railway and the Xiangxi Airport are scheduled to be operational in 2021.



products; (ii) adding values to local-featured ecological agricultural and forestry products through value chain improvements (production, processing, and marketing) and promotion of ecotourism; and (iii) strengthening institutions and building capacities.

8. The Xiangxi Tujia and Miao Autonomous Prefectural Government (XPG) places rural vitalization at the core of its development agenda. The Xiangxi Tujia and Miao Autonomous Prefecture Rural Vitalization Strategy adopts a targeted approach to poverty alleviation, and the Xiangxi Autonomous Prefecture Accelerated Three-Year Action Plan to Improve Rural Environment and Build Beautiful Villages, 2018–2020 focuses on rural environmental improvement. The strategy and the plan identify the key growth engines for Xiangxi to realize high-value agricultural and forestry products and ecotourism backed by research, technology, and value chain development and supported by institutional and capacity development.

9. Xiangxi is an appropriate demonstration area for rural environmental improvement and green development since it (i) is one of the poorest regions in the PRC, (ii) is an important area to connect the central and western regions of the PRC and the Yangtze River and special economic zones in the southern provinces, (iii) has agricultural and forestry products with potential for further development, (iv) has unique tourism resources and environmental and transportation advantages, and (v) plays a leading role in industrial integration in the PRC through its two industrial zones.

10. **Coronavirus disease pandemic.** The coronavirus disease (COVID-19) pandemic that began in the beginning of 2020 has amplified the interlinkages between biodiversity, public health, and ecosystem-dependent global supply chains. The COVID-19 pandemic is being contained in the PRC; but it remains a risk, particularly for rural remote areas that depend on tourism. With growing recognition of the need for measures to prevent the spread of infectious diseases in the future, rural vitalization is a key part of the PRC's recovery from COVID-19.

11. **Strategic fit.** The project will demonstrate environmental improvement and green development through natural capital investment in the rural areas of Xiangxi. This is consistent with (i) the PRC's Thirteenth Five-Year Plan, 2016–2020,<sup>11</sup> which aims to eradicate extreme poverty and balance the development of rural and urban areas for improvement of agricultural productivity and rural incomes; (ii) the PRC's rural vitalization strategy for 2018–2022 (footnote 3), which promotes poverty reduction, rural development, and green and inclusive growth; (iii) ADB's Strategy 2030,<sup>12</sup> which (a) emphasizes the importance of addressing the remaining poverty, reducing inequalities, and promoting rural development and food safety; and (b) encourages upper middle-income countries to strengthen institutions and share knowledge; and (iv) ADB's country partnership strategy for the PRC, 2016–2020, which aims to support inclusive economic growth by reducing poverty and inequality.<sup>13</sup> It is also in line with the Sustainable Development Goals 1, 2, 3, 5, 6, 10, 12, 13, and 15.<sup>14</sup>

<sup>11</sup> Government of the PRC. 2015. *Outline of the Thirteenth Five-Year Plan on National Economic and Social Development, 2016–2020*. Beijing.

<sup>12</sup> ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila.

<sup>13</sup> ADB. 2016. *Country Partnership Strategy: People's Republic of China, 2016–2020—Transforming Partnership: People's Republic of China and Asian Development Bank*. Manila. The project will also be consistent with ADB's proposed country partnership strategy for the PRC, 2021–2025, under preparation, which will have three strategic priorities: (i) environmentally sustainable development, (ii) climate change adaptation and mitigation, and (iii) aging society and health security.

<sup>14</sup> United Nations. 2016. *Sustainable Development Goals*. New York.

## B. Impact and Outcome

12. The project is aligned with the following impact: rural vitalization with environmental improvement and green development in the YREB realized (footnotes 2 and 3). The project will have the following outcome: rural living environment and value of agricultural and forestry products in Xiangxi enhanced.<sup>15</sup> A total of 32 subprojects will be implemented across one city and seven counties in Xiangxi.

### 13. **Output 1: Rural waste and sanitation management facilities and services improved.**

Activities for this output will include (i) construction and operation of wastewater management systems for about 45,800 households with innovative technologies (e.g., distributed wastewater management systems), innovative arrangements (e.g., a public-private partnership appropriate for the operation and maintenance [O&M] of small wastewater management systems in rural areas), and capacity development of technicians for the O&M of the wastewater management systems, considering citywide or countywide inclusive sanitation; (ii) solid waste management for about 87,500 households through the establishment of garbage transfer stations and rural garbage management teams, of which at least 30% are led by women; and (iii) the provision of sanitary toilets to about 5,500 rural households.

### 14. **Output 2: Local-featured ecological agricultural and forestry products developed.**

This output will develop local-featured, organically certified ecological agricultural and forestry products in Xiangxi (such as citrus, kiwi fruit, camellia, tea, and herbal medicine) grown with organic fertilizer and/or low-chemical fertilizer and pesticide. Activities for this output will include (i) construction and operation of facilities for the development of local-featured ecological agricultural and forestry products, including research and development facilities, seedling reserves, seedling nurseries, seedling breeding areas, integrated water and fertilizer management systems,<sup>16</sup> and field weather stations; (ii) provision of equipment and materials to the facilities for the development of local-featured ecological agricultural and forestry products; and (iii) research on (a) breeding of and (b) virus-free technologies for local-featured ecological agricultural and forestry products.

### 15. **Output 3: Value added to local products through value chains and ecotourism.**

This output will add values to local-featured ecological agricultural and forestry products in Xiangxi through improvement of value chains and promotion of ecotourism, particularly ethnic minority-inclusive ecotourism. Activities for this output will include (i) improvement of value chains for local-featured ecological agricultural and forestry products, including construction and operation in six locations within Xiangxi of facilities for storage, cold storage, processing, packaging, exhibition, e-commerce (to help farmers sell their products to urban consumers), customer service (with an agricultural product traceability system), and/or logistics; and (ii) integration of agriculture and/or forestry with ecotourism, particularly ethnic minority-inclusive ecotourism, in six locations within Xiangxi, including (a) protection and/or improvement of ethnic minority-inclusive ecotourism resources such as forests, plant communities, lakes, and rivers; and the houses, family workshops, and festivals of ethnic minorities; (b) construction of sightseeing footpaths, rest pavilions, public toilets, and parking lots in farmlands and forests; (c) construction and operation of fruit-, vegetable-, and/or tea-picking gardens; (d) construction and operation of ethnic minorities' historical and cultural exhibition facilities, sales plazas and supermarkets for local-

<sup>15</sup> The design and monitoring framework is in [Appendix 1](#).

<sup>16</sup> Water resources are sufficient to cover the irrigation water use.

featured ecological agricultural and forestry products and ethnic minorities' cultural products, and tourist service stations; and (e) brand publicity.

16. **Capacity and institutional development.** The project will develop capacities of (i) technicians for the O&M of the garbage transfer stations; (ii) rural residents, including at least 45% who are female, for garbage classification and recycling (particularly recycling of plastic); (iii) technicians and farmers, including at least 40% who are female, for sharing of advanced technologies for local-featured ecological agricultural and forestry products; (iv) staff of government agencies, including at least 40% who are female, for the O&M of the facilities for storage, processing, packaging, exhibition, e-commerce, customer service, and/or logistics; (v) local farmers, including at least 40% who are female, for protection of the ethnic minorities' intangible heritage; (vi) local farmers, including at least 40% who are female, for management of fruit-, vegetable-, and/or tea-picking gardens; (vii) staff of government agencies, including at least 40% who are female, for updated technologies for ecotourism resource improvement; (viii) tourism services and management staff of government agencies, including at least 40% who are female, for ecotourism service skills; and (ix) management staff of government agencies, including at least 40% who are female, for integration of agriculture and forestry with ecotourism. Institutional development to be conducted under the project will include (i) establishment and operation of the rural garbage management teams; (ii) institutional arrangements for the facilities for the development of local-featured ecological agricultural and forestry products constructed for output 2; and (iii) institutional arrangements for the facilities for storage, processing, packaging, exhibition, e-commerce, customer service, and/or logistics constructed for output 3.

17. Detailed project outputs and activities are given in Appendix 1.

18. **Lessons.** The project design has incorporated lessons from international practices related to rural vitalization and agricultural development, such as the importance of (i) climate-smart agricultural practices; (ii) improvement of farming technologies and marketing; (iii) help for farmers in improving their access to markets and product quality control; (iv) value chain development, resulting in the promotion of specialized agricultural products; (v) development, participation, and empowerment of farmers and farmer organizations; (vi) effective institutional arrangements and government management; (vii) sustainable O&M with capacity development; and (viii) a monitoring and evaluation (M&E) system for project performance.

### C. Value Added by ADB

19. **Value added by ADB assistance.** Based on its international experience and knowledge, ADB has added innovative features to the project, including but not limited to, (i) distributed wastewater management systems, which have advantages over the traditional centralized system such as lower operation cost; (ii) a public-private partnership appropriate for the O&M of the small wastewater management systems in rural areas (ADB funding will induce private sector's participation in and financing for the O&M); (iii) garbage classification and recycling (particularly recycling of plastic); (iv) technologies to produce quality local-featured ecological agricultural and forestry products; (v) methodologies to add value to local-featured ecological agricultural and forestry products, including improvement of value chains and integration of agriculture and forestry with ecotourism; and (vi) institutional and capacity development for the management of rural waste, the development of local-featured ecological agricultural and forestry products, and the value addition to the local products.

20. **Nature-positive recovery from the COVID-19 pandemic.** The project will contribute to holistic development in the YREB by prioritizing investments in natural capital conservation and

restoration and shifting traditional investments toward the valuing of nature and the reduction of inequalities in rural areas. Rural vitalization is a key part of the nature-positive stimulus packages for recovery from the COVID-19 pandemic, aimed at building resilience in the YREB in the short, medium, and longer terms. Nature-based approaches focus on natural capital investments, including promotion of waste and sanitation management, climate resilience, resilient sustainable agriculture, and sustainable value chains. With the integration of nature-based solutions, the project will introduce complementary elements across sectors to address multi-dimensional issues with a multi-stakeholder approach. By promoting greener and healthier growth models which will focus on nature and strengthen institutional and governance mechanisms, the project will create a safe and healthy living environment, reducing the risk of epidemics in the future.

21. **Knowledge management and dissemination.** Experiences and knowledge gained through the project will be disseminated and replicated in other poor rural areas in the PRC and ADB's developing member countries. One of the main vehicles to share knowledge and an accelerator for nature-positive investments will be the Natural Capital Lab, currently under development. It will provide a regional platform to scale natural capital investments and create a marketplace for nature-positive recovery solutions with sustained impacts. Project results and lessons will be leveraged through the ADB–PRC Regional Knowledge Sharing Initiative.<sup>17</sup> Some of the outputs for knowledge sharing will be workshops; publication of high-quality knowledge products, including working papers and academic articles; e-learning activities; strategic partnership with centers of excellence; policy toolkits; and award programs.

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<sup>17</sup> ADB. [ADB–PRC Regional Knowledge Sharing Initiative](#).

## II. IMPLEMENTATION PLANS

### A. Project Readiness Activities

Table II-1: Project Readiness Activities


Indicative Activities	2020						2021					Responsibility
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr		
Procurement agent recruited											PMO	
Advance contracting actions											PMO	
Retroactive financing actions											ADB, HPG, PMO	
Domestic FSR approved											HPDRC	
FCUP approved											NDRC	
IEE, RP, and EMDP approved											ADB	
ADB staff review											ADB	
Loan negotiations											ADB, MOF, HPG, XPG	
ADB Board consideration											ADB	
Loan and project agreements signed											ADB, MOF, HPG	
Government legal opinion provided											MOF, HPG, XPG	
Government budget inclusion											XPG, implementing agencies	
Loan effectiveness											ADB, MOF	

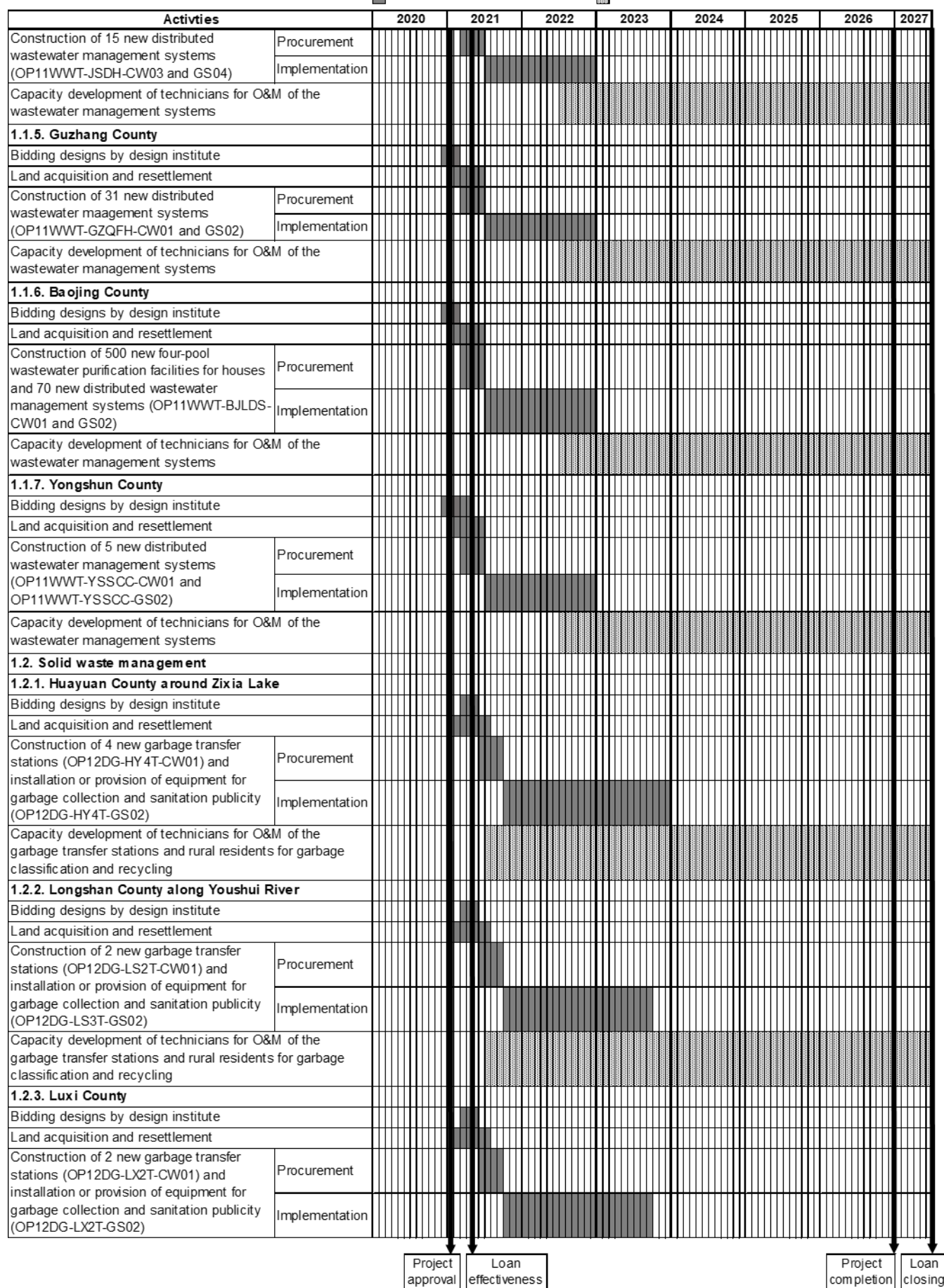
ADB = Asian Development Bank, EMDP = ethnic minority development plan, FCUP = foreign capital utilization plan, FSR = feasibility study report, HPDRC = Hunan Provincial Development and Reform Committee, HPG = Hunan Provincial Government, IEE = initial environmental examination, MOF = Ministry of Finance, NDRC = National Development and Reform Commission, PMO = project management office, RP = resettlement plan, XPG= Xiangxi Tujia and Miao Autonomous Prefectural Government.

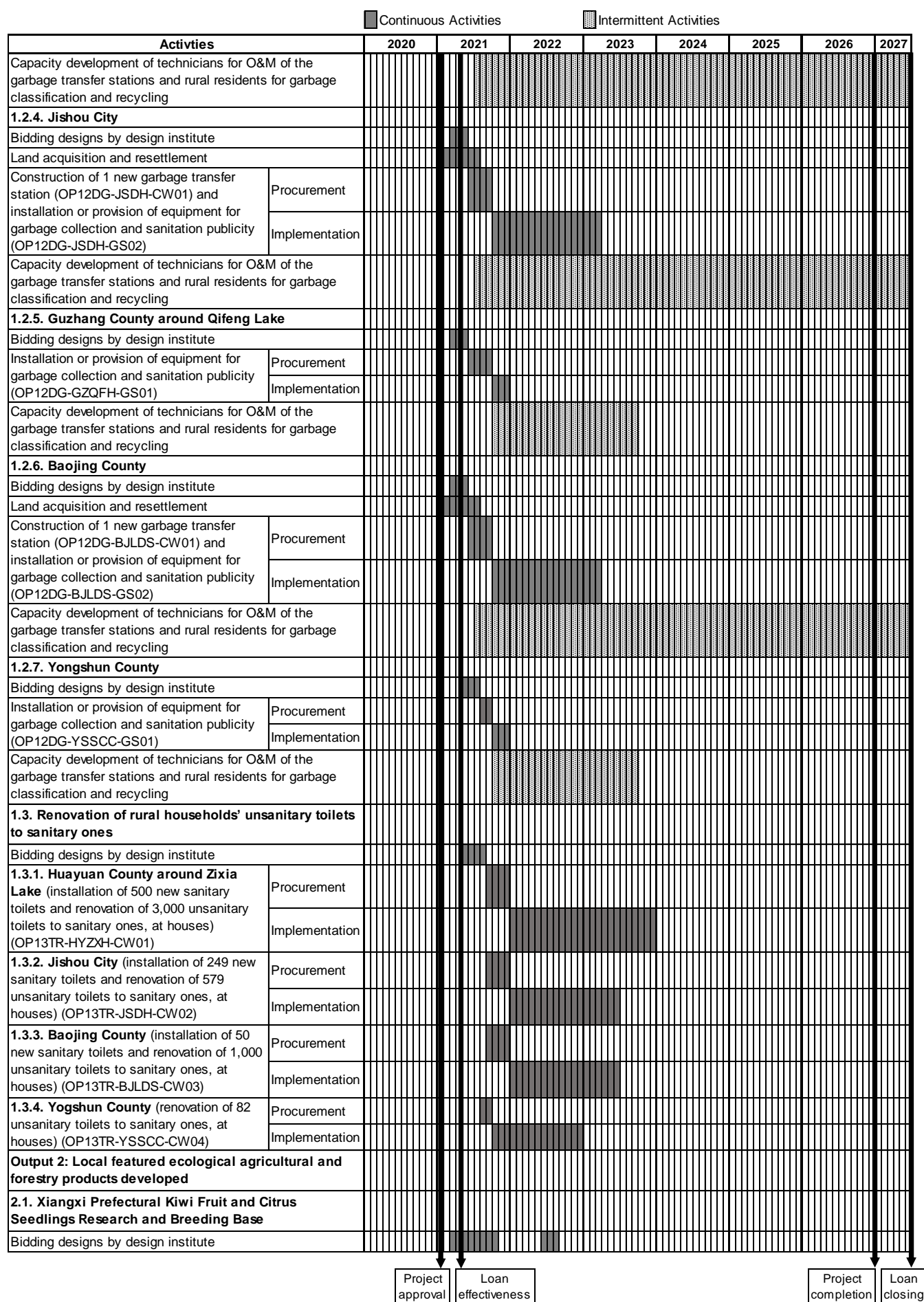
Source: Asian Development Bank.

Continuous Activities      Intermittent Activities

Activities		2020	2021	2022	2023	2024	2025	2026	2027
Preliminary designs									
Revision of EMP, RP, and EMDP based on the approved preliminary design (OP41-PPMO-CS01/2 and 3)									
<b>Output 1: Rural waste and sanitation management facilities and services improved</b>									
<b>1.1. Wastewater management system</b>									
<b>1.1.1. Huayuan County</b>									
Bidding designs by design institute									
Land acquisition and resettlement									
Construction of 1 new centralized wastewater management system including 1 new WWTP (3,000 m <sup>3</sup> /day) (OP11WWT-HYZH-CW01 and GS02)	Procurement								
	Implementation								
PPP model development for the centralized wastewater management system									
Construction of 200 new four-pool wastewater purification facilities for houses and 115 new distributed wastewater management systems with data collection and transmission systems (OP11WWT-HYZH-CW03 and GS04)	Procurement								
	Implementation								
Capacity development of technicians for O&M of the wastewater management systems									
<b>1.1.2. Longshan County</b>									
Bidding designs by design institute									
Land acquisition and resettlement									
Construction or renovation of 4 centralized wastewater management systems including 3 new WWTPs (1,200 m <sup>3</sup> /day, 800 m <sup>3</sup> /day, and 800 m <sup>3</sup> /day) and 1 existing WWTP (5,000 m <sup>3</sup> /day) (OP11WWT-LS3T-CW01 and GS02)	Procurement								
	Implementation								
Construction of 420 new four-pool wastewater purification facilities for houses and 146 new distributed wastewater management systems (OP11WWT-LSYS-CW03 and GS04)	Procurement								
	Implementation								
Capacity development of technicians for O&M of the wastewater management systems									
<b>1.1.3. Luxi County</b>									
Bidding designs by design institute									
Land acquisition and resettlement									
Construction or renovation of 4 centralized wastewater management systems including 3 new WWTPs (550 m <sup>3</sup> /day, 550 m <sup>3</sup> /day, and 800 m <sup>3</sup> /day) and 1 existing WWTP (3,000 m <sup>3</sup> /day) (OP11WWT-LX3T-CW01 and GS02 and LXPS-CW03)	Procurement								
	Implementation								
Capacity development of technicians for O&M of the wastewater management systems									
<b>1.1.4. Jishou City</b>									
Bidding designs by design institute									
Land acquisition and resettlement									
Construction of 4 new centralized wastewater management systems including 4 new WWTPs (1,000 m <sup>3</sup> /day, 300 m <sup>3</sup> /day, 300 m <sup>3</sup> /day, and 300 m <sup>3</sup> /day) (OP11WWT-JS4T-CW01 and GS02)	Procurement								
	Implementation								

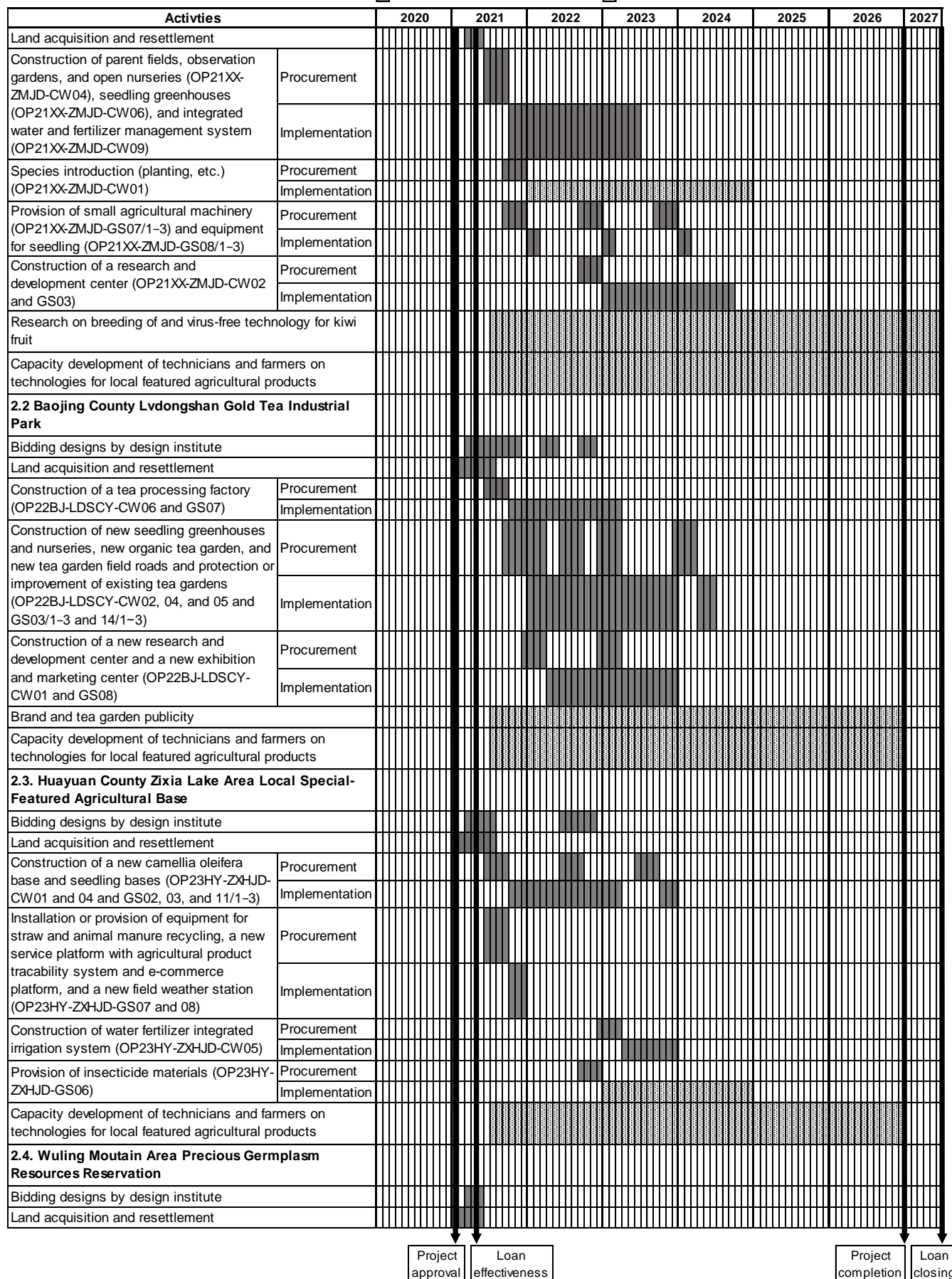
 Continuous Activities

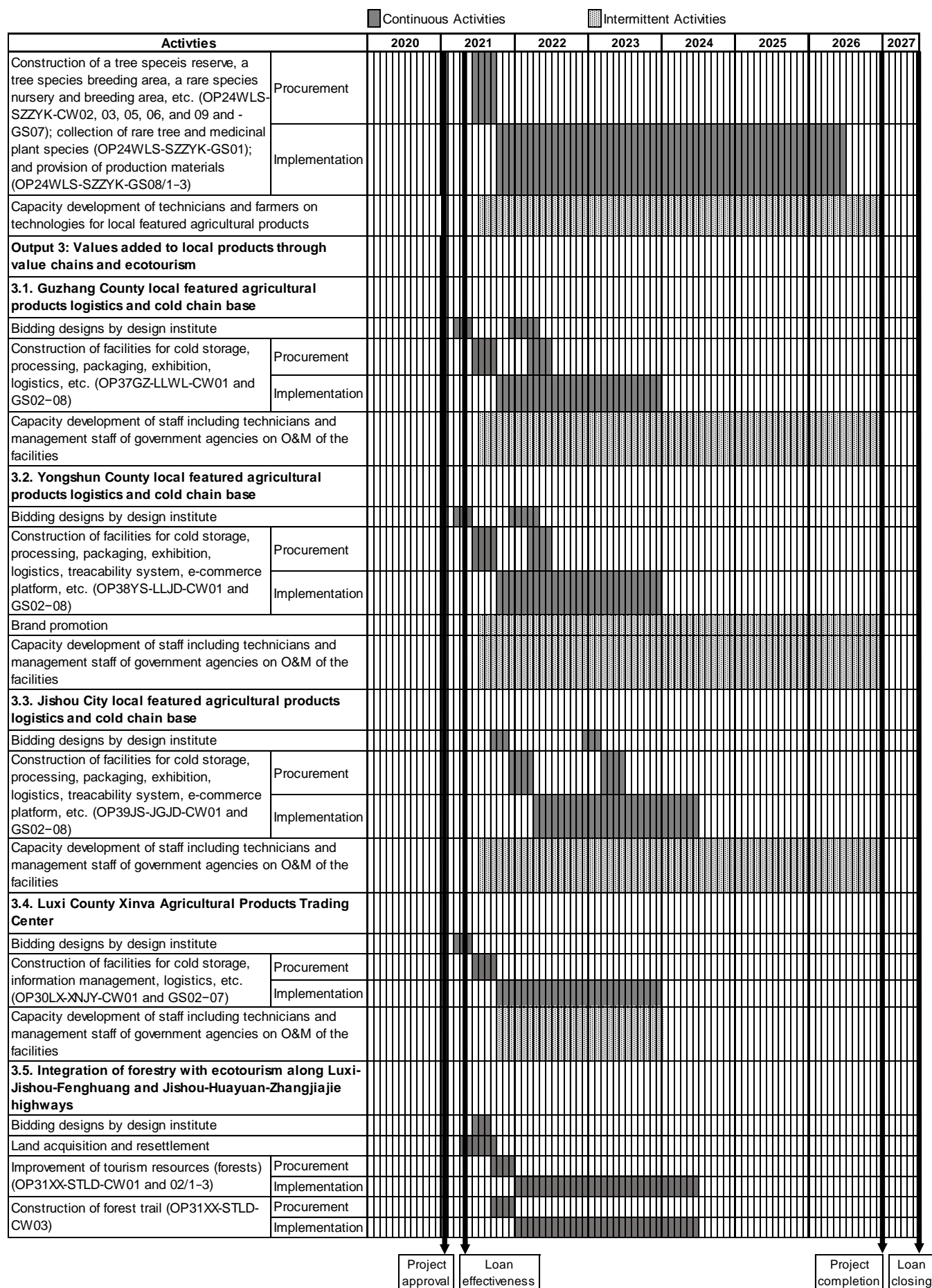
 Intermittent Activities


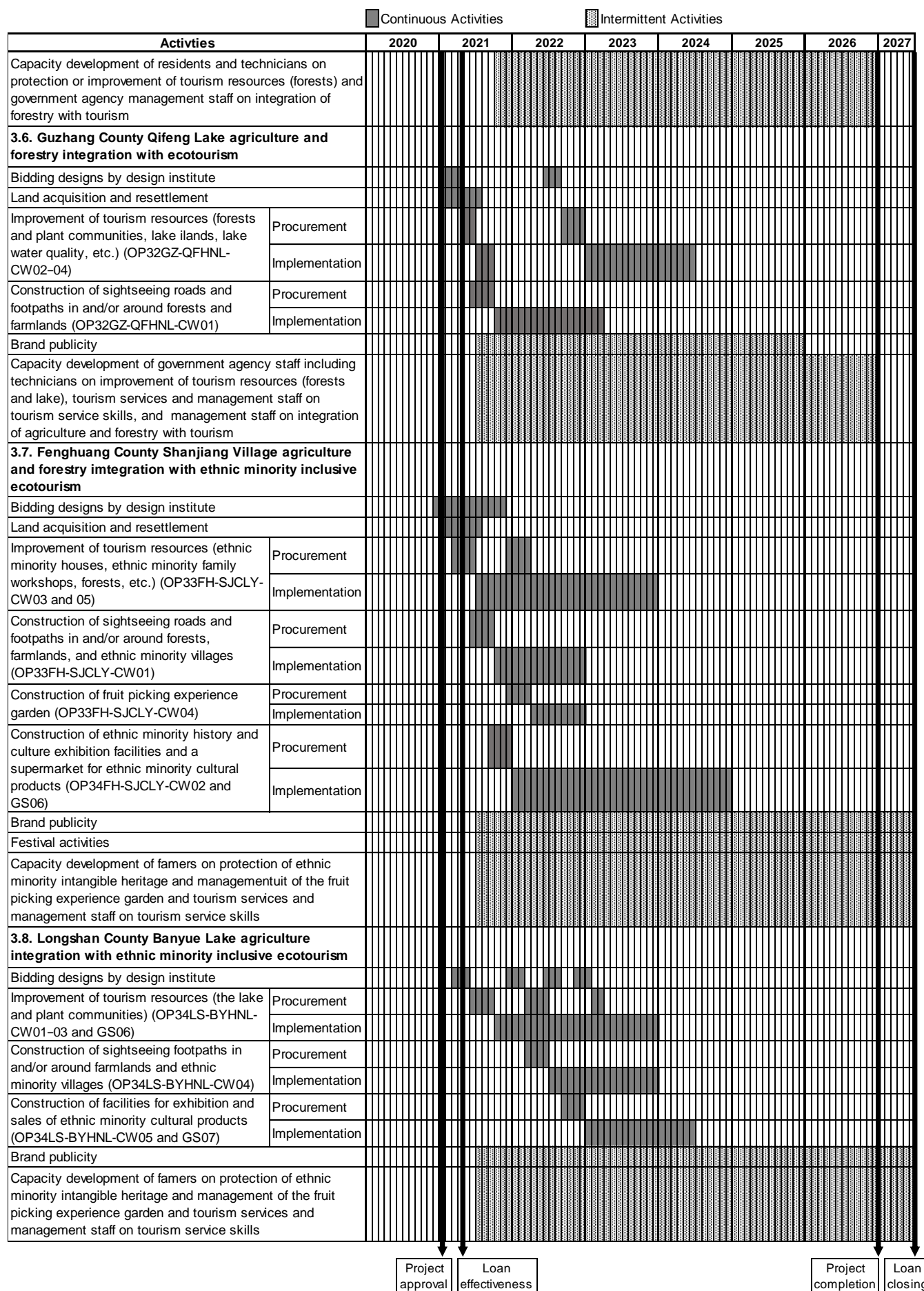




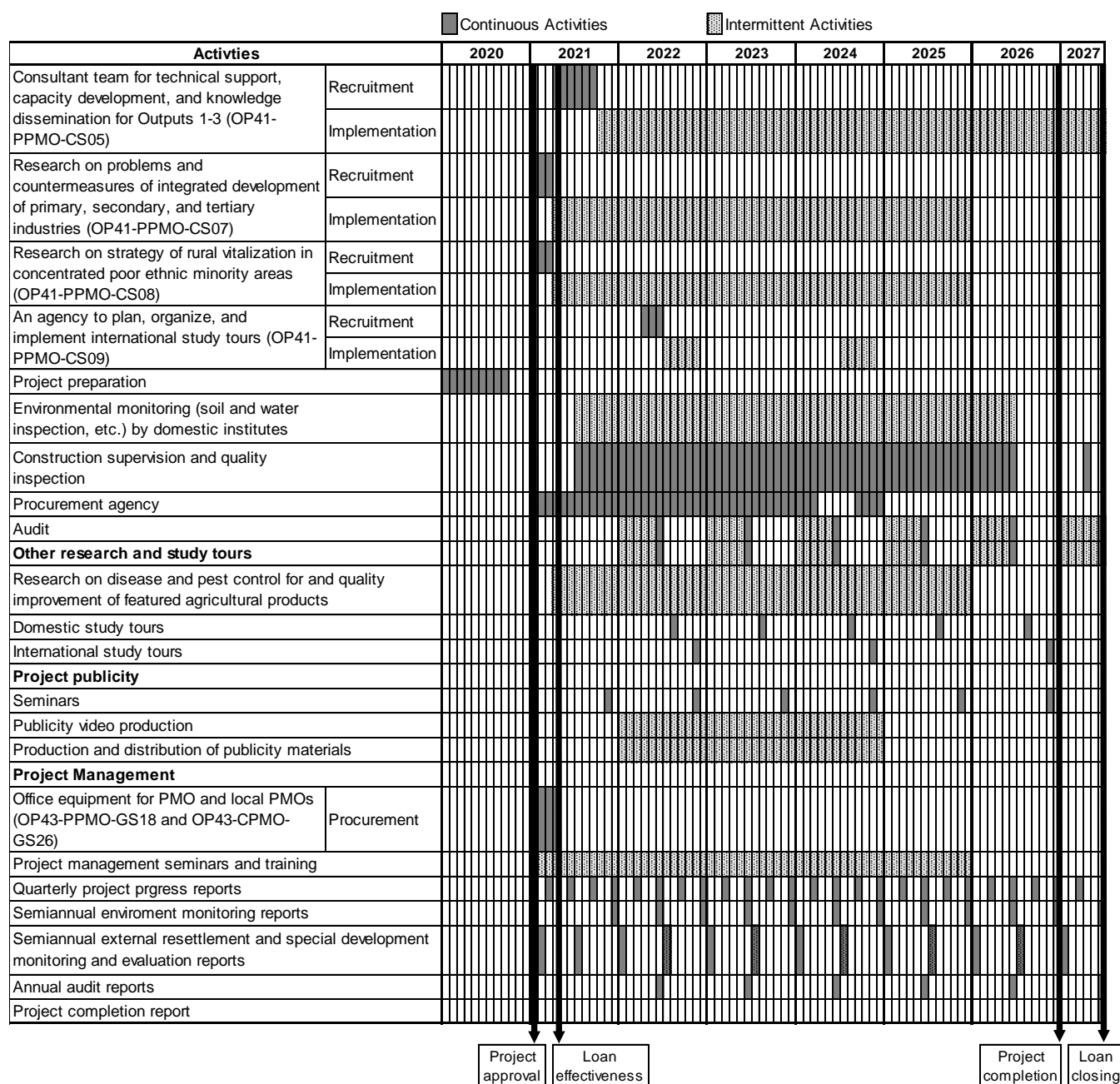
 Continuous Activities

 Intermittent Activities










EMDP = ethnic minority development plan, EMP = environmental management plan, m<sup>3</sup> = cubic meter, O&M = operation and maintenance, PMO = project management office, RP = resettlement plan, WWTP = wastewater treatment plant.

### III. PROJECT MANAGEMENT ARRANGEMENTS

#### A. Project Implementation Organizations: Roles and Responsibilities

22. The XPG will be the executing agency; and the implementing agencies will be the Jishou City Government and the county governments of Baojing, Fenghuang, Guzhang, Huayuan, Longshan, Luxi, and Yongshun. A project leading group (PLG) has been established in the XPG.<sup>18</sup> The project management office (PMO) has also been established under the PLG in the XPG, and it is physically located at the Development and Reform Committee office of the XPG.

23. In each of the implementing agencies, a local PLG has been established,<sup>19</sup> under which a local PMO has also been established.<sup>20</sup> Each local PMO is physically located at the Development and Reform Committee office of the city or county government.

24. The outbreak of COVID-19 that occurred in the beginning of 2020 will not affect the implementation of the project since, in the PRC, (i) the COVID-19 epidemic is being contained; and (ii) the economic activities are returning to their previous states, and the XPG and the implementing agencies have returned to normal operations.

**Table III-1: Project Implementation Organization**

<b>Project Implementation Organizations</b>	<b>Management Roles and Responsibilities</b>
Executing agency—XPG	<ul style="list-style-type: none"> <li>• Conduct overall project preparation and management</li> </ul>
Project leading group	<ul style="list-style-type: none"> <li>• Oversee the preparation and implementation of the overall project and provide overall guidance</li> </ul>
PMO	<ul style="list-style-type: none"> <li>• Conduct all procurement and consultant recruitment for the project, and manage consulting service contracts</li> <li>• Collect the WAs from the local PMOs, prepare and consolidate the WAs, obtain the Xiangxi Tujia and Miao Autonomous Prefectural Finance Bureau's endorsement of the WAs, and submit the WAs to the Hunan Provincial Finance Department</li> <li>• Conduct research on the local-featured ecological agricultural and forestry products, industrial integration, rural vitalization, etc., using consultants and/or other agencies</li> <li>• Conduct relevant project publicity</li> <li>• Plan, organize, and implement study visits</li> <li>• Prepare and submit to ADB the semiannual environmental monitoring reports</li> <li>• Ensure submission of semiannual external resettlement, social development, and gender action plan M&amp;E reports to ADB</li> <li>• Monitor project progress and performance, and report to ADB through quarterly project progress reports</li> </ul>

<sup>18</sup> The project leading group comprises the chair: Governor of the XPG; vice chairs: Executive Vice Governor of the XPG and two Vice Governors of the XPG in charge of agriculture and tourism; and members: Deputy Secretary of the XPG and heads of the Development and Reform Committee, Finance Bureau, Agriculture and Rural Affairs Bureau, Forestry Bureau, Culture and Tourism Bureau, Housing and Construction Bureau, Ecology and Environment Bureau, Natural Resources and Planning Bureau, Water Resources Bureau, and other representatives of relevant XPG agencies.

<sup>19</sup> The local PLG comprises the chair: Mayor; Vice chair: Vice Mayor in charge of the activities in the city or county; and members: heads of relevant government agencies such as Development and Reform Committee, Finance Bureau, Agriculture and Rural Affairs Bureau, Forestry Bureau, Housing and Construction Bureau, and Water Resources Bureau.

<sup>20</sup> The local PMO comprises the Director: Director of the city or county Development and Reform Committee; and Deputy Director and members: staff of relevant government agencies.

Project Implementation Organizations	Management Roles and Responsibilities
	<ul style="list-style-type: none"> <li>• Coordinate for annual audit of project financial statements</li> <li>• Prepare and submit to ADB a project completion report</li> <li>• Conduct any other overall project management activities</li> </ul>
Implementing agencies	<ul style="list-style-type: none"> <li>• Prepare preliminary design for each subproject in the city or county and obtain approval of the preliminary design from the city or county DRC and relevant technical bureaus</li> <li>• Construct and operate facilities and provide equipment for waste and sanitation management, local-featured ecological agricultural and forestry product development, and value addition to local agricultural and forestry products; by managing relevant contracts</li> <li>• Conduct relevant research, publicity, and capacity development</li> </ul>
Local project leading groups	<ul style="list-style-type: none"> <li>• Oversee the implementation of project components in the city or county</li> </ul>
Local PMOs	<ul style="list-style-type: none"> <li>• Prepare the WAs, obtain city or county Finance Bureau's endorsement of the WAs, and submit the WAs to the PMO</li> <li>• Ensure semiannual external resettlement and social development M&amp;E by the external monitor</li> <li>• Monitor project progress and performance, and provide information and data to the PMO for preparation of quarterly project progress reports and a project completion report</li> <li>• Conduct any other activities for the implementation of project components in the county</li> </ul>
Hunan Provincial Finance Department	<ul style="list-style-type: none"> <li>• Establish an advance account.</li> <li>• Manage the advance account, including disbursement of the ADB loan proceeds from the advance account at request.</li> <li>• Review, endorse, and submit to ADB the WAs submitted from the PMO.</li> </ul>
XPFB	<ul style="list-style-type: none"> <li>• Endorse the WAs prepared by the PMO.</li> </ul>
ADB	<ul style="list-style-type: none"> <li>• Conduct overall project preparation and administration, including (i) provision of orientation to the XPG and the implementing agencies, including the PMO and local PMOs; (ii) review of project progress and performance and implementation of remedial measures through daily communication and missions; (iii) review and approval of documents for procurement; (iv) review and approval of the WAs, and disbursement of loan proceeds; (v) changes in the project, as necessary; and (vi) preparation of the ADB-version project completion report.</li> </ul>

ADB = Asian Development Bank, DRC = Development and Reform Committee, M&E = monitoring and evaluation, PMO = project management office, WA = withdrawal application, XPFB = Xiangxi Tujia and Miao Autonomous Prefectural Finance Bureau, WA = withdrawal application, XPG = Xiangxi Tujia and Miao Autonomous Prefectural Government.

Source: Asian Development Bank.

## B. Key Persons Involved in Implementation

### Executing Agency

Xiangxi Tujia and Miao  
Autonomous Prefectural  
Government

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### Asian Development Bank

Environment, Natural  
Resources, and Agriculture  
Division; East Asia  
Department

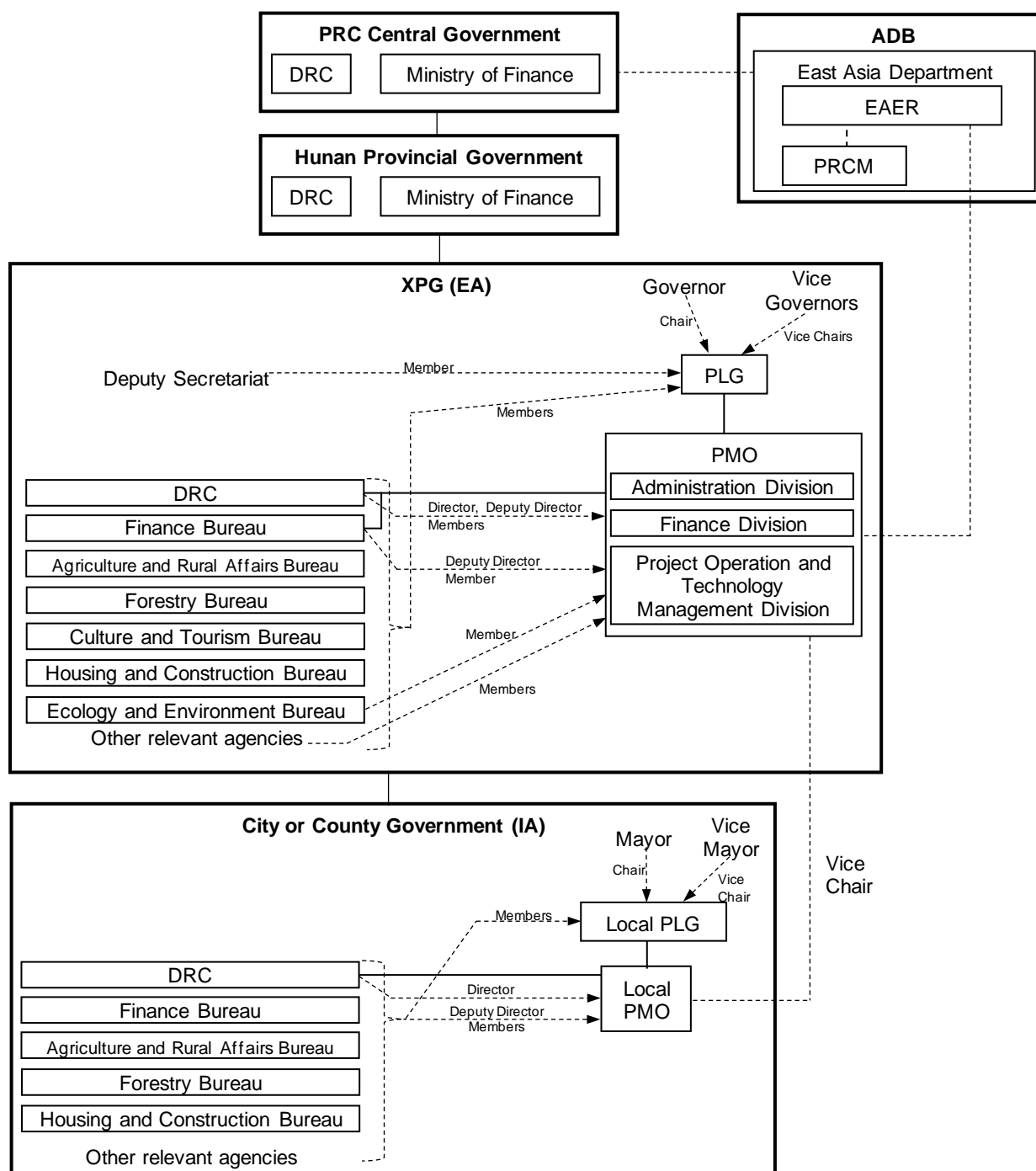
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Mission Leader

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### C. Project Organizational Structure



ADB = Asian Development Bank; DRC = development and reform committee; EA = executing agency; EAER = Environment, Natural Resources, and Agriculture Division of East Asia Department; IA = implementing agency; PLG = project leading group; PMO = project management office; PRC = People's Republic of China; PRCM = PRC Resident Mission; XPG = Xiangxi Tujia and Miao Autonomous Prefectural Government.

Source: Asian Development Bank.

#### IV. COSTS AND FINANCING

25. The project is estimated to cost €356.00 million. The outbreak of the COVID-19 pandemic that occurred in the beginning of 2020 has not affected the cost estimates since, in the PRC, (i) the COVID-19 epidemic is being contained in the PRC; and (ii) the economic activities are returning to their previous states, and the XPG and the implementing agencies have returned to normal operations.

26. The government has requested a regular loan of €169.23 million (\$200.00 million) from ADB's ordinary capital resources to help finance the project.<sup>21</sup> The 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 commitment charge of 0.15% per year; and such other terms and conditions set forth in the draft loan and project agreements. Based on the annuity method, the average maturity is 18.53 years; and the maturity premium payable to ADB is 0.50% per year.

27. ADB will finance expenditures relating to works, goods, consulting services, capacity development, workshop, study visits, research, and publicity. The government will finance expenditures relating to works, project preparation, project management, procurement, audit, environmental management, land acquisition and resettlement, social development, and others, including financial charges during implementation. The government will ensure that the counterpart funds for the project are provided in a timely manner.

28. Climate mitigation is estimated to cost €28.65 million, and climate adaptation is estimated to cost €12.07 million. ADB will finance 52.5% of mitigation costs and 63.3% of adaptation costs.

##### A. Cost Estimates Preparation and Revisions

29. The cost estimates were prepared based on the feasibility study in accordance with ADB's Guidelines on Preparing and Presenting Cost Estimates for Projects and Programs Financed by ADB.

30. The cost estimates may be updated during the implementation of the project.

##### B. Key Assumptions

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

- (i) Exchange rate: CNY7.8999 = €1.00 = \$1.1818 (as of 27 October 2020)
- (ii) Price contingencies based on expected cumulative inflation over the implementation period are as follows:

**Table IV-1: Escalation Rates for Price Contingency Calculation**

Item	2020	2021	2022	2023	2024	2025	2026	2027	Average
Foreign rate of price inflation	-0.50%	1.60%	1.70%	1.70%	1.80%	1.80%	1.80%	1.80%	1.46%
Domestic rate of price inflation	3.60%	1.90%	2.20%	2.20%	2.20%	2.20%	2.20%	2.20%	2.40%

Source: Asian Development Bank estimates.

<sup>21</sup> €0.8462 = \$1.00 as of 27 October 2020.

### C. Detailed Cost Estimates by Expenditure Category

Table IV-2: Detailed Cost Estimates by Expenditure Category

Item	(CNY million)			(€ million)			% of Total Base Cost	(\$ million)			% of Total Base Cost
	Foreign Exchange	Local Exchange	Total Cost	Foreign Exchange	Local Exchange	Total Cost		Foreign Exchange	Local Exchange	Total Cost	
<b>A. Investment Costs</b>											
1. Works	282.33	1,143.91	1,426.24	35.74	144.80	180.54	56.8%	42.24	171.13	213.36	67.1%
a. ADB financing	282.33	1,129.31	1,411.64	35.74	142.95	178.69	56.2%	42.24	168.94	211.18	66.5%
b. non-ADB financing	-	14.60	14.60	-	1.85	1.85	0.6%	-	2.18	2.18	0.7%
2. Goods	364.39	242.93	607.32	46.13	30.75	76.88	24.2%	54.51	36.34	90.85	28.6%
3. Consulting services	10.35	10.35	20.70	1.31	1.31	2.62	0.8%	1.55	1.55	3.10	1.0%
4. Capacity development, workshops, study tours, and researches	33.20	33.20	66.40	4.20	4.20	8.41	2.6%	4.97	4.97	9.93	3.1%
5. Publicity	13.25	13.25	26.50	1.68	1.68	3.35	1.1%	1.98	1.98	3.96	1.2%
6. Project preparation, project management, procurement, and audit	27.23	245.07	272.31	3.45	31.02	34.47	10.8%	4.07	36.66	40.74	12.8%
7. Environmental management	0.54	4.86	5.40	0.07	0.61	0.68	0.2%	0.08	0.73	0.81	0.3%
8. Land acquisition and resettlement	-	84.78	84.78	-	10.73	10.73	3.4%	-	12.68	12.68	4.0%
9. Social development	0.07	0.63	0.70	0.01	0.08	0.09	0.0%	0.01	0.09	0.10	0.0%
<b>Subtotal (A)</b>	<b>731.36</b>	<b>1,778.97</b>	<b>2,510.33</b>	<b>92.58</b>	<b>225.19</b>	<b>317.77</b>	<b>100.0%</b>	<b>109.41</b>	<b>266.13</b>	<b>375.54</b>	<b>118.2%</b>
<b>Total Base Cost</b>	<b>731.36</b>	<b>1,778.97</b>	<b>2,510.33</b>	<b>92.58</b>	<b>225.19</b>	<b>317.77</b>	<b>100.0%</b>	<b>109.41</b>	<b>266.13</b>	<b>375.54</b>	<b>118.2%</b>
<b>B. Contingencies</b>											
1. Physical Contingency	36.57	88.95	125.52	4.63	11.26	15.89	5.0%	5.47	13.31	18.78	5.9%
2. Price Contingency	40.00	97.31	137.31	5.06	12.32	17.38	5.5%	5.98	14.56	20.54	6.5%
<b>Subtotal (B)</b>	<b>76.57</b>	<b>186.26</b>	<b>262.83</b>	<b>9.69</b>	<b>23.58</b>	<b>33.27</b>	<b>10.5%</b>	<b>11.46</b>	<b>27.86</b>	<b>39.32</b>	<b>12.4%</b>
<b>C. Financing Charges During Implementation</b>											
1. Interest During Implementation	35.22	-	35.22	4.46	-	4.46	1.4%	5.27	-	5.27	1.7%
2. Commitment Charge	4.03	-	4.03	0.51	-	0.51	0.2%	0.60	-	0.60	0.2%
<b>Subtotal (C)</b>	<b>39.25</b>	<b>-</b>	<b>39.25</b>	<b>4.97</b>	<b>-</b>	<b>4.97</b>	<b>1.6%</b>	<b>5.87</b>	<b>-</b>	<b>5.87</b>	<b>1.8%</b>
<b>Total Project Cost (A+B+C)</b>	<b>847.18</b>	<b>1,965.23</b>	<b>2,812.41</b>	<b>107.24</b>	<b>248.77</b>	<b>356.01</b>	<b>112.0%</b>	<b>126.74</b>	<b>293.99</b>	<b>420.73</b>	<b>132.4%</b>

ADB = Asian Development Bank, CNY = Chinese yuan.

Notes: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

**D. Allocation and Withdrawal of Loan Proceeds****Table IV-3A: Allocation and Withdrawal of Loan Proceeds**

Item		Total Amount Allocated for ADB Financing (€)	Basis for Withdrawal from Loan Account
Works, Goods, and Services		169,233,000	Up to 100% of total expenditure claimed <sup>a</sup>
<b>Total</b>		<b>169,233,000</b>	

ADB = Asian Development Bank.

<sup>a</sup> Detailed financing percentages to be used during disbursement are set out in Table IV-3B of the project administration manual.**Table IV-3B: Allocation and Withdrawal of Loan Proceeds (Detailed Financing Percentages)**

Number	Item	Total Amount Allocated for ADB Financing (€)	Basis for Withdrawal from Loan Account
1	Works	77,976,667	43.6% of total expenditure claimed
2	Goods, Consulting Services, Capacity Development, Researches, Publicity	91,256,333	100.0% of total expenditure claimed
	<b>Total</b>	<b>169,233,000</b>	

ADB = Asian Development Bank.

# E. Detailed Cost Estimates by Financier

**Table IV-4: Detailed Cost Estimates by Financier**  
(€ million)

Item	ADB		Governments		Total Cost
	Amount	% of Cost Category	Amount	% of Cost Category	Amount
<b>A. Investment Costs</b>					
1. Works	77.98	43.2%	102.56	56.8%	180.54
a. ADB financing	77.98	43.6%	100.71	56.4%	178.69
b. non-ADB financing	-	0.0%	1.85	100.0%	1.85
2. Goods	76.88	100.0%	-	0.0%	76.88
3. Consulting services	2.62	100.0%	-	0.0%	2.62
4. Capacity development, workshops, study tours, and researches	8.41	100.0%	-	0.0%	8.41
5. Publicity	3.35	100.0%	-	0.0%	3.35
6. Project preparation, project management, procurement, and audit	-	0.0%	34.47	100.0%	34.47
7. Environmental management	-	0.0%	0.68	100.0%	0.68
8. Land acquisition and resettlement	-	0.0%	10.73	100.0%	10.73
9. Social development	-	0.0%	0.09	100.0%	0.09
<b>Subtotal (A)</b>	<b>169.23</b>	<b>53.3%</b>	<b>148.54</b>	<b>46.7%</b>	<b>317.77</b>
<b>Total Base Cost</b>	<b>169.23</b>	<b>53.3%</b>	<b>148.54</b>	<b>46.7%</b>	<b>317.77</b>
<b>B. Contingencies</b>					
1. Physical Contingency	-	0.0%	15.89	100.0%	15.89
2. Price Contingency	-	0.0%	17.38	100.0%	17.38
<b>Subtotal (B)</b>	<b>-</b>	<b>0.0%</b>	<b>33.27</b>	<b>100.0%</b>	<b>33.27</b>
<b>C. Financing Charges During Implementation</b>					
1. Interest During Implementation	-	0.0%	4.46	100.0%	4.46
2. Commitment Charge	-	0.0%	0.51	100.0%	0.51
<b>Subtotal (C)</b>	<b>-</b>	<b>0.0%</b>	<b>4.97</b>	<b>100.0%</b>	<b>4.97</b>
<b>Total Project Cost (A+B+C)</b>	<b>169.23</b>	<b>47.5%</b>	<b>186.77</b>	<b>52.5%</b>	<b>356.01</b>
Taxes and duties included <sup>a</sup>	12.09	70.2%	5.14	29.8%	17.24

ADB = Asian Development Bank.

<sup>a</sup> The government will finance taxes and duties of €5.14 million by cash contribution.

Notes: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

## F. Detailed Cost Estimates by Output

**Table IV-5: Detailed Cost Estimates by Output**  
(€ million)

Item	Total Cost	Output 1: Rural Waste and Sanitation Management Facilities and Services Improved		Output 2: Local Featured Ecological Agricultural and Forestry Products Developed		Output 3: Values Added to Local Products through Value Chains and Eco-Tourism		Project Management	
		Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category
<b>A. Investment Costs</b>									
1. Works	180.54	47.51	26.3%	26.10	14.5%	106.92	59.2%	-	0.0%
a. ADB financing	178.69	47.51	26.6%	25.70	14.4%	105.48	59.0%	-	0.0%
b. non-ADB financing	1.85	-	0.0%	0.40	21.6%	1.45	78.4%	-	0.0%
2. Goods	76.88	18.30	23.8%	11.14	14.5%	46.89	61.0%	0.54	0.7%
3. Consulting services	2.62	0.38	14.3%	0.38	14.3%	0.50	19.2%	1.37	52.2%
4. Capacity development, workshops, study tours, and researches	8.41	2.41	28.7%	0.94	11.2%	2.10	25.0%	2.95	35.1%
5. Publicity	3.35	-	0.0%	0.09	2.6%	2.81	83.8%	0.46	13.6%
6. Project preparation, project management, procurement, and audit	34.47	-	0.0%	-	0.0%	-	0.0%	34.47	100.0%
7. Environmental management	0.68	-	0.0%	-	0.0%	-	0.0%	0.68	100.0%
8. Land acquisition and resettlement	10.73	-	0.0%	-	0.0%	-	0.0%	10.73	100.0%
9. Social development	0.09	-	0.0%	-	0.0%	-	0.0%	0.09	100.0%
<b>Subtotal (A)</b>	<b>317.77</b>	<b>68.60</b>	<b>21.6%</b>	<b>38.64</b>	<b>12.2%</b>	<b>159.23</b>	<b>50.1%</b>	<b>51.29</b>	<b>16.1%</b>
<b>Total Base Cost</b>	<b>317.77</b>	<b>68.60</b>	<b>21.6%</b>	<b>38.64</b>	<b>12.2%</b>	<b>159.23</b>	<b>50.1%</b>	<b>51.29</b>	<b>16.1%</b>
<b>B. Contingencies</b>									
1. Physical Contingency	15.89	3.43	21.6%	1.93	12.2%	7.96	50.1%	2.56	16.1%
2. Price Contingency	17.38	2.97	17.1%	2.34	13.5%	8.45	48.6%	3.62	20.8%
<b>Subtotal (B)</b>	<b>33.27</b>	<b>6.40</b>	<b>19.3%</b>	<b>4.27</b>	<b>12.8%</b>	<b>16.42</b>	<b>49.3%</b>	<b>6.18</b>	<b>18.6%</b>
<b>C. Financing Charges During Implementation</b>									
1. Interest During Implementation	4.46	1.18	26.5%	0.58	13.0%	2.57	57.7%	0.12	2.8%
2. Commitment Charge	0.51	0.10	20.6%	0.08	16.5%	0.30	58.9%	0.02	3.9%
<b>Subtotal (C)</b>	<b>4.97</b>	<b>1.29</b>	<b>25.9%</b>	<b>0.66</b>	<b>13.3%</b>	<b>2.88</b>	<b>57.9%</b>	<b>0.14</b>	<b>2.9%</b>
<b>Total Project Cost (A+B+C)</b>	<b>356.01</b>	<b>76.29</b>	<b>21.4%</b>	<b>43.58</b>	<b>12.2%</b>	<b>178.52</b>	<b>50.1%</b>	<b>57.61</b>	<b>16.2%</b>

ADB = Asian Development Bank.

Notes: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

## G. Detailed Cost Estimates by Year

**Table IV-6: Detailed Cost Estimates by Year**  
(€ million)

Item	Until 2021			2022		2023		2024		2025		2026		2027	
	Total Cost	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category
A. Investment Costs															
1. Works	180.54	28.92	16.0%	80.79	44.8%	58.94	32.6%	9.78	5.4%	1.48	0.8%	0.62	0.3%	-	0.0%
a. ADB financing	178.69	28.90	16.2%	80.41	45.0%	58.09	32.5%	9.44	5.3%	1.23	0.7%	0.62	0.3%	-	0.0%
b. non-ADB finncing	1.85	0.02	1.2%	0.38	20.6%	0.85	45.8%	0.35	18.9%	0.25	13.6%	-	0.0%	-	0.0%
2. Goods	76.88	7.57	9.9%	30.16	39.2%	31.88	41.5%	5.96	7.8%	0.87	1.1%	0.43	0.6%	-	0.0%
3. Consulting services	2.62	0.35	13.3%	0.45	17.3%	0.43	16.5%	0.45	17.3%	0.41	15.8%	0.34	13.2%	0.17	6.6%
4. Capacity development, workshops, study tours, and researches	8.41	0.83	9.8%	1.43	17.1%	2.03	24.1%	2.06	24.5%	1.23	14.7%	0.80	9.5%	0.02	0.3%
5. Publicity	3.35	0.43	13.0%	0.66	19.7%	0.66	19.7%	0.66	19.7%	0.51	15.1%	0.43	12.9%	-	0.0%
6. Project preparation, project management, procurement, and audit	34.47	4.61	13.4%	10.45	30.3%	9.12	26.4%	3.52	10.2%	2.60	7.6%	2.16	6.3%	2.00	5.8%
7. Environmental management	0.68	0.25	36.7%	0.20	30.0%	0.17	25.2%	0.04	5.4%	0.01	2.2%	0.00	0.6%	-	0.0%
8. Land acquisition and resettlement	10.73	1.67	15.5%	4.29	39.9%	3.61	33.6%	0.77	7.2%	0.31	2.9%	0.09	0.8%	-	0.0%
9. Social development	0.09	0.09	100.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Subtotal (A)	317.77	44.72	14.1%	128.45	40.4%	106.84	33.6%	23.24	7.3%	7.44	2.3%	4.88	1.5%	2.20	0.7%
Total Base Cost	317.77	44.72	14.1%	128.45	40.4%	106.84	33.6%	23.24	7.3%	7.44	2.3%	4.88	1.5%	2.20	0.7%
B. Contingencies															
1. Physical Contingency	15.89	2.24	14.1%	6.42	40.4%	5.34	33.6%	1.16	7.3%	0.37	2.3%	0.24	1.5%	0.11	0.7%
2. Price Contingency	17.38	1.02	5.9%	5.53	31.8%	6.91	39.8%	2.03	11.7%	0.84	4.8%	0.67	3.8%	0.37	2.2%
Subtotal (B)	33.27	3.26	9.8%	11.96	35.9%	12.26	36.8%	3.19	9.6%	1.21	3.6%	0.91	2.7%	0.48	1.5%
C. Financing Charges During Implementation															
1. Interest During Implementation	4.46	0.06	1.4%	0.31	7.0%	0.67	15.1%	0.88	19.8%	0.93	20.8%	0.95	21.2%	0.65	14.7%
2. Commitment Charge	0.51	0.24	46.6%	0.17	33.4%	0.07	14.6%	0.02	3.7%	0.01	1.3%	0.00	0.4%	0.00	0.0%
Subtotal (C)	4.97	0.30	6.0%	0.48	9.7%	0.75	15.1%	0.90	18.1%	0.94	18.8%	0.95	19.1%	0.65	13.2%
Total Project Cost (A+B+C)	356.01	48.28	13.6%	140.89	39.6%	119.84	33.7%	27.34	7.7%	9.58	2.7%	6.74	1.9%	3.34	0.9%

ADB = Asian Development Bank.

Notes: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

## H. Contract and Disbursement S-Curve

Figure IV-1: Contract and Disbursement S-Curve

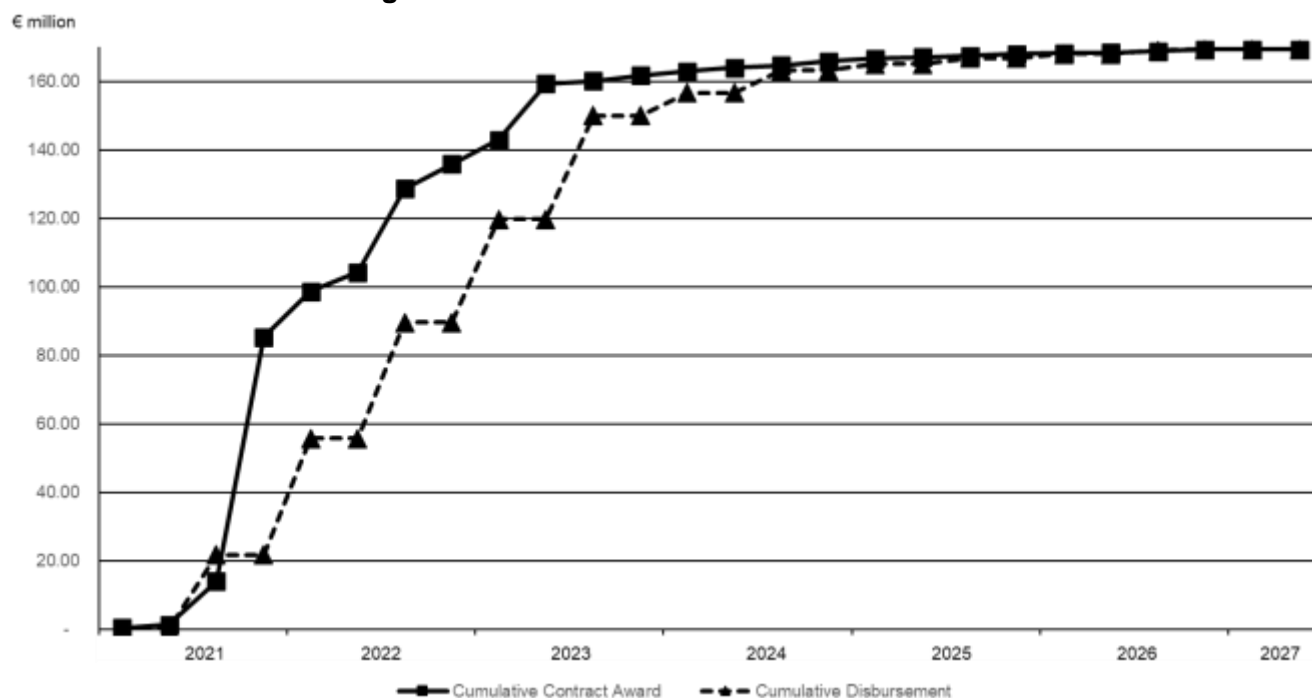


Table IV-7: Contract Award and Disbursement  
(€ million)

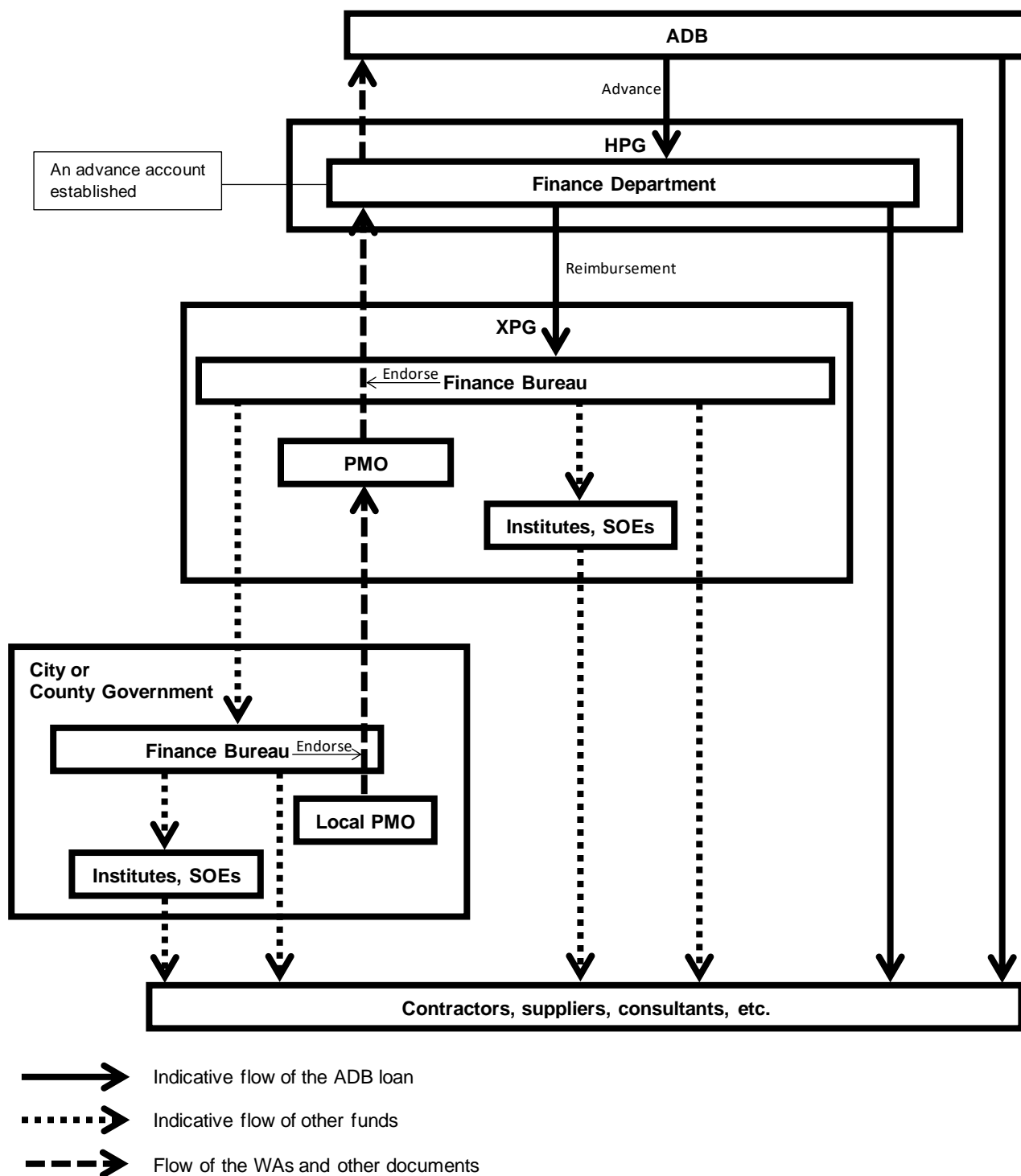
Year	Contract Award					Disbursement				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2021	0.44	0.98	12.64	71.25	85.31	-	-	21.79	-	21.79
2022	13.37	5.54	24.45	7.17	50.53	33.90	-	33.90	-	67.80
2023	7.08	16.38	0.77	1.54	25.78	30.18	-	30.18	-	60.35
2024	1.20	1.08	0.72	1.21	4.21	6.62	-	6.62	-	13.25
2025	0.74	0.41	0.49	0.47	2.11	1.78	-	1.78	-	3.56
2026	0.23	0.23	0.37	0.44	1.27	1.14	-	1.14	0.20	2.48
2027	0.01	0.01			0.02	-	-	-	-	-
<b>Total</b>					<b>169.23</b>					<b>169.23</b>

Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.



# I. Fund Flow Diagram



ADB = Asian Development Bank, HPG = Hunan Provincial Government, PMO = project management office, SOE = state-owned enterprise, WA = withdrawal application, XPG = Xiangxi Tujia and Miao Autonomous Prefecture.

## V. FINANCIAL MANAGEMENT

### A. Financial Management Assessment

32. The financial management assessment (FMA) was conducted from May to June 2020 in accordance with ADB's Guidelines for the Financial Management and Analysis of Projects and the Financial Due Diligence: A Methodology Note. The COVID-19 pandemic that occurred in the beginning of 2020 did not affect the FMA since the XPG and the implementing agencies were back to normal operations before the FMA was conducted. The FMA considered the capacity of the XPG and the implementing agencies, including fund flow arrangements, staffing, accounting and financial reporting systems, financial information systems, and internal and external auditing arrangements. Based on the assessment, the key financial management risks identified include lack of familiarity with ADB's requirements and procedures for disbursement; and lack of familiarity with ADB's requirements for financial management, particularly accounting, reporting, and auditing. It is concluded that the overall pre-mitigation financial management risk of the XPG and the implementing agencies is *moderate*.<sup>22</sup> The FMA confirmed that, with the implementation of the financial management action plan below, the XPG and the implementing agencies can properly conduct financial management, including fund flow management, use of statement of expenditures (SOE) procedures, accounting and financial reporting, and auditing. The XPG and the implementing agencies have agreed to implement an action plan as key measures to address the deficiencies. The financial management action plan is provided in Table V-1. An advance account will be established and managed by the Hunan Provincial Finance Department (HPFD). The HPFD has established and managed advance accounts for about 10 ADB projects.

**Table V-1: Financial Management Action Plan**

	<b>Action</b>	<b>Responsibility</b>	<b>Timeline</b>
1	Training on ADB disbursement procedures and requirements	XPG, including the PMO; implementing agencies, including the local PMOs; HPFD; and ADB	1 month before first disbursement
2	Training on ADB financial management requirements, including accounting, asset registration and management, auditing procedures, and foreign exchange and interest rate risk management	XPG, including the PMO; implementing agencies, including the local PMOs; HPFD; Hunan Provincial Audit Office; and ADB	3 months before loan effectiveness
3	Recruitment of experienced staff to be deployed in appropriate financial management positions with English language support to enhance operational capacities	XPG, including the PMO; and implementing agencies, including the local PMOs	Before first disbursement
4	Development of financial management manuals	XPG, including the PMO; implementing agencies, including the local PMOs; and prefectural, city, and county finance bureaus	1 month before loan effectiveness

<sup>22</sup> The financial management assessment was conducted from May to June 2020 in accordance with ADB's Guidelines for the Financial Management and Analysis of Projects and the Financial Due Diligence: A Methodology Note. The COVID-19 pandemic that occurred in the beginning of 2020 did not affect the financial management assessment since the XPG and the implementing agencies were back to normal operations before the financial management assessment was conducted.

	Action	Responsibility	Timeline
5	Close monitoring to timely identify potential issues in counterpart funding	XPG, including the PMO; implementing agencies, including the local PMOs; prefectural, city, and county finance bureaus; and ADB	At least once per year during project implementation
6	Training on accrual-based accounting system to meet the requirement of the project accounting system	XPG, including the PMO; implementing agencies, including the local PMOs; prefectural, city, and county finance bureaus; and ADB	1 month before loan effectiveness
7	Setting up of internal audit mechanisms and training on the PRC Basic Government Auditing Standard	XPG, including the PMO; implementing agencies, including the local PMOs; and audit offices	1 month before loan effectiveness
8	Segregation of duties, controls, and procedures for fund flow, financial information, accountability, reporting, and audits	XPG, including the PMO; implementing agencies, including the local PMOs; prefectural, city, and county finance bureaus; and ADB	1 month before loan effectiveness

ADB = Asian Development Bank, HPFD = Hunan Provincial Finance Department, PMO = project management office, PRC = People's Republic of China, XPG = Xiangxi Tujia and Miao Autonomous Prefectural Government.  
Source: Asian Development Bank.

## B. Disbursement

### 1. Disbursement Arrangements for ADB Funds

33. The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time), and detailed arrangements agreed upon between the government and ADB.<sup>23</sup> Online training for project staff on disbursement policies and procedures is available.<sup>24</sup> Project staff are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

34. The XPG, including the PMO, will be responsible for disbursement arrangements for expenditures related to activities which the XPG conducts, including provision of consulting services, research, project publicity, and study visits. The implementing agencies, including the local PMOs, will be responsible for disbursement arrangements for expenditures related to activities which the implementing agencies conduct, including construction and operation of facilities and provision of equipment for waste and sanitation management, local-featured ecological agricultural and forestry product development, and value addition to local-featured ecological agricultural and forestry products; and relevant research, publicity, and capacity development.

35. Each of the eight local PMOs prepare the withdrawal applications, obtain the City or County Finance Bureau's endorsement of the withdrawal applications, and submit the endorsed withdrawal applications to the PMO. The PMO prepares the consolidated withdrawal applications, obtain the XPG Finance Bureau's endorsement, and submit them to the HPFD. The HPFD, after its review and endorsement, will submit the withdrawal applications to ADB.

36. **Advance fund procedure.** The HPFD will establish and maintain an advance account. The currency of the advance account is Euro. The advance account is to be used exclusively for

<sup>23</sup> The handbook is available electronically from the ADB website (<http://www.adb.org/documents/loan-disbursement-handbook>).

<sup>24</sup> Disbursement eLearning. [http://wpqr4.adb.org/disbursement\\_elearning](http://wpqr4.adb.org/disbursement_elearning)

ADB's share of eligible expenditures. The HPFD that administers the advance account is accountable and responsible for proper use of advances to the advance account.

37. The total outstanding advance to the advance account should not exceed the estimate of ADB's share of expenditures to be paid through the advance account for the forthcoming 6 months. The XPG through the HPFD may request for initial and additional advances to the advance account based on an Estimate of Expenditure Sheet, setting out the estimated expenditures to be financed through the account for the forthcoming 6 months.<sup>25</sup> Supporting documents should be submitted to ADB or retained by the HPFD, the XPG, and the implementing agencies in accordance with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time) when liquidating or replenishing the advance account.

38. **SOE procedure.**<sup>26</sup> The SOE procedure may be used for reimbursement of eligible expenditures or liquidation of advances to the advance account. Supporting documents and records for the expenditures claimed under the SOE should be maintained and made readily available for review by ADB's disbursement and review missions, upon ADB's request for submission of supporting documents on a sampling basis, and for independent audit.

39. Before the submission of the first withdrawal application, the HPFD should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the HPFD, 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 should be paid (i) by the XPG and the implementing agencies, and subsequently claimed to ADB through reimbursement; or (ii) through the advance fund procedure, unless otherwise accepted by ADB. The XPG and the HPFD should ensure sufficient category and contract balances before requesting disbursements. Use of ADB's Client Portal for Disbursements system is encouraged for submission of withdrawal applications to ADB.<sup>27</sup>

## 2. Disbursement Arrangements for Counterpart Fund

40. The XPG and the implementing agencies will timely provide counterpart funds for works; project preparation, project management, procurement, and audit; environmental management; land acquisition and resettlement; social development; contingencies; and financial charges during project implementation as specified in the loan and project agreements. The XPG and the implementing agencies will disburse counterpart funds to contractors, suppliers, service providers, people affected by land acquisition and resettlement, and others.

41. The PMO and local PMOs will prepare annual disbursement projections and make requests for annual allocations of counterpart funds for the project. The requests will be reviewed in the XPG and the implementing agencies and approved by the respective people's congresses. Finance Bureaus of the XPG and the implementing agencies will (i) directly pay to contractors, suppliers, consultants, and others; and (i) if an institute or state-owned enterprise of the

<sup>25</sup> Estimate of Expenditure sheet is available in Appendix 8A of ADB's *Loan Disbursement Handbook* (2017, as amended from time to time),

<sup>26</sup> SOE forms are available in Appendix 7B and 7D of ADB's *Loan Disbursement Handbook* (2017, as amended from time to time).

<sup>27</sup> ADB's Client Portal for Disbursements facilitates online submission of the withdrawal applications 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>.

government is involved in a subproject, disburse counterpart fund to the institute or state-owned enterprises based on actual incurrence of costs.

### **C. Accounting**

42. The XPG will maintain, or cause to be maintained, separate books and records by funding source for all expenditures incurred on the project, following the Accounting Methods for Projects Financed by the World Bank (reference No. 2000 [13]).<sup>28</sup> The XPG will prepare consolidated project financial statements in accordance with the government's accounting laws and regulations which are consistent with the international accounting principles and practices.

### **D. Auditing and Public Disclosure**

43. The XPG will consolidate all financial information of itself and the implementing agencies into one set of detailed project financial statements and cause the Hunan Provincial Audit Department in the Hunan Provincial Government, authorized by the National Audit Department of the PRC, to audit the consolidated detailed project financial statements in accordance with the PRC's auditing standards. The audited project financial statements for the whole project together with the auditor's opinion will be presented in the English language to ADB within 6 months from the end of the fiscal year by the XPG.

44. 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 purposes of the project; and (iii) whether the XPG was in compliance with the financial covenants contained in the legal agreements.

45. 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.

46. The XPG 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.<sup>29</sup> 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

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<sup>28</sup> Accounting regulations issued by the Ministry of Finance for all foreign aid-funded projects.

<sup>29</sup> 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.

to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

47. 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.<sup>30</sup> After the review, ADB will disclose the audited project financial statements and the opinion of the auditors on the project financial statements not later than 14 days of ADB's confirmation of their acceptability by posting them on ADB's website. The management letter and additional auditor's opinions will not be disclosed.<sup>31</sup>

## VI. PROCUREMENT AND CONSULTING SERVICES

### A. Advance Contracting and Retroactive Financing

48. 1. All advance contracting and retroactive financing will be undertaken in conformity 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).<sup>32</sup> The issuance of invitations to bid under advance contracting and retroactive financing will be subject to ADB's approval. The XPG and the implementing agencies have been advised that approval of advance contracting and retroactive financing do not commit ADB to finance the project.

49. **Advance contracting.** Advance contracting will apply to consulting services for (i) initial project management support by individual consultants (package numbers: OP41-PPMO-CS01/1, 2, and 3; recruitment method: individual consultant selection); (ii) project management support consultant team (package number: OP41-PPMO-CS02; recruitment method: quality- and cost-based selection); (iii) external environmental monitoring agency (EMA) (package number: OP41-PPMO-CS03; recruitment method: consultants' qualifications selection [CQS]); (iv) external resettlement and social M&E agency (package number: OP41-PPMO-CS04; recruitment method: CQS); (v) a consultant team for a research on problems and countermeasures of integrated development of primary, secondary, and tertiary industries (package number: OP41-PPMO-CS07; recruitment method: CQS); and (vi) a consultant team for a research on strategy of rural vitalization in concentrated poor ethnic minority areas (package number: OP41-PPMO-CS08; recruitment method: CQS).

50. **Retroactive financing.** Retroactive financing will apply to the recruitment of consultants. 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

51. Procurements of all works and goods to be funded by ADB and recruitment of all consultants to be financed by ADB will be undertaken in accordance with the Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time), (footnote 27).

<sup>30</sup> Available at: <https://www.adb.org/sites/default/files/institutional-document/450636/access-information-policy.pdf>.

<sup>31</sup> This type of information would generally fall under access to information policy exceptions to disclosure. ADB. 2018. *Access to Information Policy*. Paragraph 17 (iv)–(vi).

<sup>32</sup> <https://www.adb.org/documents/adb-procurement-policy>.

52. The project has a total of 156 contract packages to be financed by ADB, including 71 works contracts; 75 goods contracts; and 10 consulting services contracts.

53. **Open competitive bidding.** Open competitive bidding (OCB) with national advertisement will be used for all 113 works and goods contract packages. For procurement under the OCB with national advertisement: (i) an advertisement in Chinese will be published on a national press, official gazette, or free and publicly accessible website, as well as on the ADB Special Column at the China Bidding and Tendering Public Service Platform (<http://www.cebpubservice.com/>); (ii) the PRC's specific standard bidding documents (accepted by ADB, as updated in 2020) will be used unless otherwise agreed between the XPG and ADB; and (iii) documents for bidding and contract will only be in Chinese language (except for documents which require ADB's review and approval), and the currencies for bidding and payment will be in Chinese yuan (CNY) unless otherwise agreed between the XPG and ADB. The relevant sections of ADB's Anticorruption Policy (1998, as amended from time to time) will be included in all procurement documents and contracts.<sup>33</sup>

54. **Consulting services.** Individual consultant selection method will be applied to recruitments of three individual consultants for initial project management support (package numbers: OP41-PPMO-CS01/1, 2, and 3; inputs: 4.00 person-months [pm] of national inputs for each contract package); quality- and cost-based selection method with a quality–cost ratio of 90:10 will be applied to recruitments of a project management support consultant team (package number: OP41-PPMO-CS02; inputs: 16.50 pm of international and 64.50 pm of national inputs), and a consultant team for technical support, capacity development, and knowledge dissemination (package number: OP41-PPMO-CS05; inputs: 18.00 pm of international and 33.50 pm of national inputs); and CQS will be applied to recruitments of an external EMA (package number: OP41-PPMO-CS03; inputs: 14.25 pm of national inputs); an external resettlement and social M&E agency (package number: OP41-PPMO-CS04; inputs: 29.00 pm of national inputs); a consultant team for a research on problems and countermeasures of integrated development of primary, secondary, and tertiary industries (package number: OP41-PPMO-CS07; inputs: 15.00 pm of national inputs); a consultant team for a research on strategy of rural vitalization in concentrated poor ethnic minority areas (package number: OP41-PPMO-CS08; inputs: 20.00 pm of national inputs); and an agency to plan, organize, and implement an international study visit (package number: OP41-PPMO-CS09; inputs: 3.00 pm of national inputs). A consulting service recruitment notice in Chinese will be published on the ADB Special Column at the China Bidding and Tendering Public Service Platform (<http://www.cebpubservice.com/>), in parallel with the posting of its English version through ADB's Consultant Management System.

55. **ADB review.** There are two ADB review procedures for procurement of works and goods: prior review and post review (sampling). For contract packages for prior review, each step of bidding (bidding document, bid evaluation report, draft negotiated contract, and signed contract) needs ADB's prior review and approval. For contract packages for post-review (sampling), ADB reviews the bid evaluation report and signed contract after the contract is signed; and on sampling basis. Under the project, contract packages for works and goods for prior review are the 1<sup>st</sup> to 10<sup>th</sup> OCB packages for works and the 1<sup>st</sup> to 10<sup>th</sup> OCB packages for goods. All the other contract packages for works and goods are for post-review (sampling). Regarding consulting services, all contract packages are for prior review. Each sample size should cover at least 20% of the total number of the post review (sampling) contracts awarded before the initial post review (sampling), or between two consecutive post reviews (sampling). Total sample size aggregated should capture contracts representing (i) about 30%–50% of total project value and (ii) about 20% of the

<sup>33</sup> <http://www.adb.org/Documents/Policies/Anticorruption-Integrity/default.asp>

total number of contracts identified for post review (sampling). It should ensure that, to the extent possible, all types of contracts are included in the sample.

### C. Procurement Plan

56. The procurement plan shall be updated as needed throughout the duration of the project.

#### Basic Data

<b>Project Name:</b> Hunan Xiangxi Rural Environmental Improvement and Green Development Project	
<b>Project Number:</b> 53050-001	<b>Approval Number:</b> XXX
<b>Country:</b> People's Republic of China	<b>Executing Agency:</b> Xiangxi Tujia and Miao Autonomous Prefectural Government
<b>Project Procurement Classification:</b> B	<b>Implementing Agencies:</b> Jishou City Government and the county governments of Baojing, Fenghuang, Guzhang, Huayuan, Longshan, Luxi, and Yongshun
<b>Procurement Risk:</b> Moderate	
<b>Project Financing Amount:</b> €356.01 million <b>ADB Financing:</b> €169.23 million <b>Non-ADB Financing:</b> €186.77 million	<b>Project Closing Date:</b> 30 June 2027
<b>Date of First Procurement Plan:</b> 27 October 2020	<b>Date of this Procurement Plan:</b> 27 October 2020

### 1. Methods, Review, and Procurement Plan

#### a. Procurement and Consultant Recruitment Methods

57. Except as ADB may otherwise agree, the following methods shall apply to procurement of goods and works and recruitment of consultants.

Procurement of Goods and Works	
Method	Comments
Open Competitive Bidding with National Advertisement	For 113 works and goods contract packages
Request for Quotations	For 33 works and goods packages

Consulting Services	
Method	Comments
Quality- and Cost-Based Selection	For recruitments of a project management support consultant team (package number: OP41-PPMO-CS02); and a consultant team for technical support, capacity development, and knowledge dissemination (package number: OP41-PPMO-CS05), (a quality–cost ratio of 90:10 for both packages)
Consultants' Qualifications Selection	For recruitments of an external environmental monitoring agency (package number: OP41-PPMO-CS03); an external resettlement and social monitoring and evaluation agency (package number: OP41-PPMO-CS04); a consultant team for a research on problems and countermeasures of integrated development of primary, secondary, and tertiary industries (package number: OP41-PPMO-CS07); a consultant team for a research on strategy of rural vitalization in concentrated poor ethnic minority areas (package number: OP41-PPMO-CS08); and an agency to plan, organize, and implement an international study visit (package number: OP41-PPMO-CS09)
Individual Consultant Selection	For recruitments of three individual consultants for initial project management support (package numbers: OP41-PPMO-CS01/1, 2, and 3)



**b. Goods and Works Contracts Estimated to Cost €0.8462 Million (Equivalent to \$1 Million) or More**

58. The following table lists goods and works contracts over the life of the project to cost €0.8462 million (equivalent to \$1 million) or more.

Package Number	General Description	Estimated Value (€ million)	Procurement Method	Review (Prior/Post [Sampling])	Bidding Procedure	Advertisement Date (quarter/year)	Comments
<b>1.1. Wastewater management system</b>							
<b>1.1.1. Huayuan County</b>							
OP11WWT-HYZXH-CW01	Construction of a WWTP	1.92	OCB (NA)	Prior	1S1E	Q2 2021	1st–10th OCB (NA) for works
OP11WWT-HYZXH-GS02	Equipment for a WWTP	1.67	OCB (NA)	Prior	1S1E	Q2 2021	1st–10th OCB (NA) for goods
OP11WWT-HYZXH-CW03	Construction of 200 new four-pool wastewater purification facilities and 115 new distributed wastewater management systems	7.88	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP11WWT-HYZXH-GS04	Equipment for 200 new four-pool wastewater purification facilities and 115 new distributed wastewater management systems	1.64	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
<b>1.1.2. Longshan County</b>							
OP11WWT-LS3T-CW01	Construction or renovation of 4 centralized wastewater management systems	4.40	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP11WWT-LS3T-GS02	Equipment for 4 centralized wastewater management systems	2.59	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP11WWT-LSYS-CW03	Construction of 420 new four-pool wastewater purification facilities and 146 new distributed wastewater management systems	8.84	OCB (NA)	Prior	1S1E	Q1 2021	1st–10th OCB (NA) for works
OP11WWT-LSYS-GS04	Equipment for 420 new four-pool wastewater purification facilities and 146 new distributed wastewater management systems	1.76	OCB (NA)	Prior	1S1E	Q1 2021	1st–10th OCB (NA) for goods
<b>1.1.3. Luxi County</b>							
OP11WWT-LXPS-CW03	Renovation of 1 centralized wastewater management system	2.17	OCB (NA)	Prior	1S1E	Q2 2021	1st–10th OCB (NA) for works
OP11WWT-LX3T-CW01	Construction of 34 centralized wastewater management systems	3.30	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP11WWT-LX3T-GS02	Equipment for 34 centralized wastewater management systems	2.70	OCB (NA)	Prior	1S1E	Q2 2021	1st–10th OCB (NA) for goods
<b>1.1.4. Jishou City</b>							
OP11WWT-JS4T-CW01	Construction of 4 new centralized wastewater management systems	2.73	OCB (NA)	Post (sampling)	1S1E	Q2 2021	

Package Number	General Description	Estimated Value (€ million)	Procurement Method	Review (Prior/Post [Sampling])	Bidding Procedure	Advertisement Date (quarter/year)	Comments
OP11WWT-JS4T-GS02	Equipment for 4 new centralized wastewater management systems	2.87	OCB (NA)	Prior	1S1E	Q2 2021	1st-10th OCB (NA) for goods
OP11WWT-JSDH-CW03	Construction of 15 new distributed wastewater management systems	2.51	OCB (NA)	Prior	1S1E	Q1 2021	1st-10th OCB (NA) for works
<b>1.1.5. Guzhang County</b>							
OP11WWT-GZQFH-CW01	Construction of 31 new distributed wastewater management systems	4.07	OCB (NA)	Prior	1S1E	Q1 2021	1st-10th OCB (NA) for works
<b>1.1.6. Baojing County</b>							
OP11WWT-BJLDS-CW01	Construction of 500 new four-pool wastewater purification facilities and 70 new distributed wastewater management systems	2.91	OCB (NA)	Prior	1S1E	Q1 2021	1st-10th OCB (NA) for works
<b>1.2. Solid waste management</b>							
<b>1.2.1. Huayuan County</b>							
OP12DG-HY4T-CW01	Construction of 4 new garbage transfer stations	1.48	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP12DG-HY4T-GS02	Equipment for garbage collection and sanitation publicity	1.07	OCB (NA)	Prior	1S1E	Q2 2021	1st-10th OCB (NA) for goods
<b>1.2.3. Luxi County</b>							
OP12DG-LX2T-CW01	Construction of 2 new garbage transfer stations	1.17	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
<b>1.3. Renovation of rural households' unsanitary toilets to sanitary ones</b>							
<b>1.3.1. Huayuan County</b>							
OP13TR-HYZXH-CW01	Installation of 500 new sanitary toilets and renovation of 3,000 unsanitary toilets	1.46	OCB (NA)	Post (sampling)	1S1E	Q3 2021	
<b>2.1. Xiangxi Prefectural Kiwi Fruit and Citrus Seedlings Research and Breeding Base</b>							
OP21XX-ZMJD-CW01	Species introduction (planting, etc.)	1.01	OCB (NA)	Post (sampling)	1S1E	Q3 2021	
OP21XX-ZMJD-GS08/1 - 3	Equipment for seedling	1.06	OCB (NA)	Post (sampling)	1S1E	Q3 2021 Q3 2022 Q3 2023	
<b>2.2 Baojing County Lvdongshan Gold Tea Industrial Park</b>							
OP22BJ-LDSCY-GS07	Equipment for a tea processing factory	0.93	OCB (NA)	Prior	1S1E	Q2 2021	1st-10th OCB (NA) for goods
OP22BJ-LDSCY-CW05	Quality improvement of low efficiency tea gardens	8.51	OCB (NA)	Post (sampling)	1S1E	Q2 2022	
OP22BJ-LDSCY-GS14/1 - 3	Organic fertilizer	1.10	OCB (NA)	Post (sampling)	1S1E	Q4 2021 Q4 2022 Q4 2023	
OP22BJ-LDSCY-CW01	Construction of a new research and development center and a new exhibition and marketing center	3.58	OCB (NA)	Post (sampling)	1S1E	Q4 2021	

Package Number	General Description	Estimated Value (€ million)	Procurement Method	Review (Prior/Post [Sampling])	Bidding Procedure	Advertisement Date (quarter/year)	Comments
<b>2.3. Huayuan County Zixia Lake Area Local Special-Featured Agricultural Base</b>							
OP23HY-ZXHJD-CW04	Construction of seedling bases	1.28	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP23HY-ZXHJD-GS07	Equipment for straw recycling	0.85	OCB (NA)	Post (sampling)	1S1E	Q2 2021	-
OP23HY-ZXHJD-GS08	Equipment for a new service platform and a new field weather station	3.83	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP23HY-ZXHJD-CW05	Construction of water fertilizer integrated irrigation system	2.40	OCB (NA)	Post (sampling)	1S1E	Q4 2022	
OP23HY-ZXHJD-GS06	Insecticide materials	1.55	OCB (NA)	Post (sampling)	1S1E	Q3 2022	
<b>2.4. Wuling Mountain Area Precious Germplasm Resources Reservation</b>							
OP24WLS-SZZYK-CW02	Construction of tree species reserve	4.45	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP24WLS-SZZYK-GS01	Equipment for tree species reserve	2.28	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP24WLS-SZZYK-CW09	Construction of storage building	1.72	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP24WLS-SZZYK-GS08/1 - 3 (organic fertilizer)	Equipment for storage building	1.27	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
<b>3.1. Guzhang County local-featured agricultural products logistics and cold chain base</b>							
OP37GZ-LLWL-CW01	Construction of facilities for cold storage, processing, packaging, exhibition, logistics, etc.	9.48	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP37GZ-LLWL-GS02	Equipment for blockchain data management	0.96	OCB (NA)	Post (sampling)	1S1E	Q1 2022	
OP37GZ-LLWL-GS03	Equipment for storage	2.49	OCB (NA)	Post (sampling)	1S1E	Q1 2022	
OP37GZ-LLWL-GS04	Equipment for cold storage	4.62	OCB (NA)	Post (sampling)	1S1E	Q1 2022	
OP37GZ-LLWL-GS05	Equipment for processing and packaging	1.47	OCB (NA)	Post (sampling)	1S1E	Q1 2022	
<b>3.2. Yongshun County local-featured agricultural products logistics and cold chain base</b>							
OP38YS-LLJD-CW01	Construction of facilities for cold storage, processing, packaging, exhibition, logistics, traceability system, e-commerce platform, etc.	5.61	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP38YS-LLJD-GS02	Equipment for warehouse logistics	2.73	OCB (NA)	Prior	1S1E	Q1 2022	1st-10th OCB (NA) for goods

Package Number	General Description	Estimated Value (€ million)	Procurement Method	Review (Prior/Post [Sampling])	Bidding Procedure	Advertisement Date (quarter/year)	Comments
OP38YS-LLJD-GS03	Equipment for cold storage	3.67	OCB (NA)	Post (sampling)	1S1E	Q1 2022	
OP38YS-LLJD-GS04	Equipment for inspection and traceability system	3.83	OCB (NA)	Post (sampling)	1S1E	Q1 2022	
<b>3.3. Jishou City local-featured agricultural products logistics and cold chain base</b>							
OP39JS-JGJD-CW01	Construction of facilities for cold storage, processing, packaging, exhibition, logistics, traceability system, e-commerce platform, etc.	6.28	OCB (NA)	Post (sampling)	1S1E	Q4 2021	
OP39JS-JGJD-GS03	Equipment for storage	1.59	OCB (NA)	Post (sampling)	1S1E	Q1 2023	
OP39JS-JGJD-GS04	Equipment for cold storage	3.21	OCB (NA)	Post (sampling)	1S1E	Q1 2023	
OP39JS-JGJD-GS05	Equipment for agricultural product traceability system	1.28	OCB (NA)	Post (sampling)	1S1E	Q1 2023	
<b>3.4. Luxi County Xinva Agricultural Products Trading Center</b>							
OP30LX-XNJY-CW01	Construction of facilities for cold storage, information management, logistics, etc.	14.20	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP30LX-XNJY-GS02	Equipment for information management	1.61	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP30LX-XNJY-GS03	Equipment for logistics storage	0.87	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP30LX-XNJY-GS04	Equipment for cold storage	1.47	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
<b>3.5. Integration of forestry with ecotourism along Luxi-Jishou-Fenghuang and Jishou-Huayuan-Zhangjiajie highways</b>							
OP31XX-STLD-CW01	Forest cleaning, etc. for forest quality precise improvement	7.32	OCB (NA)	Post (sampling)	1S1E	Q3 2021	
OP31XX-STLD-CW03	Construction of forest trail	1.27	OCB (NA)	Post (sampling)	1S1E	Q3 2021	
<b>3.6. Guzhang County Qifeng Lake agriculture and forestry integration with ecotourism</b>							
OP32GZ-QFHNL-CW02	Improvement of plant communities, forest, and mid-lake island	7.41	OCB (NA)	Post (sampling)	1S1E	Q3 2022	
OP32GZ-QFHNL-CW01	Construction of roads around the lake and footpath	8.26	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
<b>3.7. Fenghuang County Shanjia Village agriculture and forestry integration with ethnic minority-inclusive ecotourism</b>							
OP33FH-SJCLY-CW03	Renovation of ethnic minority houses and family workshops	2.66	OCB (NA)	Prior	1S1E	Q1 2021	1st-10th OCB (NA) for works
OP33FH-SJCLY-CW01	Upgrading of road and construction of footpath	2.56	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP34FH-SJCLY-CW02	Construction of Miao Culture and Art Center, Miaozu history and culture museum,	4.58	OCB (NA)	Post (sampling)	1S1E	Q3 2021	

Package Number	General Description	Estimated Value (€ million)	Procurement Method	Review (Prior/Post [Sampling])	Bidding Procedure	Advertisement Date (quarter/year)	Comments
	and ethnic minority cultural product supermarket						
OP33FH-SJCLY-GS06	Equipment for Miao Culture and Art Center, Miao history and culture museum, and ethnic minority cultural product supermarket	2.37	OCB (NA)	Post (sampling)	1S1E	Q3 2021	
<b>3.8. Longshan County Banyue Lake agriculture integration with ethnic minority-inclusive ecotourism</b>							
OP34LS-BYHNL-CW01	Renovation of pump station	1.08	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP34LS-BYHNL-CW04	Construction of footpath	1.41	OCB (NA)	Post (sampling)	1S1E	Q1 2022	
<b>3.9. Huayuan county Zixia Lake agriculture and forestry integration with ethnic minority-inclusive ecotourism</b>							
OP35HY-ZXHNL-CW11	Construction of drainage, restoration of plant communities, and riverbank protection	6.62	OCB (NA)	Prior	1S1E	Q1 2021	1st–10th OCB (NA) for works
OP35HY-ZXHNL-CW01	Construction of road and footpath	11.16	OCB (NA)	Post (sampling)	1S1E	Q3 2021	
OP35HY-ZXHNL-CW13	Construction of tourist toilets and ecological parking lot	1.44	OCB (NA)	Post (sampling)	1S1E	Q3 2021	
OP35HY-ZXHNL-CW08	Fruit planting	0.95	OCB (NA)	Post (sampling)	1S1E	Q1 2022	
OP35HY-ZXHNL-GS09	Fruit seedlings	2.03	OCB (NA)	Post (sampling)	1S1E	Q2 2022	
OP35HY-ZXHNL-GS14	Equipment for fresh fruit storage	1.29	OCB (NA)	Post (sampling)	1S1E	Q3 2021	
OP35HY-ZXHNL-CW02	Construction of Miao intangible cultural heritage exhibition center	2.18	OCB (NA)	Post (sampling)	1S1E	Q3 2021	
<b>3.10. Yongshun County Sicheng Village agriculture integration with ethnic minority-inclusive ecotourism</b>							
OP36YS-SCCNL-CW02	Renovation of ethnic minority houses	2.66	OCB (NA)	Prior	1S1E	Q1 2021	1st–10th OCB (NA) for works
OP36YS-SCCNL-CW05	Construction of intangible cultural heritage exhibition center	1.10	OCB (NA)	Post (sampling)	1S1E	Q1 2022	

1S1E = one stage-one envelope, NA = national advertisement, OCB = open competitive bidding, Q = quarter, RFQ = request for quotation, WWTP = wastewater treatment plant.

**c. Consulting Services Contracts Estimated to Cost €84,617 (Equivalent to \$100,000) or More**

59. The following table lists consulting services contracts over the life of the project to cost €84,617 (equivalent to \$100,000) or more. All consulting services contracts are for ADB's prior review.

Package Number	General Description	Estimated Value (€ million)	Recruitment Method	Advertisement Date (quarter/year)	Type of Proposal	Comments
OP41-PPMO-CS02	Project management support consultant team	0.96	QCBS	Q1 2021	FTP	For advance contracting
OP41-PPMO-CS05	Consultant team for technical support, capacity development, and knowledge dissemination	0.90	QCBS	Q2 2021	BTP	
OP41-PPMO-CS03	External environmental monitoring agency	0.09	CQS	Q2 2021	BTP	For advance contracting
OP41-PPMO-CS04	External resettlement and social development M&E agency	0.20	CQS	Q4 2020	BTP	For advance contracting and retroactive financing
OP42-PPMO-CS07	Research on problems and countermeasures of integrated development of primary, secondary, and tertiary industries	0.13	CQS	Q1 2021	BTP	For advance contracting
OP42-PPMO-CS08	Research on strategy of rural vitalization in concentrated poor ethnic minority areas	0.19	CQS	Q1 2021	BTP	For advance contracting

BTP = biodata technical proposal, CQS = consultants' qualifications selection, FTP = full technical proposal, M&E = monitoring and evaluation, Q = quarter, QCBS = quality- and cost-based selection.

**d. Goods and Works Contracts Estimated to Cost Less than €0.8462 Million (Equivalent to \$1 Million) and Consulting Services Contracts Less than €84,617 (Equivalent to \$100,000) (Smaller Value Contracts)**

60. The following table groups smaller-value goods, works, and consulting services contracts for the life of the project.

Goods and Works							
Package Number	General Description	Estimated Value (€ million)	Procurement Method	Review (Prior/Post [Sampling])	Bidding Procedure	Advertisement Date (quarter/year)	Comments
<b>1.1. Wastewater management system</b>							
<b>1.1.4. Jishou City</b>							
OP11WW-T-JSDH-GS04	Equipment for 15 new distributed wastewater management systems	0.16	RFQ	Post (sampling)	1S1E	Q1 2021	
<b>1.1.5. Guzhang County</b>							
OP11WW-T-GZQFH-GS02	Equipment for 31 new distributed wastewater management systems	0.32	OCB (NA)	Prior	1S1E	Q1 2021	1st–10th OCB (NA) for goods
<b>1.1.6. Baojing County</b>							
OP11WW-T-BJLDS-GS02	Equipment for 500 new four-pool wastewater purification facilities and 70 new distributed wastewater management systems	0.73	OCB (NA)	Prior	1S1E	Q1 2021	1st–10th OCB (NA) for goods
<b>1.1.7. Yongshun County</b>							
OP11WW-T-YSSCC-CW01	Construction of 5 new distributed wastewater management systems	0.42	OCB (NA)	Prior	1S1E	Q1 2021	1st–10th OCB (NA) for works
OP11WW-T-YSSCC-GS02	Equipment for 5 new distributed wastewater management systems	0.05	RFQ	Post (sampling)		Q2 2021	

<b>Goods and Works</b>							
<b>Package Number</b>	<b>General Description</b>	<b>Estimated Value (€ million)</b>	<b>Procurement Method</b>	<b>Review (Prior/Post [Sampling])</b>	<b>Bidding Procedure</b>	<b>Advertisement Date (quarter/year)</b>	<b>Comments</b>
<b>1.2. Garbage management</b>							
<b>1.2.2. Longshan County</b>							
OP12DG-LS2T-CW01	Construction of 2 new garbage transfer stations	0.75	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP12DG-LS3T-GS02	Equipment for garbage collection and sanitation publicity	0.76	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
<b>1.2.3. Luxi County</b>							
OP12DG-LX2T-GS02	Equipment for garbage collection and sanitation publicity	0.82	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
<b>1.2.4. Jishou City</b>							
OP12DG-JSDH-CW01	Construction of 1 new garbage transfer station	0.37	RFQ	Post (sampling)	1S1E	Q2 2021	
OP12DG-JSDH-GS02	Equipment for garbage collection and sanitation publicity	0.45	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
<b>1.2.5. Guzhang County</b>							
OP12DG-GZQFH-GS01	Equipment for garbage collection and sanitation publicity	0.37	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
<b>1.2.6. Baojing County</b>							
OP12DG-BJLDS-CW01	Construction of 1 new garbage transfer station	0.31	RFQ	Post (sampling)	1S1E	Q2 2021	
OP12DG-BJLDS-GS02	Equipment for garbage collection and sanitation publicity	0.31	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
<b>1.2.7. Yongshun County</b>							
OP12DG-YSSCC-GS01	Equipment for garbage collection and sanitation publicity	0.02	RFQ	Post (sampling)		Q3 2021	
<b>1.3. Renovation of rural households' unsanitary toilets to sanitary ones</b>							
<b>1.3.2. Jishou City</b>							
OP13TR-JSDH-CW02	Installation of 249 new sanitary toilets and renovation of 579 unsanitary toilets	0.38	RFQ	Post (sampling)	1S1E	Q3 2021	
<b>1.3.3. Baojing County</b>							
OP13TR-BJLDS-CW03	Installation of 50 new sanitary toilets and renovation of 1,000 unsanitary toilets	0.41	RFQ	Post (sampling)	1S1E	Q3 2021	
<b>1.3.4. Yongshun County</b>							
OP13TR-YSSCC-CW04	Renovation of 82 unsanitary toilets	0.03	RFQ	Post (sampling)		Q3 2021	
<b>2.1. Xiangxi Prefectural Kiwi Fruit and Citrus Seedlings Research and Breeding Base</b>							
OP21XX-ZMJD-CW04	Construction of parent fields, observation gardens, and open nurseries	0.59	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP21XX-ZMJD-CW06	Construction of seedling greenhouses	0.34	RFQ	Post (sampling)	1S1E	Q2 2021	

<b>Goods and Works</b>							
<b>Package Number</b>	<b>General Description</b>	<b>Estimated Value (€ million)</b>	<b>Procurement Method</b>	<b>Review (Prior/Post [Sampling])</b>	<b>Bidding Procedure</b>	<b>Advertisement Date (quarter/year)</b>	<b>Comments</b>
OP21XX-ZMJD-CW09	Construction of integrated water and fertilizer management system	0.19	RFQ	Post (sampling)	1S1E	Q2 2021	
OP21XX-ZMJD-GS07/1 - 3	Small agricultural machinery	0.05	RFQ	Post (sampling)		Q4 2021 Q4 2022 Q4 2023	
OP21XX-ZMJD-CW02	Construction of a research and development center	0.42	RFQ	Post (sampling)	1S1E	Q3 2022	
OP21XX-ZMJD-GS03	Equipment for a research and development center	0.45	OCB (NA)	Post (sampling)	1S1E	Q3 2022	
<b>2.2 Baojing County Lvdongshan Gold Tea Industrial Park</b>							
OP22BJ-LDSCY-CW06	Construction of a tea processing factory	0.62	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP22BJ-LDSCY-CW02	Construction of new seedling greenhouses and nurseries, new organic tea garden, and new tea garden field roads	0.65	OCB (NA)	Post (sampling)	1S1E	Q3 2021	
OP22BJ-LDSCY-CW04	Protection of old tea tree	0.55	OCB (NA)	Post (sampling)	1S1E	Q3 2021	
OP22BJ-LDSCY-GS03/1 - 3	Equipment for new seedling greenhouses and nurseries, new organic tea garden, etc.	0.26	OCB (NA)	Post (sampling)		Q4 2021 Q4 2022 Q4 2023	
OP22BJ-LDSCY-GS08	Equipment for a new research and development center and a new exhibition and marketing center	0.27	OCB (NA)	Post (sampling)	1S1E	Q4 2022	
<b>2.3. Huayuan County Zixia Lake Area Local Special-Featured Agricultural Base</b>							
OP23HY-ZXHJD-CW01	Construction of a new camellia oleifera base	0.80	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP23HY-ZXHJD-GS03	Equipment for a new camellia oleifera base	0.06	RFQ	Post (sampling)		Q3 2021	
OP23HY-ZXHJD-GS02	Seedlings of camellia oleifera	0.07	RFQ	Post (sampling)		Q3 2021	
OP23HY-ZXHJD-GS11/1 - 3 (organic fertilizer)	Organic fertilizer for a new camellia oleifera base and seedling bases	0.14	RFQ	Post (sampling)		Q2 2021 Q2 2022 Q2 2023	
<b>2.4. Wuling Mountain Area Precious Germplasm Resources Reservation</b>							
OP24WLS-SZZYK-CW03	Construction of supporting facilities for species nursery and breeding area	0.42	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP24WLS-SZZYK-CW05	Construction of shed and greenhouse for species nursery and breeding area	0.48	OCB (NA)	Post (sampling)	1S1E	Q2 2021	



<b>Goods and Works</b>							
<b>Package Number</b>	<b>General Description</b>	<b>Estimated Value (€ million)</b>	<b>Procurement Method</b>	<b>Review (Prior/Post [Sampling])</b>	<b>Bidding Procedure</b>	<b>Advertisement Date (quarter/year)</b>	<b>Comments</b>
OP24WLS-SZZYK-CW06	Field engineering for species nursery and breeding area	0.81	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP24WLS-SZZYK-GS07	Equipment for species nursery and breeding area	0.79	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
<b>3.1. Guzhang County local-featured agricultural products logistics and cold chain base</b>							
OP37GZ-LLWL-GS06	Office equipment	0.07	RFQ	Post (sampling)		Q2 2022	
OP37GZ-LLWL-GS07	4 freight elevators and 3 transformers	0.41	OCB (NA)	Post (sampling)	1S1E	Q1 2022	
OP37GZ-LLWL-GS08	Kitchen equipment and furniture	0.04	RFQ	Post (sampling)		Q2 2022	
<b>3.2. Yongshun County local-featured agricultural products logistics and cold chain base</b>							
OP38YS-LLJD-GS05	Equipment for processing, sorting, and packing	0.79	OCB (NA)	Post (sampling)	1S1E	Q1 2022	
OP38YS-LLJD-GS06	Equipment for e-commerce platform, etc.	0.29	OCB (NA)	Post (sampling)	1S1E	Q1 2022	
OP38YS-LLJD-GS07	Kitchen equipment and furniture	0.05	RFQ	Post (sampling)		Q2 2022	
OP38YS-LLJD-GS08	4 freight elevators and 4 transformers	0.48	OCB (NA)	Post (sampling)	1S1E	Q1 2022	
<b>3.3. Jishou City local-featured agricultural products logistics and cold chain base</b>							
OP39JS-JGJD-GS02	Equipment for e-commerce	0.36	OCB (NA)	Post (sampling)	1S1E	Q1 2023	
OP39JS-JGJD-GS06	Equipment for agricultural product processing	0.28	OCB (NA)	Post (sampling)	1S1E	Q1 2023	
OP39JS-JGJD-GS07	Office equipment	0.04	RFQ	Post (sampling)		Q2 2023	
OP39JS-JGJD-GS08	2 elevators and 1 transformer	0.22	OCB (NA)	Post (sampling)	1S1E	Q1 2023	
<b>3.4. Luxi County Xinha Agricultural Products Trading Center</b>							
OP30LX-XNJY-GS05	Office equipment and furniture	0.28	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP30LX-XNJY-GS06	Air conditioners, electric generators, switch room electrical equipment, transformers, etc.	0.73	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
OP30LX-XNJY-GS07	Garbage hook trucks, etc.	0.34	OCB (NA)	Post (sampling)	1S1E	Q2 2021	
<b>3.5. Integration of forestry with ecotourism along Luxi-Jishou-Fenghuang and Jishou-Huayuan-Zhangjiajie highways</b>							
OP31XX-STLD-	Seedling planting, nurture, etc. for forest quality	0.26	RFQ	Post (sampling)		Q3 2021	

<b>Goods and Works</b>							
<b>Package Number</b>	<b>General Description</b>	<b>Estimated Value (€ million)</b>	<b>Procurement Method</b>	<b>Review (Prior/Post [Sampling])</b>	<b>Bidding Procedure</b>	<b>Advertisement Date (quarter/year)</b>	<b>Comments</b>
CW02/1 - 3	precise improvement						
<b>3.6. Guzhang County Qifeng Lake agriculture and forestry integration with ecotourism</b>							
OP32GZ-QFHNL-CW03	Riverbank protection	0.52	OCB (NA)	Post (sampling)	1S1E	Q3 2022	
OP32GZ-QFHNL-CW04	Water protection and management	0.07	RFQ	Post (sampling)		Q2 2021	
<b>3.7. Fenghuang County Shanjia Village agriculture and forestry integration with ethnic minority-inclusive ecotourism</b>							
OP33FH-SJCLY-CW05	Transformation of forest form	0.47	OCB (NA)	Post (sampling)	1S1E	Q4 2021	
OP33FH-SJCLY-CW04	Construction of picking experience garden	0.29	RFQ	Post (sampling)	1S1E	Q4 2021	
<b>3.8. Longshan County Banyue Lake agriculture integration with ethnic minority inclusive ecotourism</b>							
OP34LS-BYHNL-CW02	Construction of water circulation facility	0.30	RFQ	Post (sampling)	1S1E	Q2 2021	
OP34LS-BYHNL-CW03	Restoration of plant community, and water surface protection and management	0.32	RFQ	Post (sampling)	1S1E	Q1 2022	
OP34LS-BYHNL-GS06	Equipment for water surface protection and management	0.06	RFQ	Post (sampling)		Q1 2023	
OP34LS-BYHNL-CW05	Construction of ethnic minority cultural products exhibition and sales	0.57	OCB (NA)	Post (sampling)	1S1E	Q3 2022	
OP34LS-BYHNL-GS07	Equipment for ethnic minority cultural products exhibition and sales	0.14	RFQ	Post (sampling)	1S1E	Q3 2022	
<b>3.9. Huayuan County Zixia Lake agriculture and forestry integration with ethnic minority-inclusive ecotourism</b>							
OP35HY-ZXHNL-CW04	Transformation of forest form	0.28	RFQ	Post (sampling)	1S1E	Q1 2022	
OP35HY-ZXHNL-GS05/1 - 2	Seedlings	0.11	RFQ	Post (sampling)		Q2 2022	
OP35HY-ZXHNL-GS06/1 - 3 (organic fertilizer)	Organic fertilizer	0.59	OCB (NA)	Post (sampling)	1S1E	Q3 2022 Q3 2023 Q3 2024	
OP35HY-ZXHNL-CW12	Water surface protection and management	0.07	RFQ	Post (sampling)		Q1 2022	
OP35HY-ZXHNL-GS03	Equipment for Miao intangible cultural heritage exhibition center	0.71	OCB (NA)	Post (sampling)	1S1E	Q4 2022	
<b>3.10. Yongshun County Sicheng Village agriculture integration with ethnic minority-inclusive ecotourism</b>							
OP36YS-SCCNL-CW01	Ecological river slope protection	0.41	RFQ	Post (sampling)	1S1E	Q3 2021	

<b>Goods and Works</b>							
<b>Package Number</b>	<b>General Description</b>	<b>Estimated Value (€ million)</b>	<b>Procurement Method</b>	<b>Review (Prior/Post [Sampling])</b>	<b>Bidding Procedure</b>	<b>Advertisement Date (quarter/year)</b>	<b>Comments</b>
OP36YS-SCCNL-GS03	Equipment for Laosicheng village scenic area supporting facilities	0.26	OCB (NA)	Post (sampling)	1S1E	Q3 2021	
OP36YS-SCCNL-CW04	Construction of footpath	0.11	RFQ	Post (sampling)		Q3 2021	
OP36YS-SCCNL-CW07	Construction of local-featured fruit orchard	0.45	OCB (NA)	Post (sampling)	1S1E	Q2 2022	
OP36YS-SCCNL-GS08/1-2	Seedlings for fruit orchard	0.32	OCB (NA)	Post (sampling)	1S1E	Q2 2022 Q2 2023 Q2 2024	
OP36YS-SCCNL-GS09/1-2	Organic fertilizer	0.03	RFQ	Post (sampling)		Q3 2022 Q3 2023 Q3 2024	
OP36YS-SCCNL-GS11	Equipment for fresh fruit storage	0.26	OCB (NA)	Post (sampling)	1S1E	Q2 2022	
OP36YS-SCCNL-GS06	Equipment for intangible cultural heritage exhibition center	0.70	OCB (NA)	Post (sampling)	1S1E	Q1 2022	
<b>Project Management</b>							
OP43-PPMO-GS18	Office equipment for PMO	0.10	RFQ	Post (sampling)		Q1 2021	
OP43-CPMO-GS26	Office equipment for local PMOs	0.45	OCB (NA)	Prior	1S1E	Q1 2021	1st-10th OCB (NA) for goods

NA = national advertisement, OCB = open competitive bidding, PMO = project management office, Q = quarter, RFQ = request for quotation, 1S1E = one stage-one envelope.

<b>Consulting Services</b>							
<b>Package Number</b>	<b>General Description</b>	<b>Estimated Value (€ million)</b>	<b>Recruitment Method</b>	<b>Advertisement Date (quarter/year)</b>	<b>Type of Proposal</b>	<b>Comments</b>	
OP41-PPMO-CS01/1	Initial project management support for procurement and project management	0.04	ICS	Q4 2020	Not applicable	For advance contracting and retroactive financing	
OP41-PPMO-CS01/2	Initial project management support for environment	0.04	ICS	Q4 2020	Not applicable	For advance contracting and retroactive financing	
OP41-PPMO-CS01/3	Initial project management support for social safeguard and social development	0.04	ICS	Q4 2020	Not applicable	For advance contracting and retroactive financing	
OP42-PPMO-CS09	An agency to plan, organize, and implement international study visits	0.04	CQS	Q2 2022	BTP		

BTP = biodata technical proposal, CQS = consultants' qualifications selection, ICS = individual consultant selection, Q = quarter.

## 2. List of Awarded and Ongoing, and Completed Contracts

61. The following tables list the awarded and ongoing contracts and completed contracts.

**a. Awarded and Ongoing Contracts**

Goods and Works							
Package Number	General Description	Estimated Value (€ million)	Actual Contract Value (€ million)	Procurement Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award	Comments

Consulting Services							
Package Number	General Description	Estimated Value (€ million)	Actual Contract Value (€ million)	Recruitment Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award	Comments

**b. Completed Contracts**

Goods and Works								
Package Number	General Description	Estimated Value (€ million)	Contract Value (€ million)	Procurement Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award	Date of Completion	Comments

Consulting Services								
Package Number	General Description	Estimated Value (€ million)	Contract Value (€ million)	Recruitment Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award	Date of Completion	Comments

**3. Non-ADB Financing**

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

Consulting Services and other services				
General Description	Estimated Value (cumulative) (€ million)	Estimated Number of Contracts	Recruitment Method	Comments
Design institutes	8.61	Multiple	Domestic	
Domestic social assessment agencies	0.09	Multiple	Domestic	
Domestic environmental impact assessment agency	0.17	1	Domestic	
Domestic institutes for soil and water inspection, etc.	0.51	Multiple	Domestic	
Construction supervision and quality inspection companies	3.47	Multiple	Domestic	
Procurement agency	0.51	1	Domestic	
Auditing	2.13	1	Domestic	

#### **4. Open Competitive Bidding (with National Advertisement)**

##### **a. Regulation and Reference Documents**

63. 2. The procedures to be followed for the OCB (with national advertisement) shall be those set forth in ADB's Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time), (footnote 27); the Government Procurement Law of People's Republic of China approved on 29 June 2002; and Law of the People's Republic of China on Bid Invitation and Bidding of the People's Republic of China promulgated on 30 August, 1999, with the clarifications and modifications described in the following paragraphs. Any relevant type of standard bidding documents issued by ADB (2018) or the PRC on specific standard bidding documents for goods and works accepted by ADB (updated in 2020) shall be used.

##### **b. Procurement Procedures**

###### **(i) Competitive Bidding Procedure** (Procurement Law Art. 26 and Law on Bidding Art. 10)

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

###### **(ii) Eligibility**

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

###### **(iii) Advertising**

66. All invitations to prequalify or to bid shall be advertised in the national press (China Daily Newspaper) or a free and open access website (China Tendering and Bidding Public Service Platform). Such advertisement shall be made in sufficient time for prospective bidders to obtain prequalification or bidding documents and prepare and submit their responses. In any event, a minimum preparation period of twenty-eight (28) days shall be given. The preparation period shall count (a) from the date of advertisement; or (b) when the documents are available for issue, whichever date is later. The advertisement and the prequalification and bidding documents shall specify the deadline for such submission.

###### **(iv) Bidding Period**

67. The minimum bidding period is 28 days prior to the deadline for the submission of bids.

###### **(v) Participation by Government-Owned Enterprises**

68. Government-owned enterprises in the borrower's country may be permitted to bid if they can establish that they (i) are legally and financially autonomous, (ii) operate under commercial law, and (iii) are not a dependent agency of the borrower and/or the project executing agency.

###### **(vi) Rebidding**

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

**c. Bidding Documents**

**(i) Qualification Requirements**

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

**(ii) Bid Submission and Opening**

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

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

**(iii) Bid Evaluation and Award**

73. No bid may be rejected solely on the basis that the bid price falls outside any standard contract estimate, or margin, or bracket of average bids established by the borrower and/or the project executing agency.

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

**(iv) ADB Policy Clauses**

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

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

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

**D. Consultant's Terms of Reference**

78. Indicative terms of reference for consulting services to be funded by ADB are in Appendix 2.

## VII. SAFEGUARDS

### A. Environment

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

80. **Content of the environmental management plan.** The EMP describes (i) the project environmental safeguard objectives; (ii) roles and responsibilities for the EMP implementation; (iii) mitigation measures; (iv) inspection, monitoring, and reporting arrangements; (v) training and institutional strengthening; (vi) a project-specific grievance redress mechanism (GRM); (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 the EMP implementation, including the XPG, the implementing agencies, contractors, construction supervision companies (CSCs), and operators. 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 the SPS for environmental safeguards and the PRC's environmental laws and regulations. All of the XPG and the implementing agencies are required to comply with the EMP.

81. **Environmental management plan implementation.** The EMP will be implemented in all phases of the project: design, pre-construction, construction, and operation. The XPG will be responsible for ensuring that the project will be designed, constructed, decommissioned, and operated in accordance with (i) national and local governments' laws, regulations, procedures, and guidelines on environment, health, and safety; (ii) the SPS; and (iii) the IEE, including the EMP. The XPG, through the PMO, holds final responsibility for implementation of and compliance with the EMP.

82. For finalization of a preliminary design for each subproject of the project, the PMO will forward the EMP to the design institute which prepares the preliminary design. The environment officers of the PMO and local PMO will work with the design institute to ensure that safeguard risks identified in the EMP are considered in the preliminary design and avoided, minimized, or mitigated. The EMP will be updated reflecting the preliminary designs, as needed. To ensure that bidders will respond to the EMP's provisions, the PMO and local PMOs will prepare and provide the following specification clauses for incorporation into the bidding documents: (i) a list of environmental management requirements to be budgeted by the bidders in their proposals; (ii) environmental clauses for contractual terms and conditions; and (iii) the IEE, including the EMP (updated as necessary) for compliance. All bidders for civil works will be required to fully address the EMP requirements, especially the mitigation and monitoring measures.

83. **Personnel.** The EMP will be coordinated by the following personnel: (i) at least one full-time and qualified PMO environment officer appointed by the XPG, who will be responsible for overall coordination for the EMP; (ii) at least eight full-time local PMO environment officers (one for each of the eight local PMOs), who will oversee coordination for the EMP for all subprojects, and (iii) at least 24 full-time social-and-environmental safeguard officers within the agencies involved in the subprojects (one for each of the 24 agencies). These officers will have a combined role for social and environment safeguards and will lead daily coordination for the EMP (and social

safeguard requirements) at the site level. They will coordinate closely with the PMO and local PMO environment officers.

84. The environment officers of the PMO and local PMO and the social-and-environmental safeguard officers of the agencies involved in the subprojects will be supported in their roles by (i) a national consultant for initial (start-up) project management support for environment, who will provide support to the PMO for initial environmental management activities, including the update of the EMP, as necessary, in the early phases of implementation, before a project management support consultant team is engaged; and (ii) a national environment specialist in the project management support consultant team, who will support the XPG and the implementing agencies in implementing the EMP, including assessments of whether subprojects are consistent with the scope of the preliminary designs and the EMP or whether new safeguard assessments are required, integration of the EMP in bidding documents for civil works, site visits and liaising with contractors and the CSCs, and supports for the preparation of semiannual environmental monitoring reports. Terms of reference for the positions are provided in Appendix 2 of this project administration manual (PAM) and also in Appendix 2 of the EMP.

85. **Capacity building.** To ensure effective implementation of the EMP, a capacity building program is included in the EMP for training of staff of the XPG and the implementing agencies in the EMP implementation, mitigation measures, supervision, monitoring, reporting, and the GRM. Training will be provided by the national consultant for initial project management support for environment and the national environment specialist and other specialists in the project management support consultant team. Trainees will include staff of the XPG, the implementing agencies, contractors, and the CSCs.

86. **Procedures for feedback and adjustment of the environmental management plan, including in the event of noncompliance.** Based on site inspections and monitoring reports, the PMO, local PMOs, and agencies involved in subprojects shall decide, in consultation with the consultants, 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 and the EMP will be adjusted, if necessary. The environment officers of the PMO and local PMOs, social-and-environmental safeguard officers of the agencies involved in subprojects, and consultants will play critical roles in the feedback and adjustment mechanism. Prior to making such changes in the EMP, the PMO will first seek the endorsement of ADB. 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, the PMO will immediately consult with ADB and form an environmental assessment team to conduct additional environmental assessment. If necessary, further public consultation will be undertaken. A new or updated domestic environmental assessment and a new 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, and operators of the constructed project facilities, for implementation.

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

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



## B. Involuntary Resettlement

89. **Category and impacts.** The project is classified by ADB as Category B for involuntary resettlement. The project will involve a use 11,634.10 *mu* of land, including state-owned land occupation of 535.10 *mu*,<sup>34</sup> permanent land acquisition of 98.59 *mu*, land use rights transfer of 9,860.00 *mu*, and land use for rural public infrastructure of 1,140.50 *mu*. In addition, the project will temporarily use 9.00 *mu* of land during construction. The project will not involve any physical house relocation. A total of 61 households with 261 persons will be affected permanently by land acquisition, of which 34 households with 151 persons will be significantly affected.

90. **Resettlement plan.** A resettlement plan has been prepared in accordance with ADB's SPS and relevant laws and regulations of the PRC. The resettlement plan includes adequate compensation and livelihood restoration measures for affected people. The resettlement plan is based on surveys and consultations with affected people during project preparation. A GRM has been established and incorporated into the resettlement plan. Frameworks for land use rights transfer and land use for public infrastructure have been attached to the resettlement plan. The resettlement plan also includes measures of (i) the capacity building of the XPG and the implementing agencies to implement the resettlement plan and conduct internal monitoring in compliance with ADB's requirements; and (ii) internal and external monitoring and reporting on implementation of the resettlement plan.

91. **Updating the 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.

92. **Capacity building for implementation and monitoring of the resettlement plan.** The XPG and the implementing agencies have capacity to implement domestically funded projects. Their capacity will be strengthened to implement the resettlement plan and conduct internal monitoring in compliance with ADB's requirements through several measures, including (i) appointment of a full-time social officer to each of the PMO and local PMOs by the XPG or the implementing agency; (ii) inclusion of a national resettlement specialist in a project management support consultant team; (iii) training of relevant staff of the XPG and the implementing agencies on implementation and monitoring of the resettlement plan; (iv) provision of training on ADB's relevant policy requirements and assistance to the XPG and the implementing agencies in updating and finalizing the resettlement plan, by an initial project management support consultant for social safeguard and social development; and (iv) recruitment of an external agency for semiannual external M&E for resettlement and social development.

## C. Indigenous People or Ethnic Minority

93. **Category.** The project is classified by ADB as Category B for indigenous peoples or ethnic minorities. There are 368,307 ethnic minorities in the project area, mainly the Miao and Tujia people, comprising a big majority of the project beneficiaries. They will benefit from (i) improved waste and sanitation management, (ii) development of local-featured ecological agricultural and forestry products, (iii) employment opportunities, and (iv) capacity development. While the ethnic minority groups have socioeconomic conditions similar to that of the Han population, the Miao and Tujia people have their own languages and cultural practices.

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<sup>34</sup> A *mu* is a Chinese unit of measurement (1 *mu* = 666.67 square meters).

94. **Ethnic minority development plan update.** An ethnic minority development plan (EMDP) has been prepared, which includes (i) benefits and targets for ethnic minorities; (ii) consultation, participation, and information disclosure; (iii) GRM; (iv) implementation and capacity building; and (v) monitoring and reporting requirements. The EMDP will be updated in case there are any changes in the project scope during the preparation of preliminary designs of subprojects or the project implementation.

95. **Capacity building for implementation and monitoring of the ethnic minority development plan.** The project will strengthen the capacity of the XPG and the implementing agencies to implement and monitor the EMDP. The capacity building measures include (i) appointment of a full-time social officer to each of the PMO and local PMOs by the XPG or the implementing agency; (ii) inclusion of a national social development specialist in the project management support consultant team; (iii) training of relevant staff of the XPG and the implementing agencies on implementation and monitoring of the EMDP; (iv) provision of training on ADB's relevant policy requirements, by an initial project management support consultant for social safeguard and social development; and (iv) recruitment of an external agency for semiannual external M&E for resettlement and social development.

#### **D. Grievance Redress Mechanism**

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

#### **E. Prohibited Investment Activities**

97. Pursuant to ADB's SPS, ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of ADB's SPS.

### **VIII. GENDER AND SOCIAL DIMENSIONS**

#### **A. Poverty Reduction and Social Strategy**

98. The project is classified as *general intervention* for poverty reduction. The poverty and social analysis was undertaken based on extensive stakeholder consultations and socioeconomic

surveys. A total of 422,022 residents in the project areas, including 108,702 poor or low-income people (25.8%) will directly benefit from the project through improved rural waste and sanitation management, development of local-featured ecological agricultural and forestry products, and value addition to local-featured ecological agricultural and forestry products. It is estimated that 1,317 skilled and 5,612 non-skilled local jobs will be created during construction and operation. A social development action plan (SDAP) has been prepared, with specific targets for the poor and low-income people. The project will strengthen the capacity of the XPG and the implementing agencies to implement and monitor the SDAP.

## **B. Gender**

99. The project is classified as *effective gender mainstreaming*, following ADB's Guidelines for Gender Mainstreaming Categories of ADB Projects.<sup>35</sup> A gender analysis was undertaken during project preparation, which showed that (i) 64.6% surveyed women were engaged in farming and casual work; (ii) had a low level of participation in public affairs (34.5% of village committee members and 4.8% of village committee heads were women); (iii) had low educational attainment levels (only 8.4% of surveyed women had college or university degrees); and (iv) lacked income-generating opportunities. The project will provide opportunities for women to participate in and benefit equitably from the project activities. Women will benefit particularly from increased jobs, income-generating opportunities (agricultural and forestry products, ecotourism, etc.), and better sanitation services.

100. A gender action plan (GAP) has been prepared to ensure that the project contributes to improved gender equality. Key measures of the GAP include (i) skills training and capacity building on advanced technologies for local-featured ecological agricultural and forestry products; (ii) provision to women of new skilled and non-skilled job opportunities created by the project (baseline and targets have been set based on data provided by PMOs from similar projects); (iii) consultations on preliminary designs of the subprojects and tariff proposals, with at least 40% female participants; (iv) participation in paid rural garbage management teams, with at least 30% are women; (v) promotion of women's entrepreneurship and management capacity in agricultural and ecotourism industry that will include skills training; and (vi) women's participation in the design of e-commerce platforms to integrate their specific requirements in the designs. Key gender targets have also been included in the design and monitoring framework.

101. The project will strengthen the capacity of the XPG and the implementing agencies to implement and monitor the GAP. The capacity building measures include (i) appointment of a full-time social officer to each of the PMO and local PMOs by the XPG or the implementing agency; (ii) inclusion of a national gender specialist in the project management support consultant team; (iii) training of relevant staff of the XPG and the implementing agencies on implementation and monitoring of the GAP; (iv) provision of training on ADB's relevant policy requirements by an initial project management support consultant for social safeguard and social development; and (iv) recruitment of an external agency for semiannual external M&E for resettlement and social development, including the M&E of the GAP. Reporting of gender actions and progress towards gender targets in the DMF and the GAP will be provided as part of quarterly project progress reports and semiannual external resettlement and social development M&E reports, during mid-term review, and in the project completion report.

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<sup>35</sup> ADB. 2012. *Guidelines for Gender Mainstreaming Categories of ADB Projects*. Manila.

**Table VIII-1: Social Development Action Plan**

Table VII-11 Social Development Action Plan				
Actions	Targets and Indicators	Timeframe	Responsible Agencies	Budget Sources
<b>A. Output 1: Rural waste and sanitation management facilities and services improved</b>				
A.1. Conduct consultations on preliminary designs of subprojects, including consultations on needs and views from women and men, with the representation of poor and low-income people.	A.1. Of 166,774 direct beneficiaries in 21 towns in 1 city and 7 counties, 100 representatives from each town, 20% of which are poor and/or low-income people, attend the consultations (2020 baseline: NA)	2020–2021	IAs, contractors, and facility operators (supported by the PMO, local PMOs, TGs, VCs, PAOs, design institute, and consultants)	Government counterpart funds and the ADB loan
A.2. Establish rural garbage management teams with participation of residents, including poor and low-income people.	A.2. 85 rural garbage management teams formed in the project area, 25% of which are poor and/or low-income people (2020 baseline: 0)	2022–2027		
A.3. Conduct public hearings with residents, including poor and low-income people, for wastewater and solid waste treatment tariff proposals.	A.3. 100 representatives from each of relevant towns, 25% of which are poor and/or low-income people, attend the public hearings (2020 baseline: NA)	2022–2027		
A.4. Provide poor people with public assistance program to partially exempt them from wastewater and solid waste treatment tariff.	A.4. 100% of registered poor and/or low-income households under the poverty line covered by the program (2020 baseline: NA)	2022–2027		
A.5. Provide residents, including poor and low-income people, with training on garbage classification and recycling.	A.5. 36,600 residents, of which 25% are poor and/or low-income people, trained on garbage classification and recycling (2020 baseline: 0)	2021–2027		
A.6. Provide poor and low-income people with new job opportunities.	A.6. 1,391 new job opportunities (479 skilled and 912 non-skilled job opportunities) for construction and operation created, of which 30% are provided to poor and/or low-income people (2020 baseline: NA)	2021–2027		
<b>B. Output 2: Local-featured ecological agricultural and forestry products developed</b>				
B.1. Conduct consultations on preliminary designs of subprojects, including consultations on needs and views from women and men, with the representation of poor and low-income people, during project preparation and implementation.	B.1. Of 31,668 direct beneficiaries in 8 towns in 3 counties, 100 representatives from each town, of which 20% are poor and/or low-income people, attend the consultations (2020 baseline: NA)	2020–2021	XPG, IAs, contractors, and facility operators (supported by the PMO, local PMOs, TGs, VCs, PAOs, design institute, and consultants)	Government counterpart funds and ADB loan
B.2. Provide famers, including poor and low-income people, with training on technologies for local-featured ecological agricultural and forestry products.	B.2. 7,150 farmers trained on technologies for local-featured ecological agricultural and forestry products, of which 25% are poor and/or low-income people (2020 baseline: 0)	2021–2027		
B.3. Provide poor and low-income people with new job opportunities.	B.3. 3,961 new job opportunities (219 skilled and 3,742 non-skilled job opportunities) for construction and operation created, of which 20% are provided to poor and/or low-income people (2020 baseline: NA)	2021–2027		

Actions	Targets and Indicators	Timeframe	Responsible Agencies	Budget Sources
C. Output 3: Values added to local products through value chains and ecotourism				
C.1. Conduct consultations on preliminary designs of subprojects, including consultations on needs and views from women and men, with the representation of poor and low-income people, during project preparation and implementation.	C.1. Of 294,419 direct beneficiaries in 22 towns in 1 city and 7 counties, 100 representatives from each town, of which 25% are poor and/or low-income people, attend the consultations (2020 baseline: NA)	2020–2021	XPG, IAs, contractors, and facility operators (supported by the PMO, local PMOs, TGs, VCs, PAOs, design institute, and consultants)	Government counterpart funds
C.2. In consultations with ethnic minority residents, integrate cultural elements of ethnic minorities into the designs of facilities for exhibition of agricultural and forestry products and ethnic minorities' history and culture.	C.2. Cultural elements of ethnic minorities integrated to the designs of 100% of the facilities for exhibition of agricultural and forestry products and ethnic minorities' history and culture (2020 baseline: NA)	2020–2024		
C.3. Provide famers, including poor and low-income people, with training on protection of ethnic minority intangible heritage and management of fruit, vegetable, and tea-picking gardens.	C.3. 400 farmers trained on protection of ethnic minority intangible heritage and management of fruit, vegetable, and tea-picking gardens, of which 25% are poor and/or low-income people (2020 baseline: 0)	2021–2027		
C.4 Provide poor and low-income people with new job opportunities.	C.4. 1,577 new job opportunities (619 skilled and 958 non-skilled job opportunities) for construction and operation created, of which 25% are provided to poor and/or low-income people (2020 baseline: NA)	2021–2027		
D. Comply with labor laws and core labor standards (for all outputs)				
D.1. Ensure contractors comply with labor laws and core labor standards, including no child labor, minimum wages, equal payment to equal work, and occupational health and safety.	D.1 All contractors comply with labor laws and core labor standards (2020 baseline: NA)	2021–2026	Contractors (supported by the XPG, including the PMO; IAs, including local PMOs; construction supervision companies; LSSBs; and consultants)	Government counterpart fund and loan funds
D.2. Ensure participation of residents as well as construction workers in public health knowledge promotion and training regarding prevention and control of HIV/AIDS, STI, COVID-19, and other infectious disease.	D.2. All construction workers and residents near construction sites receive training and information on relevant infectious diseases (2020 baseline: NA)	2021–2025		
D.3. Distribute locally information and publicity materials (e.g., posters and brochures) regarding the prevention and treatment of HIV/AIDS, STI, COVID-19, and other infectious diseases.	D.3. The information and publicity materials distributed in villages, including construction sites (2020 baseline: NA)	2021–2026		
D.4. Distribute to construction workers brochures regarding festivals and activities of ethnic minorities.	D.4. Brochures regarding festivals and activities of ethnic minorities distributed to construction workers (2020 baseline: NA)	2021–2026		
E. Project management				
E.1. Ensure a social development specialist is included in the project management support consultant team to guide the implementation of the SDAP; and provide training to staff of the PMO, local PMOs, and other relevant agencies.	E.1. A social development specialist recruited as a member of the project management support consultant team (2020 baseline: NA)	2021–2026	XPG, including the PMO; IAs, including local PMOs;	Government counterpart fund and loan funds

Actions	Targets and Indicators	Timeframe	Responsible Agencies	Budget Sources
<p>E.2. Assign a social officer to each of the PMO and local PMOs and a social-and-environmental safeguard officer to each of 24 agencies involved in the subprojects to ensure effective implementation of the SDAP</p> <p>E.3. Provide training to staff of the PMO and local PMOs on (i) ADB's social development policies; (ii) how to implement and monitor the SDAP; and (iii) project-related social issues and importance of social inclusion in all project components.</p> <p>E.4. Collect data disaggregated by poor and low-income people.</p> <p>E.5. Employ an external resettlement and social development M&amp;E agency.</p>	<p>E.2. A social officer appointed to each of the PMO and local PMOs and a social-and-environmental safeguard officer to each of 24 agencies involved in the subprojects (2020 baseline: NA)</p> <p>E.3. All staff of the PMO and local PMOs trained on the SDAP (2020 baseline: NA)</p> <p>E.4. Data disaggregated by poor and low-income people collected (2020 baseline: NA)</p> <p>E.5. Monitoring reports on the SDAP implementation included in the semiannual external resettlement and social development M&amp;E reports (2020 baseline: NA)</p>		consultants; and external resettlement and social development M&E agency (supported by PAOs and LRBs)	

ADB = Asian Development Bank, AIDS = acquired immune deficiency syndrome, COVID-19 = coronavirus disease, HIV = human immunodeficiency virus, IA = implementing agency, NA = not applicable, LRB = land resource bureau, LSSB = labor and social security bureau, M&E = monitoring and evaluation, PAO = poverty alleviation office, PMO = project management office, SDAP = social development action plan, STI = sexually transmitted infection, TG = town government, VC = village committee, XPG = Xiangxi Tujia and Miao Autonomous Prefectural Government.

Source: Asian Development Bank.

Table VIII-2: Gender Action Plan

Actions	Targets and Indicators	Timeframe	Responsible Agencies	Budget Sources
<b>A. Output 1: Rural waste and sanitation management facilities and services improved.</b>				
A.1. Conduct consultations on preliminary designs of subprojects, including consultations on needs and views of women, in 21 towns in 1 city and 7 counties.	A.1. 166,774 beneficiaries consulted, of which 40% are women (2020 baseline: NA)	2020–2021	IAs, contractors, and facility operators (supported by the PMO, local PMOs, design institute, and consultants)	Government counterpart funds and the ADB loan
A.2. Conduct public hearings with residents, with women's representatives, for wastewater and solid waste treatment tariff proposals.	A.2. 40% of the participants in the public hearings are women (2020 Baseline: NA)	2022–2027		
A.3. Establish rural garbage management teams with participation of residents, including women.	A.3. 85 rural garbage management teams formed in the project area, of which 30% are led by women (2020 baseline: 0) <sup>a</sup>	2022–2027		
A.4. Provide residents, including women, with training on garbage classification and recycling.	A.4. 36,600 residents, of which 45% are women, trained and reported their enhanced skills on garbage classification and recycling (2020 baseline: 0)	2021–2027		
A.5. Set quotas for women's employment in skilled and non-skilled jobs created by the project.	A.5.1. 35% of 479 skilled jobs created by the project provided to women (2020 baseline: NA)  A.5.2. 40% of 912 non-skilled jobs created by the project provided to women (2020 baseline: NA)	2021–2027		
<b>B. Output 2: Local-featured ecological agricultural and forestry products developed</b>				
B.1. Conduct consultations on preliminary designs of subprojects, including consultations on needs and views of women, in 8 towns in 3 counties.	B.1. 31,668 beneficiaries consulted, of which 30% are women (2020 baseline: NA)	2020–2021	XPG, IAs, contractors, and facility operators (supported by the PMO, local PMOs, design institute, and consultants)	Government counterpart funds and the ADB loan
B.2. Provide famers, including women, with training on technologies for local-featured ecological agricultural and forestry products.	B.2. 7,150 farmers and 140 technicians, of which 40% are women, trained and reported their enhanced knowledge on technologies for local-featured ecological agricultural and forestry products (2020 baseline: NA)	2021–2027		
B.3. Set quotas for women's employment in skilled and non-skilled jobs created by the project.	B.3.1. 35% of 219 skilled jobs created by the project provided to women (2020 baseline: NA) B.3.2. 35% of 3,742 non-skilled jobs created by the project provided to women (2020 Baseline: NA)	2021–2027		
<b>C. Output 3: Values added to local products through value chains and ecotourism</b>				
C.1. Conduct consultations on preliminary designs of subprojects, including consultations on needs and views of women, in 22 towns in 1 city and 7 counties.	C.1. 294,419 beneficiaries consulted, of which 40% are women (2020 baseline: NA)	2020–2021	XPG, IAs, consultants, contractors, and facility operators (supported by	Government counterpart fund and loan funds
C.2. Design the e-commerce platform to address the needs of women and/or female entrepreneurs that will be using the platform.				

Actions	Targets and Indicators	Timeframe	Responsible Agencies	Budget Sources
C.3. Provide business start-up training (including relevant aspects such as finance, market, e-commerce, management, etc.) to promote women's entrepreneurship and management capacity in agricultural and ecotourism industry.	C.3.1 240 number of women and/or female entrepreneurs received training and reported their enhanced knowledge on the use of e-commerce platform (2020 baseline: NA)	2021–2027	PMO, local PMOs, and design institute)	
C.4. Organize networking and experience sharing workshops inviting women who have taken the training and started their own businesses.	C.3.2 240 women trained and reported their enhanced knowledge on business development (2020 Baseline: NA) C.4. 240 women participate in the workshops (2020 baseline: NA)	2022–2027		
C.5. Provide training on the O&M of the facilities for storage, cold storage, processing, packaging, exhibition, e-commerce, customer service (with agricultural product traceability system), and/or logistics.	C.5. 163 staff of the facilities, of which 40% are women, trained and reported their enhanced skills on the O&M of the facilities for storage, cold storage, processing, packaging, exhibition, e-commerce, customer service (with agricultural product traceability system), and/or logistics (2020 baseline: NA)	2021–2026		
C.6. Provide training on value addition to local-featured ecological agricultural and forestry products.	C.6. 300 farmers and 354 staff members, including technicians and 103 management staff members of government agencies; and of which 40% are women, trained and reported their enhanced knowledge on value addition to local-featured ecological agricultural and forestry products (2020 baseline: 0)	2021–2027		
C.7. Set quotas for women's employment in skilled and non-skilled jobs created by the project.	C.7.1. 619 skilled jobs generated, of which 30% are provided to women with priority (2020 baseline: 15%) C.7.2. 958 non-skilled jobs generated, of which 25% are provided to women with priority (2020 baseline: 20%)	2021–2027		

ADB = Asian Development Bank, IA = implementing agency, NA = not applicable, O&M = operation and maintenance, PMO = project management office, XPG = Xiangxi Tujia and Miao Autonomous Prefectural Government.

<sup>a</sup> The work of rural garbage management teams is to be paid.

Source: Asian Development Bank.



## IX. PERFORMANCE MONITORING, EVALUATION, REPORTING, AND COMMUNICATION

### A. Project Design and Monitoring Framework

Impact the Project is Aligned with Rural vitalization with environmental improvement and green development in the Yangtze River Economic Belt realized (National Strategic Plan for Rural Vitalization, 2018–2022; and Yangtze River Economic Belt Development Plan, 2016–2030) <sup>a</sup>			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
<b>Outcome</b> Rural living environment and value of agricultural and forestry products in Xiangxi enhanced <sup>b</sup>	By 2028: a. Overall rural residents' satisfaction with the living environment in Xiangxi increased to 80% (2020 baseline: 60%) <sup>b</sup> (OP 3.3; OP 5.1)  b. Average annual disposable income of rural residents in Xiangxi increased by 59% to CNY16,000 (2019 baseline: CNY10,046)	a. Periodic rural household surveys by the XPG and/or the implementing agencies  b. Xiangxi statistical handbook	R: Epidemic outbreaks deteriorate the rural living environment
<b>Outputs</b> 1. Rural waste and sanitation management facilities and services improved  2. Local-featured ecological agricultural and forestry products developed	1a. By 2024, 45,826 households (including 183,511 people, of which 88,452 are women) in the project area connected with wastewater facilities (2020 baseline: 22,972 households [including 91,647 people, of which 44,174 are women]) (OP 2.1.4; OP 3.3; OP 5.1) 1b. By 2024, 504 tons per day of solid waste from 87,530 households (including 335,078 people, of which 161,496 are women) in the project area connected with garbage treatment (2020 baseline: 211 tons per day from 58,580 households [including 222,630 people, of which 107,296 are women]) (OP 2.1.4; OP 3.3; OP 5.1) 1c. By 2024, households that have sanitary toilets increased to 62,929 (including 241,058 people, of which 116,200 are women) in the project area (2020 baseline: 57,469 households [including 218,672 people, of which 105,400 are women]) (OP 2.1.4; OP 3.3; OP 5.1) 1d. By 2024, 85 rural garbage management teams formed in the project area, of which at least 30% are led by women (2020 baseline: 0) <sup>c</sup>  1e. By 2027, 36,600 residents (of which 45% are women) trained and reported their improved knowledge on garbage classification and recycling (2020 baseline: Not applicable) (OP 2.2) 1f. By 2027, 1,391 new job opportunities for construction and operation created, of which at least 35% are provided to women (2020 baseline: Not applicable) (OP 1.2; OP 2.1)  1g. By 2027, experiences and knowledge gained for this output disseminated through three workshops or publications. 2a. By 2027, 147 quality certificates issued for local-featured ecological agricultural and forestry products in Xiangxi (2020 baseline: 123) 2b. By 2027, facilities for the development of local-featured ecological agricultural and forestry products operational in four locations within Xiangxi (2020 baseline: Not applicable) (OP 1.3.1; OP 5.1.1; OP 5.3)	1a.–1c. Surveys by village committees      1d. Project progress reports and/or external resettlement and social development M&E reports  1e. Post-training surveys   1f. Project progress reports and/or external resettlement and social development M&E reports  1g. Project progress reports  2a. Reports by the XPG  2b. Project progress reports	R: Changes in administrative procedure or budgetary process delay the provision of counterpart funds

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks and Critical Assumptions
3. Value added to local products through value chains and ecotourism	<p>2c. By 2027, 7,150 farmers and 140 technicians, of which at least 40% are women, have been trained and have reported improved knowledge on technologies for local-featured ecological agricultural and forestry products (2020 baseline: 0) (OP 2.2; OP 6.1.1)</p> <p>2d. By 2027, 3,961 new job opportunities for construction and operation created by the construction and operation of the four bases for the development of local-featured ecological agricultural and forestry products, of which at least 35% are provided to women (2020 baseline: Not applicable) (OP 1.2; OP 2.1)</p> <p>2e. By 2027, experiences and knowledge gained for this output disseminated through three workshops or publications.</p> <p>3a. By 2027, facilities to improve value chains and promote ecotourism constructed under the project and related services operational to add values to local-featured ecological agricultural and forestry products (2020 baseline: Not applicable) (OP 5.2.2)</p> <p>3b. By 2027, number of tourists per year to rural areas in Xiangxi increased to 40.0 million (2019 baseline: 15.0 million)</p> <p>3c. By 2027, 300 farmers and 354 staff members, including technicians; and 103 management staff members of government agencies, of which at least 40% are women, have been trained and have reported enhanced knowledge on value addition to local-featured ecological agricultural and forestry products (2020 baseline: 0) (OP 2.2; OP 6.1.1)</p> <p>3d. By 2026, about 1,577 new job opportunities for construction and operation created by the construction and operation of the value chain facilities and the ecotourism resources and facilities, of which at least 30% are provided to women (2020 baseline: Not applicable) (OP 1.2; OP 2.1)</p> <p>3e. By 2027, experiences and knowledge gained for this output disseminated through three workshops or publications.</p>	<p>2c. Post-training surveys</p> <p>2d. Project progress reports and/or external resettlement and social development M&amp;E reports</p> <p>2e. Project progress reports</p> <p>3a. Project progress reports</p> <p>3b. Reports by the XPG</p> <p>3c. Post-training surveys</p> <p>3d. Project progress reports and/or external resettlement and social development M&amp;E reports</p> <p>3e. Project progress reports</p>	
<b>Key Activities with Milestones</b> <p><b>1. Rural waste and sanitation management facilities and services improved</b></p> <p>1.1 Construct or renovate the wastewater management systems, four-pool wastewater purification facilities for houses, and wastewater management systems (Q2 2021–Q4 2023).</p> <p>1.2 Construct garbage transfer stations and install or provide equipment for garbage collection and publicity (Q4 2021–Q4 2023).</p> <p>1.3 Install new sanitary toilets and renovate unsanitary toilets to sanitary ones in households (Q1 2022–Q4 2023).</p> <p>1.4 Develop a public–private partnership model for the O&amp;M of the wastewater management systems in rural areas (Q2 2023–Q2 2027, intermittent).</p> <p>1.5 Develop the capacity of technicians for the O&amp;M of the wastewater management systems (Q1 2022–Q2 2027, intermittent).</p> <p>1.6 Develop the capacity of technicians for the O&amp;M of the garbage transfer stations and of rural residents for garbage classification and recycling (Q2 2021–Q2 2027, intermittent).</p> <p><b>2. Local-featured ecological agricultural and forestry products developed</b></p> <p>2.1 Construct and operate in four locations within Xiangxi the facilities for the development of local-featured ecological agricultural and forestry products, including research and development facilities, species reserve bases, seedling nurseries and breeding areas, integrated water and fertilizer management systems, and field weather stations (Q4 2021–Q2 2026, intermittent).</p> <p>2.2 Provide equipment and materials to the facilities (Q4 2021–Q2 2026, intermittent).</p> <p>2.3 Conduct research on (i) breeding of and (ii) virus-free technologies for local-featured ecological agricultural and forestry products (Q2 2021–Q4 2025, intermittent).</p> <p>2.4 Develop the capacity of technicians of the bases and farmers, particularly training of farmers for extension of advanced technologies for local-featured ecological agricultural and forestry products (Q3 2021–Q4 2026, intermittent).</p>			

### Key Activities with Milestones

#### 3. Values added to local products through value chains and ecotourism

- 3.1 Construct and operate in six locations within Xiangxi the facilities for storage, cold storage, processing, packaging, exhibition, e-commerce, customer service (with agricultural product traceability system), and/or logistics (Q4 2021–Q2 2024).
- 3.2 Protect and/or improve ecotourism resources (Q3 2021–Q1 2025, intermittent).
- 3.3 Construct sightseeing footpaths, rest pavilions, public toilets, and other facilities to integrate agriculture or forestry with ecotourism in farmlands and forests (Q4 2021–Q2 2024).
- 3.4 Construct and operate the ethnic minorities' historical and cultural exhibition facilities, sales plaza and supermarkets for local products, and tourist service stations (Q1 2022–Q4 2024).
- 3.5 Construct and operate fruit, vegetable, and/or tea-picking gardens (Q1 2022–Q1 2025, intermittent).
- 3.6 Develop the capacity of the staff of government agencies for the O&M of the facilities (Q3 2021–Q4 2026, intermittent).
- 3.7 Conduct brand publicity (Q3 2021–Q4 2026, intermittent).
- 3.8 Develop the capacity of (i) farmers on protection of the ethnic minorities' intangible heritage; and management of fruit-, vegetable-, and/or tea-picking gardens; (ii) staff of government agencies, including technicians, on updated technologies for ecotourism resource improvement; (iii) tourism service and management staff of government agencies on ecotourism service skills; and (iv) management staff of government agencies on integration of agriculture and forestry with ecotourism (Q3 2021–Q4 2026, intermittent).

#### Project Management Activities

- Prepare the preliminary design; and revise the initial environmental examination, resettlement plan, and ethnic minority development plan, as necessary (Q3 2020–Q1 2021).
- Prepare the bidding designs and conduct procurement and consultant recruitment (Q4 2020–Q4 2024, intermittent).
- Conduct land acquisition and resettlement (Q1–Q3 2021).
- Recruit individual consultants and provide initial project management (Q4 2020).
- Recruit a consultant team for project management support (Q1–Q2 2021).
- Recruit an external environmental monitoring agency (Q2 2021).
- Recruit an external monitor for external resettlement M&E (Q4 2020–Q1 2021).
- Provide project management support through consultants (Q1 2021–Q2 2027, intermittent).
- Monitor and evaluate project impact, outcome, and outputs using the project performance management system; and submit quarterly project progress reports to ADB (Q2 2021–Q1 2027, intermittent).
- Submit semiannual environmental monitoring reports to ADB (Q4 2021–Q2 2027, intermittently).
- Submit semiannual external resettlement M&E reports to ADB (Q1 2021–Q1 2027, intermittently).
- Implement the ethnic minority development plan, social development action plan, gender action plan, and consultation and participation plan; and monitor their implementation (Q1 2021–Q2 2027, intermittent).
- Submit project completion report (Q2 2027).

#### Inputs

ADB (Ordinary capital resources, regular loan):	€169.23 million
Government:	€186.77 million

ADB = Asian Development Bank, M&E = monitoring and evaluation, OP = operational priority, O&M = operation and maintenance, PRC = People's Republic of China, Q = quarter, R = risk, tCO<sub>2</sub>e = ton of carbon dioxide equivalent, Xiangxi = Xiangxi Tujia and Miao Autonomous Prefecture, XPG = Xiangxi Tujia and Miao Autonomous Prefectural Government.

<sup>a</sup> Government of the PRC. 2016. *Outline of the Yangtze River Economic Belt Development Plan, 2016–2030*. Beijing; and Government of the PRC. 2018. *National Strategic Plan for Rural Vitalization, 2018–2022*. Beijing.

<sup>b</sup> The living environment is defined from the aspect of hygiene, which is improved by waste and sanitation management.

<sup>c</sup> The work of the rural garbage management teams is paid work.

#### Contribution to Strategy 2030 Operational Priorities

Expected values and methodological details for all OP indicators to which this operation will contribute results are detailed in Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in Appendix 2 of the report and recommendation of the President. In addition to the OP indicators tagged in the design and monitoring framework, this operation will contribute results for

OP 1.3: Poor and vulnerable people with improved standards of living (number)

OP 3.1: Total annual greenhouse gas emissions reduction (tCO<sub>2</sub>e/year)

OP 3.1.1: Additional climate finance mobilized (\$)

OP 3.1.3: Low-carbon infrastructure assets established or improved (number)

OP 3.1.5: Low-carbon solutions promoted and implemented (number)

OP 3.3.1: Pollution control enhancing infrastructure assets established or improved (number)

OP 3.3.2: Solutions to enhance pollution control and resource efficiency implemented (number)

OP 3.3.3: Terrestrial, coastal, and marine areas conserved, restored, and/or enhanced (hectares)

OP 3.3.4: Solutions to conserve, restore, and/or enhance terrestrial, coastal, and marine areas implemented (number)

OP 5.2: Farmers with improved market access (number)

OP 5.2.1: Wholesale markets established or improved (number)

OP 5.3.1: Land improved through climate-resilient irrigation infrastructure and water delivery services (hectares)

Source: ADB.

## **B. Monitoring**

### **1. Project Performance Monitoring**

102. In well advance of loan effectiveness, the PMO will prepare a format of quarterly project progress reports acceptable to ADB; and make necessary arrangements for preparation of the reports, including a flow of data and information collection, responsibility definition of each of the PMO and local PMOs, and reporting formats (from contractors to the local PMOs, from consultants to the PMO, from the local PMOs to the PMO, etc.). Quarterly project progress reports will include progress of the overall project and each component; status of consulting services and activities performed by each consultant; information on training, workshops, and study visits conducted; status of land acquisition and resettlement based on internal monitoring; status of the implementation of the EMDP, the SDAP, and the GAP; records of grievance and complaints; project performance (achievement of each performance indicator against the target); and particular issues.

### **2. Compliance Monitoring**

103. The XPG, including the PMO; the implementing agencies, including the local PMOs; and consultants for project management support will closely monitor the compliance of all the covenants included in the loan and project agreements. The compliance status of the covenants will be reported through quarterly progress reports. ADB will verify the compliance by reviewing quarterly project progress reports, communicating with the PMO, and/or conducting review missions.

### **3. Safeguard Monitoring**

#### **a. Environment**

104. The environmental monitoring program focuses on the environment in affected project areas. The environmental monitoring program is included in the 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 the CSCs; (ii) external monitoring of air, water, noise, and soil standards, to be conducted by a certified external EMA engaged by the PMO; and (iii) compliance monitoring to be conducted by a national environment specialist in the project management support consultant team, to ensure the EMP is being implemented. The monitoring shall comply with the standards. ADB will review project's compliance with the EMP standards based on semiannual environmental monitoring reports provided by the PMO (which will include the reports and findings of the external EMA) and review missions.

105. **Internal monitoring.** During construction, the PMO and local PMO environmental officers, social and environment safeguard officers of agencies involved in the subprojects, and the CSCs will be responsible for conducting internal environmental monitoring in accordance with the monitoring plan. Results will be reported from the CSCs to the agencies, from the agencies to the local PMOs, and from the local PMOs to the PMO.

106. **External monitoring.** The PMO will contract an external EMA to conduct the external environmental monitoring described in Section D of the EMP. The EMA will have relevant national certifications and capacity to undertake the external monitoring specified in the EMP. The external monitoring will be conducted during the entire construction phase and first full year of operation

of facilities constructed under the project. The EMA will prepare semiannual monitoring reports of the methods and results. The EMA will submit the reports to the PMO and the local PMOs at the same time, to ensure independence. The PMO will include the reports of the EMA as appendices in the semiannual environment monitoring reports to ADB, and will ensure that the EMA reports are not altered or edited in any way prior to submission to ADB.

107. **Compliance monitoring.** The environmental specialist in the project management support consultant team will review project progress and compliance with the EMP based on field visits, discussions with the PMO, local PMOs, and agencies involved in subprojects, and review of monitoring reports provided by the CSCs and the EMA. The findings of the environmental specialist will be reported to ADB through semiannual environment monitoring reports.

108. **Semiannual environmental monitoring reports and disclosure.** The PMO will submit semiannual environmental monitoring reports to ADB. The reports will include (i) progress made for the 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 the GRM); and (vi) any problems encountered during construction and operation, and relevant corrective actions undertaken. The environmental specialist will help the PMO prepare the reports and submit the English reports to ADB. ADB will review and disclose the reports on the ADB website.

109. **Environmental acceptance reporting.** Following the PRC's Regulation on Project Completion Environmental Audit (Ministry of Environmental Protection, 2001), within 3 months after the completion of major subprojects, an environmental acceptance report for each subproject shall be (i) prepared by the implementing agency or a capable environmental monitoring institute in accordance with the PRC's Guideline on Project Completion Environmental Audit (2017); and (ii) finally reported to ADB through semiannual environmental monitoring reports. The environmental acceptance reports will indicate the timing, extent, and effectiveness of completed mitigation and maintenance, and needs for additional mitigation measures and monitoring during operations.

#### **b. Resettlement Plan, EMDP, SDAP, and GAP (Social Measures)**

110. Internal and external monitoring of the implementation of the resettlement plan, EMDP, SDAP, and GAP will be conducted. For monitoring of the implementation of the resettlement plan and EMDP, monitoring methodologies are specified in the resettlement plan and EMDP. For monitoring of the implementation of the SDAP and the GAP, clear targets and indicators are in the SDAP and GAP and some indicators are also included in the design and monitoring framework.

111. To ensure implementation and monitoring of the resettlement plan, EMDP, SDAP, and GAP, the resettlement specialist, social development specialist, and gender specialist in the project management support consultant team will assist the PMO and local PMOs, by working with relevant focal staff of the PMO and local PMOs, in (i) setting up effective monitoring systems; (ii) internally monitoring the implementation of the plans; and (iii) reporting the results of the internal monitoring to ADB through quarterly project progress reports and disclosing relevant information locally, until the project completion. The PMO and local PMOs will ensure that civil works contractors comply with applicable labor laws and core labor standards and provide relevant training to their workers.

112. An external resettlement and social development M&E agency will implement external M&E of the implementation of the resettlement plan, the EMDP, the SDAP, and the GAP, semiannually.<sup>36</sup> The cost of the external resettlement M&E will be funded from the ADB loan. External resettlement and social development M&E reports will be forwarded directly to ADB.

### **C. Evaluation**

113. In addition to regular monitoring, project progress and performance will be monitored at least once a year jointly by ADB and the XPG during ADB's review mission. ADB and the XPG will undertake a midterm review in the mid-year of the project implementation period to conduct a detailed evaluation of the project scope, implementation arrangements, progress of the overall project and each component, and status of achieving the performance targets; and recommend appropriate measures, including changes in the project scope and/or implementation arrangements, reallocation of loan proceeds, changes in the ADB financing ratios, and extension of the loan closing date. Promptly after physical completion of the project, but in any event not later than 6 months thereafter or such later date as ADB may agree for this purpose, the PMO will prepare and submit to ADB a project completion report, in such form and in such detail as ADB shall reasonably request, on the implementation and evaluation of the project.

### **D. Reporting**

114. The XPG will provide ADB with (i) quarterly project progress reports in a format agreed by ADB; (ii) semiannual environmental monitoring reports; and (iii) a project completion report promptly after physical completion of the project, but in any event not later than 6 months thereafter or such later date as ADB may agree for this purpose. The XPG will also ensure that an external resettlement and social development M&E agency will submit the M&E reports to ADB. To ensure that project will continue to be both viable and sustainable, project accounts and the audited project financial statements together with the associated auditor's report should be adequately reviewed.

### **E. Stakeholder Communication Strategy**

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

116. **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

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<sup>36</sup> The M&E of the implementation of the resettlement plan will be conducted semiannually during the implementation of the resettlement plan and annually for 2 years after that.

project implementation, especially prior to and during civil works. Planning for public consultations will ensure that environmental and social safeguard requirements are discussed.

**117. Involuntary resettlement.** Affected villagers and households were consulted during project preparation and socioeconomic surveys. Local representatives participated in resettlement planning and their concerns have been integrated into the resettlement plan. The resettlement plan has also been posted on ADB's website. Resettlement information booklets were distributed locally. The grievance redress procedures have been established and explanations have been included in the resettlement information booklets.

**118. Ethnic minority development, social development, and gender action plans.** Consultations with communities were conducted and will be continued during the implementation of the EMDP, SDAP, and GAP. Special attention will be paid to the participation of women, the poor and/or low-income people, and ethnic minority groups. Information from monitoring reports will be disclosed periodically.

**119. Public disclosure.** ADB; the XPG, including the PMO; and the implementing agencies, including the local PMOs, will disclose relevant project information to the public and interested parties. This includes particularly the information regarding the overall project and environment and social safeguards. The information disclosure measures for different stakeholders are described in Table IX-2.

**Table IX-2: Public Disclosure Measures**

Information	Means of Communication	Responsibility	Audience	Frequency
Report and Recommendation of the President with links to relevant documents	ADB website	ADB	Public	Once
Project information during design and construction phase	Stakeholder consultations and public notice boards	XPG, including PMO; Project and implementing agencies, including the local PMOs	Project beneficiaries and affected people	Regular intervals during design and construction phase
Environmental monitoring reports	ADB and XPG websites, and public notice boards	XPG, including PMO; and implementing agencies, including the local PMOs	Affected people and other interested stakeholders	Semiannually
Information on RPs, EMDPs, SDAPs, and GAP activities	Stakeholder consultation, ADB and XPG websites, and public notice boards	XPG, including PMO; and implementing agencies, including the local PMOs	Affected people and other interested stakeholders	Regularly
External resettlement and social development M&E reports	ADB and XPG websites, and public notice boards	XPG, including PMO; and implementing agencies, including the local PMOs	Affected people and other interested stakeholders	For the LAR, semiannually during the LAR implementation and annually for 2 years after the LAR completion. For social development, semiannually during project implementation
Audited project financial statements	ADB website	ADB; XPG, including the PMO; and Audit Office	Public	Annually

Information	Means of Communication	Responsibility	Audience	Frequency
Project Information Documents	ADB Website	ADB	Public	Quarterly
Project Completion Report	ADB Website	ADB	Public	Once

ADB = Asian Development Bank, EMDP = ethnic minority development plan, GAP = gender action plan, LAR = land acquisition and resettlement, M&E = monitoring and evaluation, PMO = project management office, RP = resettlement plan, SDAP = social development action plan, XPG = Xiangxi Tujia and Miao Autonomous Prefectural Government. Source: Asian Development Bank.

120. Detailed consultation, participation, and information disclosure related to social and environmental safeguards are included in the EMP, resettlement plan, and the EMDP.

## **X. ANTICORRUPTION POLICY**

121. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project.<sup>37</sup> All contracts financed by ADB shall include provisions which specify 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.<sup>38</sup>

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

## **XI. ACCOUNTABILITY MECHANISM**

123. 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.<sup>39</sup>

## **XII. RECORD OF CHANGES TO THE PROJECT ADMINISTRATION MANUAL**

124. 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 manual, including revision to contract awards and disbursement S-curves.

<sup>37</sup> Anticorruption Policy: <https://www.adb.org/documents/anticorruption-policy>

<sup>38</sup> ADB's web site on anticorruption and integrity: <https://www.adb.org/site/integrity/main>

<sup>39</sup> ADB's website on accountability mechanism: <https://www.adb.org/site/accountability-mechanism/main>



Table A1.1: Detailed Project Outputs and Activities

Outputs, Components, and Detailed Activities	Location	Implementing Agency	Construction unit	O&M unit	Users		
Output 1: Rural waste and sanitation management facilities and services improved							
1.1. Wastewater management system							
1.1.1. Huayuan County (around Zixia Lake)							
1.1.1.1. Centralized wastewater management system	Xingnongyuan community	Huayuan County Government	Huayuan County Zixia Agriculture, Tourism, and Culture Development Co.,Ltd.		Residents in villages and communities around Zixia Lake		
Construction of a WWTP (3,000 m³/day)							
Installation of sewer line (8.96 km), inspection wells (376) of various size, etc.							
Development of PPP model for O&M							
1.1.1.2. Single household four-pool wastewater purification facilities	Other villages and communities around Zixia Lake						
Installation to 200 houses (1 set for 1 house)							
1.1.1.3. Distributed wastewater management systems							
Construction of various size small WWTPs						With solar panels	
Installation or construction of UPVC and HDPE pipes (143 km), wastewater collection ditches (18 km), inspection wells (4,010), etc.							
Construction of reclaimed water collection and regulation pools (50), etc.							
Installation of equipment for data collecton and transmission							
1.1.1.4. Capacity development							
5 technical and management staff members on O&M of the centralized wastewater management system (twice a year for 5 years, 2 days per training session)	Trainers will be mainly from the government's technical institutions at county and prefecture levels.						
34 technical staff members on O&M of the distributed wastewater management systems (twice a year for 5 years, 2 days per training session)							
1.1.2. Longshan County							
1.1.2.1. Miaoertan Village centralized wastewater management system	Miaoertan Town	Longshan County Government	Longshan County Housing and Construction Bureau		Residents in Miaoertan Town		
Construction of a WWTP (1,200 m³/day)							
Installation of various size pipes (9.96 km), inspection wells (332), etc.							
1.1.2.2. Xichehe Town centralized wastewater management system	Xichehe Town				Residents I Xichehe Town		
Construction of a WWTP (800 m³/day)							
Installation of various size pipes (5.75 km), inspection wells (332), etc.							
1.1.2.3. Longtou community centralized wastewater management system	Longtou community				Residents in Longtou community		
Construction of a WWTP (800 m³/day)							
Installation of various size pipes (10.17 km), inspection wells (127), etc.							
1.1.2.4. Banyue Lake centralized wastewater management system	Around Banyue Lake ara		Longshan County Liye Township management committee		Longshan Substation of Xiangxi Prefectural Ecological and Environment Bureau	Residents around Banyue Lake area	
Installation of HDPE pipes (3.0 km), inspection wells (75), etc.							The existing WWTP (5,000 m³/day) was constructed in 2014.
Renovation of drainage facilities around the lake							

Outputs, Components, and Detailed Activities				Location	Implementing Agency	Construction unit	O&M unit	Users
	<b>1.1.2.5. Youshui River Single household four-pool wastewater purification facilities</b>			17 villages and communities along Youshui River	Longshan County Government	Longshan Substation of Xiangxi Prefectural Ecological and Environment Bureau		Residents in 17 villages and communities along Youshui River
	Installation to 400 houses (1 set for 1 house)							
	<b>1.1.2.6. Youshui River distributed wastewater management systems</b>							
	Construction of various size small WWTPs	With solar panels						
	Installation of UPVC pipe (89.3 km), HDPE pipe (59.6 km), inspection wells (4,963), etc.							
	Installation of equipment for data collecton and transmission							
	<b>1.1.2.7. Liye Town single household four-pool wastewater purification facilities</b>			Liye Town				
	Installation to 20 houses (1 set for 1 house)							
	<b>1.1.2.8. Liye Town distributed wastewater management systems</b>							
	Construction of various size small WWTPs (47)	With solar panels						
	Installation of HDPE pipe (8.6 km), inspection wells (287), etc.							
	Construction or installation of protection nets (3,460 m), hedgerow (3,460 m), ecological ditches (1,500 m), etc.							
	Installation of equipment for data collection and transmission							
	<b>1.1.2.9. Capacity development</b>							
	15 technical and management staff members on O&M of the centralized wastewater management system (twice a year for 5 years, 2 days per training session)		Trainers will be mainly from the government's technical institutions at county and prefecture levels.					
	50 technical staff members on O&M of the distributed wastewater management systems (twice a year for 5 years, 2 days per training session)							
<b>1.1.3. Luxi County</b>								
<b>1.1.3.1. Dalan Town centralized wastewater management system</b>				Dalan community	Luxi County Government	Luxi County Housing and Construction Bureau		Residents in Dalan community
Construction of a WWTP (550 m <sup>3</sup> /day)								
Installation of pipes (12.2 km) of various size, inspection wells (407), etc.								
<b>1.1.3.2. Heshui Town centralized wastewater management system</b>				Heshui community				
Construction of a WWTP (550 m <sup>3</sup> /day )								
Installation of pipes (14.73 km) of various size, inspection wells (491), etc.								
<b>1.1.3.3. Xinglongchang Town centralized wastewater management system</b>				Xinglongchang community				
Construction of a WWTP (800 m <sup>3</sup> /day )								
Installation of pipes (16.78 km) of various size, inspection wells (491), etc.								
<b>1.1.3.4. Pushi Town centralized wastewater management system</b>				Pushi community				
Installation of pipes (66.64 km) of various size, inspection wells (1,716), a lift pump, etc.			The exsting WWTP (3,000 m <sup>3</sup> /day) was constructed in 2016 and put into operation in 2018.					

Outputs, Components, and Detailed Activities			Location	Implementing Agency	Construction unit	O&M unit	Users	
	1.1.3.5. Capacity development	15 technical and management staff members on O&M of the centralized wastewater management system (twice a year for 5 years, 2 days per training session)		Luxi County Government				
		12 technical staff members on O&M of the distributed wastewater management systems (twice a year for 5 years, 2 days per training session)						
	1.1.4. Jishou City							
	1.1.4.1. Majingao Town centralized wastewater management system		Majingao Town	Jishou City Government	Jishou City Housing and Construction Bureau	Jishou City Public Utility Service Center	Residents in Majingao Town	
	Construction of a WWTP (1,000 m <sup>3</sup> /day)							
	Installation of various size pipes (18.7 km), inspection wells (624), etc.							
	1.1.4.2. Yilve Village centralized wastewater management system		Yilve village				Residents in Yilve village	
	Construction of a WWTP (300 m <sup>3</sup> /day)							
	Installation of pipelines (4.7 km) of various size, inspection wells (157), etc.							
	1.1.4.3. Taiping Town centralized wastewater management system		Taiping Town				Residents in Taiping Town	
	Construction of a WWTP (300 m <sup>3</sup> /day)							
	Installation of pipelines (8.54 km) of various size, inspection wells (285), etc.							
	1.1.4.4. Danqing Town centralized wastewater management system		Danqing Town				Residents in Danqing Town	
	Construction of a WWTP (300 m <sup>3</sup> /day)							
	Installation of pipelines (9.8 km) of various size, inspection wells (327), etc.							
	1.1.4.5. Dong River distributed wastewater management systems		Communities around Dong River		Jishou City Environment Protection Bureau		Residents in communities around Dong River	
	Construction of various size small WWTPs (15)							
	Installation of various size pipe lines (36.2 km), inspection wells (1,799), etc.							
	Installation of equipment for data collecton and transmission							
	1.1.4.6. Capacity development							
20 technical and management staff members on O&M of the centralized wastewater management system (twice a year for 5 years, 2 days per training session)		Trainers will be mainly from the government's technical institutions at county and prefecture levels.						
14 technical staff members on O&M of the distributed wastewater management systems (twice a year for 5 years, 2 days per training session)								
1.1.5. Guzhang County								
1.1.5.1. Qifeng Lake distributed wastewater management systems			Villages around Qifeng Lake	Guzhang County Government	Guzhang County Housing and Construction Bureau	Residents in villages around Qifeng Lake		
Construction of various size small WWTPs (31)								
Installation of various size pipe lines (86 km), inspection wells (2,835), etc.								
Installation of equipment for data collecton and transmission								
1.1.5.2. Capacity development								
18 technical staff members on O&M of the distributed wastewater management systems (twice a year for 5 years, 2 days per training session)		Trainers will be mainly from the government's technical institutions at county and prefecture levels.						

Outputs, Components, and Detailed Activities			Location	Implementing Agency	Construction unit	O&M unit	Users
1.1.6. Baojing County							
1.1.6.1. Lvdongshan Town single household four-pool of sewage purification facilities			4 villages in Lvdongshan Town	Baojing County Government	Baojing Ruixing Construction and Investment Limited Company	Lvtongshan Township Government	Residents in 4 villages in Lvdongshan Town
Installation to 500 houses (1 set for 1 house)							
1.1.6.2. Lvdongshan Town distributed wastewater management systems							
Construction of various size small WWTPs (70) With solar panels							
Installation of various size pipe lines (39.5 km), inspection wells (987), etc.							
Installation of equipment for data collecton and transmission							
1.1.6.3. Capacity development							
12 technical staff members on O&M of the distributed wastewater management systems (twice a year for 5 years, 2 days per training session)		Trainers will be mainly from the government's technical institutions at county and prefecture levels.					
1.1.7. Yongshun County							
1.1.7.1. Sicheng Village distributed wastewater manageent systems			Sicheng Village	Yongshun County Government	Yongshun Tusi Culture and Tourism Dcvelopment Group Limited Company		Residents in Sicheng Village
Construction of various size small WWTPs (5) With solar panels							
Installation of various size pipe lines(1.9 km), inspection wells (397), etc.							
Installation of equipment for data collecton and transmission							
1.1.7.2. Capacity development							
2 technical staff members on O&M of the distributed wastewater management systems (twice a year for 5 years, 2 days per training session)		Trainers will be mainly from the government's technical institutions at county and prefecture levels.					
1.2. Solid waste management		Collected garbage will be treated at 6 existing landfills (constructed during 2007 - 2011).					
1.2.1. Huayuan County around Zixia Lake							
1.2.1.1. Shilan Town			Shilan Town	Huayuan County Government	Huayuan County Zixia Agriculture, Tourism, and Culture Development Co.,Ltd.		Residents in Shilan Town
Construction of a garbage transfer station							
Provision of garbage collection equipment	93 sealed dustbins, 1, 014 sorting trash cans, 9 power cleaning vehicles, 1 garbage truck, 4 garbage hook trucks, 1 suction sewage truck, spare parts and tools, etc.						
Provision of sanitation publicity goods	40 stainless steel bulletin boards, 80 plastic-sprayed exhibition boards and 1,500 garbage classification manuals						
1.2.1.2. Longtan Town							
Construction of a garbage transfer station			Longtan Town				Residents in Longtan Town
Provision of garbage collection equipment	79 sealed dustbins, 862 sorting trash cans, 7 power cleaning vehicles, 1 garbage truck, 4 garbage hook trucks, 1 suction sewage truck, spare parts and tools, etc.						
Provision of sanitation publicity goods	40 stainless steel bulletin boards, 80 plastic-sprayed exhibition boards and 1,000 garbage classification manuals						

Outputs, Components, and Detailed Activities			Location	Implementing	Construction	O&M unit	Users		
		1.2.1.3. Malichang Town		Malichang Town	Huayuan County Government	Huayuan County Zixia Agriculture, Tourism, and Culture Development Co.,Ltd.		Residents in Malichang Town	
		Construction of a garbage transfer station							
		Provision of garbage collection equipment	88 sealed dustbins, 964 sorting trash cans, 8 power cleaning vehicles, 1 garbage truck, 4 garbage hook trucks, 1 suction sewage truck, spare parts and tools, etc.						
		Provision of sanitation publicity goods	40 stainless steel bulletin boards, 80 plastic-sprayed exhibition boards and 1,600 garbage classification manuals						
		1.2.1.4. Huayuan Town		Huayuan Town		Residents in Huayuan Town			
		Construction of a garbage transfer station							
		Provision of garbage collection equipment	60 sealed dustbins, 649 sorting trash cans, 6 power cleaning vehicles, 1 garbage truck, 4 garbage hook trucks, 1 suction sewage truck, spare parts and tools, etc.						
		Provision of sanitation publicity goods	40 stainless steel bulletin boards, 80 plastic-sprayed exhibition boards and 1,900 garbage classification manuals						
		1.2.1.5. Capacity development							
		20 technical and management staff members on O&M of the garbage transfer stations (twice a year for 5 years, 2 days per training session)	Trainers will be mainly from the government's technical institutions at county and prefecture levels.						
		4,800 farmers, dustmen, and village committee members on garbage classification and sanitation knowledge (once a year for 2 years, one day per training session)							
		1.2.2. Longshan County along Youshui River							
		1.2.2.1. Xichehe Town		Xichehe Town		Longshan Count Government	Longshan County Town Administration and Comprehensive Law Execution Bureau		Residents in Xichehe Town
		Renovation and expansion of a garbage transfer station							
		Provision of garbage collection equipment	35 sealed dustbins, 2,144 sorting trash cans, 6 power cleaning vehicles, 1 garbage truck, 2 garbage hook trucks, spare parts and tools, etc.						
Provision of sanitation publicity goods	15 stainless steel bulletin boards, 30 plastic-sprayed exhibition boards and 1,100 garbage classification manuals								
1.2.2.2. Miaoertan Town		Miaoertan Town	Residents in Miaoertan Town						
Construction of two garbage transfer stations									
Provision of garbage collection equipment	50 sealed dustbins, 7,968 sorting trash cans, 14 power cleaning vehicles, 2 garbage trucks, 4 garbage hook trucks, 1 suction sewage truck, spare parts and tools, etc.								
Provision of sanitation publicity goods	50 stainless steel bulletin boards, 100 plastic-sprayed exhibition boards, and 4,000 garbage classification manuals								

Outputs, Components, and Detailed Activities			Location	Implementing	Construction	O&M unit	Users			
	1.2.2.3. Liye Town		Liye Town	Longshan Count Government	Longshan County Town Administration and Comprehensive Law Execution Bureau		Residents in Liye Town			
	Provision of garbage collection equipment	50 sealed dustbins, 4,778 sorting trash cans, 14 power cleaning vehicles, 4 garbage hook trucks, spare parts and tools, etc.								
	Provision of sanitation publicity goods	50 stainless steel bulletin boards, 100 plastic-sprayed exhibition boards, and 2,400 garbage classification manuals								
	1.2.2.4. Liye Town drinking water source area		Liye Town drinking water source area						Rsidents in Liye Town drinking water source area	
	Provision of garbage collection equipment	10 sealed dustbins, 24 sorting trash cans, 6 power cleaning vehicles, 1 garbage hook truck, spare parts and tools, etc.								
	Provision of sanitation publicity goods	10 stainless steel bulletin boards, 20 plastic-sprayed exhibition boards, and 500 garbage classification manuals								
	1.2.2.5. Capacity development									
	5 technical and management staff members on O&M of the garbage transfer stations (twice a year for 5 years, 2 days per training session)	Trainers will be mainly from the government's technical institutions at county and prefecture levels.								
	9,000 farmers, dustmen, and village committee members on garbage classification and sanitation knowledge (once a year for 2 years, one day per training session)									
	1.2.3. Luxi County									
1.2.3.1. Pushi Town		Pushi Town	Luxi County Government	Luxi County Housing and Construction Bureau		Residents in Pushi Town				
Construction of a garbage transfer station										
Provision of garbage collection equipment	160 sealed dustbins, 25 power cleaning vehicles, 2 garbage trucks, 2 garbage hook trucks, 1 suction sewage truck, spare parts and tools, etc.									
Provision of sanitation publicity goods	60 stainless steel bulletin boards, 100 plastic-sprayed exhibition boards, and 5,000 garbage classification manuals									
1.2.3.2. Dalan Town		Dalan Town				Residents in Dalan Town				
Construction of a garbage transfer station										
Provision of garbage collection equipment	170 sealed dustbins, 15 power cleaning vehicles, 2 garbage trucks, 6 garbage hook trucks, 1 suction sewage truck, spare parts and tools, etc.									
Provision of sanitation publicity goods	60 stainless steel bulletin boards, 100 plastic-sprayed exhibition boards, and 12,000 garbage classification manuals									

Outputs, Components, and Detailed Activities			Location	Implementing	Construction	O&M unit	Users	
	1.2.3.3. Capacity development			Luxi County Government				
	10 technical and management staff members on O&M of the garbage transfer stations (twice a year for 5 years, 2 days per training session)	Trainers will be mainly from the government's technical institutions at county and prefecture levels.						
	130,000 farmers, dustmen, and village committee members on garbage classification and sanitation knowledge (once a year for 2 years, one day per training session)							
1.2.4. Jishou City								
	1.2.4.1. Aizai Town		Aizhai Town	Jishou City Government	Jishou city Housing and Construction Bureau	Jishou City Aizhai Township Government	Residents in Aizhai Town	
	Renovation and expansion of a garbage transfer station							
	Provision of garbage collection equipment	72 sealed dustbins, 3,126 sorting trash cans, 16 power cleaning vehicles, 2 garbage trucks, 10 garbage hook trucks, 2 suction sewage trucks, spare parts and tools, etc.						
	Provision of sanitation publicity goods	35 stainless steel bulletin boards, 70 plastic-sprayed exhibition boards, and 2,900 garbage classification manuals						
	1.2.4.2. Capacity development							
	5 technical and management staff members on O&M of the garbage transfer stations (twice a year for 5 years, 2 days per training session)	Trainers will be mainly from the government's technical institutions at county and prefecture levels.						
	5,500 farmers, dustmen, and village committee members on garbage classification and sanitation knowledge (once a year for 2 years, one day per training session)							
1.2.5. Guzhang County								
	1.2.5.1. Around Qifeng Lake		Villages around Qifeng Lake	Guzhang County Government	Guzhang county Qifeng Lake Management Committee		Residents in villages around Qifeng Lake	
	Provision of garbage collection equipment	50 sealed dustbins, 3,410 sorting trash cans, 37 power cleaning vehicles, 1 garbage truck, 10 garbage hook trucks, 1 suction sewage truck, spare parts and tools, etc.						
	Provision of sanitation publicity goods	40 stainless steel bulletin boards, 100 plastic-sprayed exhibition boards, and 3,200 garbage classification manuals						
	1.2.5.2. Capacity development							
	2,000 farmers, dustmen, and village committee members on garbage classification and sanitation knowledge (once a year for 2 years, one day per training session)	Trainers will be mainly from the government's technical institutions at county and prefecture levels.						

Outputs, Components, and Detailed Activities			Location	Implementing	Construction	O&M unit	Users
<b>1.2.6. Baojibg County</b>							
<b>1.2.6.1. Lvdongshan Town</b>			Lvdongshan Town	Baojing County Government	Baojing Ruixing Construction and Investment Limited Company	Baojing County Lvdongshan Township Government	Residents in Lvdongshan Town
Construction of a garbage transfer station							
Provision of garbage collection equipment	20 sealed dustbins, 3,948 sorting trash cans, 8 power cleaning vehicles, 4 garbage trucks, 4 garbage hook trucks, 1 suction sewage truck, spare parts and tools, etc.						
Provision of sanitation publicity goods	20 stainless steel bulletin boards, 60 plastic-sprayed exhibition boards, and 1,970 garbage classification manuals						
<b>1.2.6.2. Capacity development</b>							
5 technical and management staff members on O&M of the garbage transfer stations (twice a year for 5 years, 2 days per training session)		Trainers will be mainly from the government's technical institutions at county and prefecture levels.					
2,000 farmers, dustmen, and village committee members on garbage classification and sanitation knowledge (once a year for 2 years, one day per training session)							
<b>1.2.7. Yongshun County</b>							
<b>1.2.7.1. Sicheng Village</b>			Sicheng Town	Yongshun County Government	Yongshun Tusi Culture and Tourism Dvelopment Group Limited Company		Residents in Sicheng Town
Provision of garbage collection equipment	3 sealed dustbins, 200 sorting trash cans, 2 power cleaning vehicles, 1 garbage hook truck, spare parts and tools, etc.						
Provision of sanitation publicity goods	2 stainless steel bulletin boards, 5 plastic-sprayed exhibition boards, and 600 garbage classification manuals						
<b>1.2.7.2. Capacity development</b>							
300 farmers, dustmen, and village committee members on garbage classification and sanitation knowledge (once a year for 2 years, one day per training session)							
<b>1.3. Renovation of rural households' unsanitary toilets to sanitary ones</b>							
<b>1.3.1. Huayian County</b>			Villages around Zixia Lake	Huayuan County Government	Huayuan County Zixia Agriculture, Tourism, and Culture Development Co.,Ltd.	Households	Residents in villages around Zixia Lake
500 new toilets construction and 3,000 toilets renovation							
<b>1.3.2. Jishou City</b>			Aizhai Town	Jishou City Government	Jishou city Agricultural and Rural development Bureau	Households	Residents in Aizhai Town
249 new toilets construction and 579 toilets renovation							
<b>1.3.3. Baojing County</b>			Lvdongshan Town	Baojing County Government	Baojing Ruixing Construction and Investment Limited Company	Households	Residents in Lvdongshan Town
50 new toilets construction and 1,000 toilets renovation							



Outputs, Components, and Detailed Activities			Location	Implementing Agency	Construction unit	O&M unit	Users
1.3.4. Yongshun County			Sicheng Village	Yongshun County Government	Yongshun Tusi Culture and Tourism Dcvelopment Group Limited Company	Households	Residents in Sicheng Village
	82 toilets renovation						
Output 2: Local featured ecological agricultural and forestry products developed							
2.1. Xiangxi Prefectural Kiwi Fruit and Citrus Seedlings Research and Breeding Base			Duliangtian and Yanbanjing Villages of Qiangongping Town	XPG (executing agency), represented by Agriculture and Rural Bureau	Xiangxi Prefecture Citrus Science and Research Institute		
2.1.1. Seedling facilities							
Construction of parent field, observation garden, and open nursery (8.99 ha), seedling greenhouse (5,000 m <sup>2</sup> ), van seedling breeding bed (10,000 m <sup>2</sup> ), integrated water and fertilizer management system, etc.; seedling nature and management; etc.							
2.1.2. Vriety speceis introduction							
Purchase of seedlings (400,000), seedling planting, etc.							
2.1.3. Small agricultural machinery and equipment ad materials for seedling							
Provision of small agricultural machinery and equipment (seedling pots, etc.) and materials (organic fertilizer, etc.) for seedling							
2.1.4. Research and development center							
Construction of the building (1,005 m <sup>2</sup> ), etc.; provision of seedling screening equipment, seedling virus-free equipment, traceability equipment, office equipment, etc.; etc.							
2.1.5. Research on breeding and virus-free technology of kiwi fruit							
2.1.6. Capacity development							
350 farmers on production techniques (cultivation, fertilization, irrigation, disease and pest control, etc.) of citrus and kiwi fruit (once a year for three years)		Thainers will be from the institute.					
30 technicians on updated technologies on cultivation, fertilization, irrigation, disease and pest control, breeding and seedling culture, post-harvest treatment, etc. (twice a year for 5 years, 2 days per session)		Trainers will be senior researchers of the institute and from other provincial-level institutes.					
500 farmerstraining at the base for extension and sharing of advanced technologies for local featured agricultural and forestry product							
2.2 Baojing County Lvdongshan Gold Tea Industrial Park		The constructed facilities except for the research and development center will be used by farmers and cooperatives free of charge.	Baojing County Lvdongshan Town	Baojing County Government	Baojing Ruixing Construction Investment Co., Ltd	Baojing county Lvtongshan Township Government	Research and development center: Agriculture and Rural Bureau and Tea Development Office of the Baojing County Government  Other facilities: farmers and cooperatives
2.2.1. Tea processing factory							
Construction of a 725.9 m <sup>2</sup> tea processing workshop in Huangjin village and a 725.9 m <sup>2</sup> tea processing workshop in Hangji village.							
2.2.2. Seedling nursery							
Land preparation (0.33 ha); construction of retaining wall, irrigation and drainage ditch, field road, etc.; seedling culture and management; provision of organic fertilizer; etc.							

Outputs, Components, and Detailed Activities			Location	Implementing Agency	Construction unit	O&M unit	Users
<b>2.2.3. Seedling greenhouse and organic tea garden</b>			Baojing County Lvdongshan Town	Baojing County Government	Baojing Ruixing Construction Investment Co., Ltd	Baojing county Lvtongshan Township Government	Research and development center: Agriculture and Rural Bureau and Tea Development Office of the Baojing County Government  Other facilities: farmers and cooperatives
Construction of a special-shaped steel frame shed (10,000 m <sup>2</sup> ) with automatic spray equipment, provision of agricultural materials, etc.; land preparation (66.7 ha), seedling purchase, seedling nurture, management, and protection, provision of organic fertilizer, etc.; etc.							
<b>2.2.4. Tea garden road, rest pavilions, tea garden toilets, and parking lot</b>							
Construction of tea garden road (30 km), rest pavilions (50), tea garden toilets (20), parking lot (13,000 m <sup>2</sup> ), etc.							
<b>2.2.5. Old tea tree protection and quality improvement of low efficiency tea gardens</b>							
Resource survey, installtion of guardrail, land preparation (1,200 ha), transformation of forest form at tea gardens (3,000 ha), seedling purchase, seedling nature and management, organic fertilizer provision, etc.							
<b>2.2.6. Research and development center</b>		The research and development center will be used by the County's Agriculture and Rural Bureau and the Tea Development Office. These two institutions have 9 senior researchers and 13 technicians for research, <u>breeding, and processing technologies.</u>					
Construction of research and development center (1,090.8 m <sup>2</sup> ); installtion or provision of equipment for laboratory pretreatment, plant morphological identification, tea ingredient detection, office, etc.; etc.							
<b>2.2.7. Exhibition and marketing center</b>							
Construction of exhibition and maketing center (2,098.8 m <sup>2</sup> ), incuding provision or installation of equipment and furniture; etc.							
<b>2.2.8. Publicity of brand and old tea tree protection</b>							
<b>2.2.9. Capacity development</b>							
2,000 farmers on production techniques (cultivation, fertilization, irrigation, disease and pest control, etc.) of the Golden tea (once a year for three years).		Thainers will be from county-, prefecture-, and provincial-level agriculture and rural affairs bureaus.					
50 technicians on cultivation, fertilization, irrigation, disease and pest control, breeding and seedling culture, post-harvest treatment, etc. (twice a year for 5 years, 2 days per session).							
1,000 farmers on technical extension and knowledge sharing, to demonstrate advanced technologies for tea production.							
<b>2.3. Huayuan County Zixia Lake Area Local Special-Featured Agricultural Base</b>			Zixia Lake area	Huayuan County Government	Huayuan County Zixia Agriculture, Tourism, and Culture Development Co.,Ltd. (a SOE 100% owned by Xiangxi National Agricultural Science and Technology Park [a government committee under the Huayuan County Government])		
<b>2.3.1. Seedling bases</b>							
Construction of camellia oleifera base (8,100 m <sup>2</sup> ), seedling greenhouse (8,000 m <sup>2</sup> ), germplasm resource nursery (1,800 m <sup>2</sup> ), integrated water and fertilizer management system, field weather stations, etc.; nurture, management, and protection; provision of organic fertilizer; etc.							
<b>2.3.2. Green prevention and control</b>							
Provision of solar powered pest control lamp,							

Outputs, Components, and Detailed Activities			Location	Implementing Agency	Construction unit	O&M unit	Users	
	2.3.3. Recycling straw		Zixia Lake area	Huayuan County Government	Huayuan County Zixia Agriculture, Tourism, and Culture Development Co.,Ltd. (a SOE 100% owned by Xiangxi National Agricultural Science and Technology Park [a government committee under the Huayuan County Government])			
	Provision of equipment for recycling straw							
	2.3.4. Service platform							
	Provision or installation of equipment for agricultural product traceability system, and e-commerce platform							
	2.3.5. Capacity development							
	4,800 farmers on production techniques (cultivation, fertilization, irrigation, disease and pest control, etc.) of camellia oleifera and fruits (once a year for three years).	Thainers will be from county- and prefecture-level technical bureaus.						
	30 technicians on updated technologies on cultivation, fertilization, irrigation, disease and pest control, post-harvest treatment, etc. (twice a year for 5 years, 2 days per session).							
	1,000 farmer on technical extension of advanced technologies for the production of camellia oleifera and fruits							
	2.4. Wuling Moutain Area Precious Germplasm Resources Reservation		Liaojiqiao Township		XPG (executing agency), represented by Forestry Bureau	Xiangxi Prefecture Forestry Science and Research Institute		
	2.4.1. Tree species resource storage and breeding test area							
Construction of rare tree species resource preservation bank (320 ha), storehouse of rare medicinal plants (50 ha), breeding test area of tree species (15 ha), conservation and breeding area of rare seedlings (including laboratory, disinfection room, big arch shelter greenhouse, seedling breeding bed frame, variety cultivation area and nursery, rare tree species parent garden, and integrated water and fertilizer management system), etc.								
2.4.2. Collection of tree species resources								
Collection of rare tree resources (1,750) and rare medicinal plants (500)								
2.4.3. Seedling								
Provison of production materials (seedling containers, organic fertilizer, etc.), etc.								
2.4.4. Capacity development								
Technical exchange and cooperation								
30 technicians on updated technologies on plantation, fertilization,pest control, and management, etc. (twice a year for 5 years, 2 days per session).		Trainers will be senior researchers of the same institute and from academy and university of Hunan province.						
Output 3: Values added to local products through value chains and ecotourism								
	3.1. Guzhang County local featured agricultural products logistics and cold chain base		Guzhang Ecological Science and Technology Garden, Guyang Town	Guzhang County Government	Guzhang County Tongyuan Integrated Development Limited Company		Farmer cooperatives, agribusiness enterprises, logistics companies, etc.	
	3.1.1. Constuction							
	Buildings for cold chain, processing, and packaging (16,621.6 m <sup>2</sup> ), logistics storage (6,176 m <sup>2</sup> ), and office (1,463 m <sup>2</sup> ), etc.							
	3.1.2. Installation or provision of equipment							
Equipment for blockchain data management, storage, cold storage, processing and packaging, office, kitchen, etc.								

Outputs, Components, and Detailed Activities			Location	Implementing Agency	Construction unit	O&M unit	Users
	3.1.3. Capacity development			Guzhang County Government			
	35 technicians and staff members on safety production and fire-prevention (twice a year for 5 years, 2 days per session)	Trainers will be from Social Safeguard Bureau and Fire Fighting Bureau of the Guzhang County Government.					
	10 management staff members on operation and management (twice a year for 5 years, 2 days per session)						
	3.2. Yongshun County local featured agricultural products logistics and cold chain base		Furong Town	Yongshun County Government	Xiangxi Mengdong River Tourism Ecological Development Zone Construction Co.,Ltd. (a SOE 100%-owned by the Yongshun County Government)	Agricultural processing and agribusiness companies, research and inspection institutes, etc., paying rental fees	
	3.2.1. Constuction						
	Buildings for cold chain, storage, and packaging workshop (8,519 m <sup>2</sup> ), comprehensive office (2,514 m <sup>2</sup> ), and quality inspection (949 m <sup>2</sup> ), etc.						
	3.2.2. Installation or provision of equipment						
	Equipment for warehouse logistics, cold storage, inspection and traceability system, sorting and packing, processing, e-commerce platform, office, kitchen, etc.						
	3.2.3. Brand promotion						
	3.2.4. Capacity development						
	30 technicians and staff members on safety production and fire-prevention (twice a year for 5 years, 2 days per session)	Trainers will be from Social Safeguard Bureau and Fire Fighting Bureau of the Yongshun County Government.					
	10 management staff members on operation and management (twice a year for 5 years, 2 days per session)						
	3.3. Jishou City local featured agricultural products logistics and cold chain base		Jishou city Qianzhou economic Development Zone	Jishou City Government	Jishou city Hutai State-Owned Asset Investment and Management Limited Liability Company (a SOE 100%-owned by the Jishou City Government)	Farmer cooperatives, agribusiness enterprises, logistics companies, etc.	
	3.3.1. Constuction						
	Buildings for cold chain and processing workshop (5,760 m <sup>2</sup> ), logistics storage (5,548 m <sup>2</sup> ), and e-commerce and office (2,525 m <sup>2</sup> ), etc.						
	3.3.2. Installation or provision of equipment						
	Equipment for information management, logistics storage, cold storage, office, etc.						
	3.3.3. Capacity development						
	25 technicians and staff members on safety production and fire-prevention (twice a year for 5 years, 2 days per session)	Trainers will be from Social Safeguard Bureau and Fire Fighting Bureau of the Jishou City Government.					
	8 management staff members on operation and management (twice a year for 5 years, 2 days per session)						
	3.4. Luxi County Xinnv Agricultural Products Trading Center		Wuxi Town, Luxi County	Luxi County Government	Luxi County Market Service Center	Luxi County Market Service Center	
	3.4.1. Buildings						
	New construction (27,028 m <sup>2</sup> ), decoration and reconstruction (6,000 m <sup>2</sup> ), etc.						
	3.4.2. Installation or provision of equipment						
	Equipment for e-commerce, storage, cold storage, agricultural product traceability system, agricultural product processing, smoked food processing line, fruit and vegetable food processing line, etc.						
	3.4.3. Capacity development						
	30 technicians and staff members on safety production and fire-prevention (twice a year for 5 years, 2 days per session)	Trainers will be from Social Safeguard Bureau and Fire Fighting Bureau of the Luxi County Government.					
	15 management staff members on operation and management (twice a year for 5 years, 2 days per session)						

Outputs, Components, and Detailed Activities	Location	Implementing Agency	Construction unit	O&M unit	Users
<b>3.5. Integration of forestry with ecotourism along Luxi-Jishou-Fenghuang and Jishou-Huayuan-Zhangjiajie highways</b> <b>3.5.1. Improvement of tourism resources</b> Forest clearing, inter-cutting, pruning and reshaping, land preparation and rehabilitation, afforestation and greening, seedling planting, nurturing, provision of equipment, etc. <b>3.5.2. Forest trail</b> Construction of 40 km forest trail <b>3.5.3. Capacity development</b> 39,500 farmers on forest fire-prevention for one day 30 technicians on tree plantation, precised quality upgrading of forest, fertilization, pest control, management, and fire-prevention, etc. (twice a year for 5 years, 2 days per session) 10 management staff members on integration of forestry with tourism (twice a year for 5 years, 2 days per session)	Along Luxi-Jishou-Fenghuang and Jishou-Huayuan-Zhangjiajie Highways	Baojing, Fenghuang, Huayuan, and Jishou County Governments	Forestry Bureau of the XPG	Baojing, Fenghuang, Huayuan, and Yongshun County Governments	Tourists
<b>3.6. Guzhang County Qifeng Lake agriculture and forestry integration with ecotourism</b> <b>3.6.1. Improvement of tourism resources</b> Forest and plant community restoration, mid-lake island improvement, water protection and management, etc. <b>3.6.2. Sightseeing roads and footpaths in and/or around forests and farmlands</b> Construction of round-the-lake road (10.98 km) and footpath (5.8 km) <b>3.6.3. Brand publicity</b> <b>3.6.4. Capacity development</b> 30 tourism service and management staff members on tourism service skills (guidance, reception, marketing, etc.) (twice a year for 5 years, 2 days per session) 5 technicians and management staff members on updated techniques on tree plantation, pest control, management, and fire-prevention, etc. (twice a year for 5 years, 2 days per session) 2 lake water management staff members on skills of lake water management (twice a year for 3 years, 2 days per session) 10 management staff members on integration of forestry with tourism (twice a year for 5 years, 2 days per session)	Qifeng Lake area	Guzhang County Government	Guzhang County Qifeng Lake Management Committee		Tourists
<b>3.7. Fenghuang County Shanjian Village agriculture and forestry integration with ethnic minority inclusive ecotourism</b> <b>3.7.1. Improvement of tourism resources</b> Rebovation of ethnic minority houses (28) and ethnic minority family workshops (12), transformation of forest form (3 types of forest models, 30 ha each), etc.	Shanjian, Heku, Jixin and Ganzi Townships	Fenghuang County Government	Fenghuang Mingcheng Construction and Investment Limited Company (a SOE 100%-owned by the Fenghuang County Government)		Tourists

Outputs, Components, and Detailed Activities			Location	Implementing Agency	Construction unit	O&M unit	Users
	<b>3.7.2. Sightseeing roads and footpaths in and/or around forests, farmlands, and ethnic minority villages</b>		Shanjiang, Heku, Jixin and Ganzi Townships	Fenghuang County Government	Fenghuang Mingcheng Construction and Investment Limited Company (a SOE 100%-owned by the Fenghuang County Government)		Tourists
	Upgrading of road (3.69 km) and construction of footpath (2.67 km)						
	<b>3.7.3. Fruit picking experience garden</b>						
	Construction a fruit picking experience garden (2.89 ha)						
	<b>3.7.4. Ethnic minority history and culture exhibition facilities and a supermarket for ethnic minority cultural products</b>						
	Construction of Miao culture and art center (6,099 m <sup>2</sup> ), museum of Miao history and culture (2,385 m <sup>2</sup> ), and national minority cultural products supermarket (1,210 m <sup>2</sup> )						
	<b>3.7.5. Brand publicity</b>						
	<b>3.7.6. Festival activities</b>						
	<b>3.7.7. Capacity development</b>						
	100 farmers on the Miao ethnic minority intangible heritage skills (embroidery, silver decoratives, Miao medicine, and cultural performance, etc.) (twice a year for 5 years, 1 day per session)	Trainers will be skill inheritors of the county and also from County Culture and Tourism Bureau.					
	30 tourism service and management staff members on tourism service skills (guidance, reception, marketing, etc.) (twice a year for 5 years, 2 days per session)	Trainers will be from prefecture- and county-level culture and tourism bureauss.					
	20 farmers on cultivation, fertilization, pest control and management of fruits (yellow peach, grape and kiwi fruit) garden for picking experience by tourists, etc. (once a year for 3 years, 1 day per session)	Trainers will be from prefecture- and cunty level agriculture and rural bureaus					
10 management staff members on integration of forestry with tourism (twice a year for 5 years, 2 days per session)	Trainers will be from Xiangxi Prefectural Forestry Bureau and Culture and Tourism Bureau.						
<b>3.8. Longshan County Banyue Lake agriculture integration with ethnic minority inclusive ecotourism</b>			Liye Town	Longshan County Government	Longshan county Liye Management Committee (a public institute established by the Longshan County Government)	Longshan County Liye Management Committee	Tourists
<b>3.8.1. Improvement of tourism resources</b>							
Water circulation (pump station renovation, pipe installation [1,800 m], etc.), water surface protection and management, plant community restoration (1.32 ha), etc.							
<b>3.8.2. Sightseeing footpaths in and/or around forests, farmlands, and ethnic minority villages</b>							
Construction of footpath (4.26 km)							
<b>3.8.3. Exhibition and sales of ethnic minority cultural products</b>							
Construction of national minority cultural products exhibition and sales center (1,080 m <sup>2</sup> )							
<b>3.8.4. Brand publicity</b>							
<b>3.8.5. Capacity development</b>							
30 tourism service and management staff members on tourism service skills (guidance, reception, marketing, etc.) (twice a year for 5 years, 2 days per session)	Trainers will be from prefecture- and county-level culture and tourism bureauss.						

Outputs, Components, and Detailed Activities			Location	Implementing Agency	Construction unit	O&M unit	Users	
		2 lake water management staff members on skills of lake water management (twice a year for 3 years, 2 days per session)	Trainers will be from prefecture- and county-level water and resources bureaus		Longshan County Government			
		10 management staff members on integration of forestry with tourism (twice a year for 5 years, 2 days per session)	Trainers will be from Xiangxi Prefectural Forestry Bureau and Culture and Tourism Bureau.					
3.9. Huayuan County Zixia Lake agriculture and forestry integration with ethnic minority inclusive ecotourism			Zixia Lake area	Huayuan County Government	Huayuan County Zixia Agriculture, Tourism, and Culture Development Co.,Ltd. (a SOE 100% owned by the Huayuan County Government)		Tourists	
3.9.1. Improvement of tourism resources								
	Transformation of forest form (3 types of forest models, 70 m <sup>2</sup> , 70 m <sup>2</sup> , and 80 m <sup>2</sup> ), plant community restoration (12.6 ha), riverbank protection, water surface protection and management, etc.							
3.9.2. Sightseeing roads, footpaths, public toilets, and ecological parking lots in and/or around forests, farmlands, and ethnic minority villages								
	Construction of liking road (18.9 km), footpath (11.2 km), tourist toilets (20), ecological parking lot (17,000 m <sup>2</sup> ), etc.							
3.9.3. Fruit picking garden								
	Fruit planting (200 ha)							
3.9.4. Ethnic minority cultural heritage exhibition center								
	Construction of Miao intangible cultural heritage exhibition center (4,915 m <sup>2</sup> )							
3.9.5. Brand publicity								
3.9.6. Capacity development								
	200 farmers oncultivation, fertilization, pest control and management of fruit (peach, pear, plum, jujube and cherry) gardens, etc. (once a year for 3 years, 1 day per session)	Trainers will be from prefecture- and county-level agriculture and rural bureaus.						
	30 tourism service and management staff members on tourism service skills (guidance, reception, marketing, etc.) (twice a year for 5 years, 2 days per session)	Trainers will be from prefecture- and county-level culture and tourism bureaus.						
	2 lake water management staff members on skills of lake water management (twice a year for 3 years, 2 days per session)	Trainers will be from prefecture- and county-level water and resources bureaus						
	15 management staff members on integration of forestry with tourism (twice a year for 5 years, 2 days per session)	Trainers will be from Xiangxi Prefectural Forestry Bureau and Culture and Tourism Bureau.						

Outputs, Components, and Detailed Activities	Location	Implementing Agency	Construction unit	O&M unit	Users
<b>3.10. Yongshun County Sicheng Village agriculture integration with ethnic minority inclusive ecotourism</b> <b>3.10.1. Improvement of tourism resources</b> Ecological slope protection of river channel (2,699 m), ethnic minority house renovation (35), preservation of scenic area, etc. <b>3.10.2. Sightseeing footpaths in and/or around farmlands and ethnic minority villages</b> Construction of footpath (1.03 km) <b>3.10.3. Fruit picking garden</b> Construction of featured fruit orchard (35 ha), etc. <b>3.10.4. Intangible cultural heritage exhibition center and tourist service station</b> Construction of an intangible cultural heritage exhibition center (1,210 m <sup>2</sup> ) and tourist service station <b>3.10.5. Brand publicity</b> <b>3.10.6. Capacity development</b> 80 farmers on cultivation, fertilization, pest control and management of fruit (peach, pear, plum, jujube and cherry) gardens, etc. (once a year for 3 years, 1 day per session) 30 tourism service and management staff members on tourism service skills (guidance, reception, marketing, etc.) (twice a year for 5 years, 2 days per session) 5 management staff members on integration of forestry with tourism (twice a year for 5 years, 2 days per session)	Sicheng Village	Yongshun County Government	Yongshun Tusi Culture and Tourism Development Group Limited Company		Tourists
<b>Technical support, researches, study tours, etc.</b>					
4.1 Technical support, capacity development, and knowledge dissemination for Outputs 1,2, and 3, by a recruited consultant team		XPG (executing agency) represented by PMO			
4.2 Research on problems and countermeasures of integrated development of primary, secondary, and tertiary industries by a recruited domestic institute					
4.3 Research on strategy of rural vitalization in concentrated poor ethnic minority areas by a recruited domestic institute					
4.4 Research on disease and pest control for and quality improvement of featured agricultural products by Agriculture and Rural Bureau of the XPG					
4.5 Planning, organizing, and implementation of international study tours by a recruited agency					
4.6 Domestic study tours					



Outputs, Components, and Detailed Activities	Location	Implementing Agency	Construction unit	O&M unit	Users
<b>Project management</b>					
5.1 Project management supports by recruited 3 national individual consultants for initial project management support for procurement and project management, environment, and social safeguard and social development and a project management support consultant team		XPG (executing agency) represented by PMO			
5.2 Semiannual environmental monitoring by a recruited external environmental monitoring agency					
5.3 Semiannual M&E of implementation of the RP, EMDP, SDAP, and GAP by a recruited external resettlement and social development M&E agency					
5.4 Environmental monitoring (soil and water inspection, etc.) by recruited domestic institutes		Jishou City and Baojing, Fenghuang, Guzhang, Huayuan, Longshan, Luxi, and Yongshun County Governments			
5.5 Construction supervision and quality inspection by engaged construction supervision and quality inspection companies					
5.6 Procurement of works and goods by an engaged procurement agency		XPG (executing agency) represented by PMO			
5.7 Auditing of the project by Hunan Provincial Audit Office					
5.8 Project publicity (seminars, production and distribution of project publicity video and materials, etc.)					
5.9 Purchase of office equipment for PMO and local PMOs					
5.10 Project management seminars and training					
5.11 Submission of quarterly project progress reports to ADB					
5.12 Submission of semiannual environmental monitoring reports to ADB					
5.13 Submission of semiannual external resettlement and social development M&E reports to ADB					
5.14 Submission of annual audit reports to ADB					
5.15 Submission of the project completion report to ADB					

ADB = Asian Development Bank, EMDP = ethnic minority development plan, GAP = gender action plan, ha = hectare, HDPE = high-density polyethylene, km = kilometer, M&E = monitoring and evaluation, m<sup>2</sup> = square meter, m<sup>3</sup> = cubic meter, O&M = operation and maintenance, PMO = project management office, PPP = public-private partnership, RP = resettlement plan, SDAP = social development action plan, SOE = state-owned enterprise, UPVC = un-plasticised poly vinyl chloride, WWTP = wastewater treatment plant, XPG = Xiangxi Tujia and Miao Autonomous Prefectural Government.

Source: Asian Development Bank.

**INDICATIVE TERMS OF REFERENCE FOR CONSULTING SERVICES FOR  
PACKAGE OP41-PPMO-CS01/1: INITIAL PROJECT MANAGEMENT SUPPORT  
(PROCUREMENT AND PROJECT MANAGEMENT)**

**A. Introduction**

1. This document sets out indicative terms of reference for consulting services needed to ensure the smooth initial management of the Hunan Xiangxi Rural Environmental Improvement and Green Development Project. The direct client of the consulting services is the project management office (PMO). The PMO is under the Xiangxi Tujia and Miao Autonomous Prefectural Government (XPG, the executing agency of the project) and physically located in the Development and Reform Committee of the XPG. The consulting services will be also provided to eight local PMOs which are physically located in Development and Reform Committees of the Jishou City Government and the county governments of Baojing, Fenghuang, Guzhang, Huayuan, Longshan, Luxi, and Yongshun (implementing agencies).

**B. Implementation Arrangements**

2. The consulting services will be carried out by a national individual consultant (national procurement and project management specialist). The consulting services will be financed by the Asian Development Bank (ADB); and the consultant will be recruited by the PMO according to ADB's Procurement Policy (2017, as amended from time to time), and ADB's Procurement Regulations for ADB Borrowers (2017, as amended from time to time). The consultant will be selected using the individual consultant selection method. The consulting services are expected to start on 1 January 2021 until 31 July 2021.

**C. Reporting Requirements**

3. By the end of the assignment, the specialist will submit a report on his/her activities to ADB and the PMO (a soft copy of the English version to ADB and soft copies of the English and Chinese versions to the PMO).

**D. Detailed Scope of Services and Consultants' Inputs**

4. The individual national procurement and project management specialist will provide a total of 4 person-months of consulting services. The consultant shall have a university degree or higher in management, accounting, or related field. He or she shall be proficient in English; and has at least 10 years of experience in procurement, consultant recruitment, and project management for projects funded by ADB or other international funding agencies. Knowledge on ADB's Procurement Policy (2017, as amended from time to time), ADB's Procurement Regulations for ADB Borrowers (2017, as amended from time to time), and other ADB procedures for procurement and consultant recruitment are required.

5. The specialist will undertake the following tasks: (i) understand the format of quarterly project progress reports provided by ADB, and provide the PMO with guidance on how to fill-in the format by assisting them in preparing the first report; (ii) improve internal procedures of routine data collection and filling and information exchange among the PMO, the local PMOs, and other agencies of the XPG and the implementing agencies for smooth project implementation and quarterly project progress reporting; (iii) assist the PMO in recruiting a consultant team for project management support (package number: OP41-PPMO-CS02), an external environmental monitoring agency (package number: OP41-PPMO-CS03), an external resettlement and social



## **INDICATIVE TERMS OF REFERENCE FOR CONSULTING SERVICES FOR PACKAGE OP41-PPMO-CS01/2: INITIAL PROJECT MANAGEMENT SUPPORT (ENVIRONMENT)**

### **A. Introduction**

1. This document sets out indicative terms of reference for consulting services needed to ensure the establishment of preparatory administrative and technical work required for efficient implementation of the Hunan Xiangxi Rural Environmental Improvement and Green Development Project in the early stage of project implementation. The direct client of the consulting services is the project management office (PMO). The PMO is under the Xiangxi Tujia and Miao Autonomous Prefectural Government (XPG, the executing agency of the project) and physically located in the Development and Reform Committee of the XPG. The PMO's overall responsibility includes implementation of the environmental management plan (EMP). The consulting services will be also provided to eight local PMOs which are physically located in Development and Reform Committees of the Jishou City Government and the county governments of Baojing, Fenghuang, Guzhang, Huayuan, Longshan, Luxi, and Yongshun (implementing agencies).

### **B. Implementation Arrangements**

2. The consulting services will be carried out by an individual consultant (national environment specialist). The consulting services will be financed by the Asian Development Bank (ADB) and the consultant will be recruited by the PMO according to ADB's Procurement Policy (2017, as amended from time to time) and ADB's Procurement Regulations for ADB Borrowers (2017, as amended from time to time). The consultant will be selected using the individual consultant selection method. The consulting services are expected to start on 1 January 2021 until 31 July 2021, and a project management support consultant team (package number: OP41-PPMO-CS02), including an environment specialist, will take over project management support to provide long-term support to the PMO and the local PMOs.

### **C. Reporting Requirements**

3. Upon completion of the consultancy, the specialist will submit a written report describing the work accomplished, any key challenges encountered and/or technical concerns for further consideration, and lessons learned to ADB and the PMO (a soft copy of the English version to ADB and soft copies of the English and Chinese versions to the PMO).

### **D. Detailed Scope of Services and Consultants' Inputs**

4. The individual national environment specialist will provide a total of 4 person-months of consulting services. The consultant shall 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 environmental impact assessment and/or initial environmental examination (IEE), including specific experience in management and monitoring of environmental projects; (iii) familiarity with ADB's Safeguard Policy Statement (2009), ADB's 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 project sites; and (vii) proficiency in spoken and written English.

5. The specialist will undertake the following tasks:

- (i) work closely with the PMO, the local PMOs, and design institutes to ensure that relevant preliminary design incorporates designs and mitigation measures described in the IEE and EMP;
- (ii) update the IEE and EMP based on the preliminary design, as necessary (including, but not be limited to, major changes in proposed alignments and/or locations of facilities, new subcomponents requiring civil works and/or impacting environment, and/or cancellation of components); prepare any new impact assessments and/or updates, as required; and obtain ADB's approval of them (the ADB-approved documents cannot be changed without prior approval of relevant government agency and ADB);
- (iii) assist the PMO and the local PMOs in establishing grievance redress mechanism, including procedures to ensure documentation and reporting of complaints, follow-up actions, and results;
- (iv) provide training to staff of the PMO, the local PMOs, and relevant agencies of the XPG and the implementing agencies so that they will understand ADB's Safeguard Policy Statement (2009), other policies, and compliance requirements for environmental management; national and local regulations and standards for environmental protection, health, labor, and occupational safety; and the IEE and EMP;
- (v) assist the PMO, the local PMOs, and relevant agencies of the XPG and the implementing agencies in establishing an internal environmental monitoring and reporting system and provide hands-on guidance in preparing the first environmental monitoring report;
- (vi) assist the PMO, the local PMOs, and relevant agencies of the XPG and the implementing agencies in constructing, operating, maintaining, and monitoring the project facilities in strict conformity with all applicable laws and regulations, including national and local regulations and standards for environmental protection, health, labor, and occupational safety; ADB's Safeguard Policy Statement (2009); and the IEE and EMP;
- (vii) assist the PMO and the local PMOs in handing over relevant documents and files to the project management support consultant team (package number: OP41-PPMO-CS02) and brief the team, particularly the environment specialist in the team, on status and outstanding issues; and
- (viii) perform any other environmental management related tasks during the start-up phase of the project.

**E. Cost Estimate****Table A2.2: Cost Estimate**

<b>Item</b>	<b>Total Cost (CNY'000)</b>
1.	Consultant
a.	Remuneration and per diem
	National consultant (4 person-months)
	250.4
b.	Local travel
	30.0
c.	Reports and communications
	1.0
2.	Miscellaneous administration and support costs
	3.6
3.	Contingencies
	15.0
<b>Total</b>	
	<b>300.0</b>

Source: Asian Development Bank estimates.

**INDICATIVE TERMS OF REFERENCE FOR CONSULTING SERVICES  
FOR PACKAGE OP41-PPMO-CS01/3: INITIAL PROJECT MANAGEMENT SUPPORT (LAND  
ACQUISITION AND RESETTLEMENT AND SOCIAL DEVELOPMENT)**

**A. Introduction**

1. This document sets out indicative terms of reference for consulting services needed to ensure the smooth initial management of the Hunan Xiangxi Rural Environmental Improvement and Green Development Project. The direct client of the consulting services is the project management office (PMO). The PMO is under the Xiangxi Tujia and Miao Autonomous Prefectural Government (XPG the executing agency of the project) and physically located in the Development and Reform Committee of the XPG. The consulting services will be also provided to eight local PMOs which are physically located in Development and Reform Committees of the Jishou City Government and the county governments of Baojing, Fenghuang, Guzhang, Huayuan, Longshan, Luxi, and Yongshun (implementing agencies).

**B. Implementation Arrangements**

2. The consulting services will be carried out by an individual consultant (national land acquisition and resettlement [LAR] and social development specialist). The consulting services will be financed by the Asian Development Bank (ADB); and the consultant will be recruited by the PMO according to ADB's Procurement Policy (2017, as amended from time to time), and ADB's Procurement Regulations for ADB Borrowers (2017, as amended from time to time). The consultant will be selected using the individual consultant selection method. The consulting services are expected to start on 1 January 2021 until 31 July 2021.

**C. Reporting Requirements**

3. By the end of the assignment, the specialist will submit a report on his/her activities to ADB and the PMO (a soft copy of the English version to ADB and soft copies of the English and Chinese versions to the PMO).

**D. Detailed Scope of Services and Consultants' Inputs**

4. The individual national LAR and social development specialist will provide a total of 4 person-months of consulting services. The consultant shall have a university degree or above in resettlement, social, or related field. He or she shall be proficient in English and have at least 10 years of experience in the LAR in the People's Republic of China on projects funded by ADB or other international funding agencies. Knowledge on ADB's Safeguard Policy Statement (2009) and ADB's or other international funding agencies' procedures for the LAR are required.

5. The specialist will undertake the following tasks: (i) assist the PMO, local PMOs, relevant agencies of the XPG and the implementing agencies, and the design institute in updating the resettlement plan and the ethnic minority development plan (EMDP) approved by ADB, in the ADB formats, and based on the preliminary design, disclosing them to the affected persons prior to ADB's approval; and obtaining ADB's approval of them; (ii) assist the PMO and the local PMOs in ensuring adequate resettlement readiness prior to the LAR and social development readiness (for implementation of the EMDP, social development action plan, and gender action plan); (iii) assist the PMO and the local PMOs in establishing effective grievance redress mechanisms, including mechanisms to ensure reporting of complaints; follow-up actions; and results; (iv) provide training to relevant staff of the PMO, local PMOs, and the relevant agencies of the XPG

and the implementing agencies so that they will understand ADB's policies and compliance requirements for the LAR, ethnic minority development, social development, and gender; (v) assist the PMO; the local PMOs; and the relevant agencies of the XPG and the implementing agencies in establishing an internal monitoring and reporting system for implementation of the resettlement plan (including frameworks for land use rights transfer and land use for rural public infrastructure), the EMDP, social development action plan, and gender action plan; (vi) assist the PMO and the local PMOs in handing over relevant documents and files to the project management support consultant (package number: OP41-PPMO-CS02); and brief the team, particularly the resettlement specialist, social development specialist, and gender specialist in the team, on status and outstanding issues; and (vii) perform any other LAR and social development related tasks during the start-up phase of the project.

## E. Cost Estimate

**Table A2.3: Cost Estimate**

		<b>Total Cost (CNY'000)</b>
<b>Item</b>		
1.	Consultant	
a.	Remuneration and per diem	
	National consultant (4 person-months)	250.4
b.	Local travel	30.0
c.	Reports and communications	1.0
2.	Miscellaneous administration and support costs	3.6
3.	Contingencies	15.0
<b>Total</b>		<b>300.0</b>

Source: Asian Development Bank estimates.



## **INDICATIVE TERMS OF REFERENCE FOR CONSULTING SERVICES FOR PACKAGE OP41-PPMO-CS02: PROJECT MANAGEMENT SUPPORT CONSULTANT TEAM**

### **A. Introduction**

1. This document sets out indicative terms of reference for consulting services needed to ensure the smooth management of the Hunan Xiangxi Rural Environmental Improvement and Green Development Project. The direct client of the consulting services is the project management office (PMO). The PMO is under the Xiangxi Tujia and Miao Autonomous Prefectural Government (XPG, the executing agency of the project) and physically located in the Development and Reform Committee of the XPG. The consulting services will be also provided to eight local PMOs which are physically located in Development and Reform Committees of the Jishou City Government and the county governments of Baojing, Fenghuang, Guzhang, Huayuan, Longshan, Luxi, and Yongshun (implementing agencies).

### **B. Implementation Arrangements**

2. The consulting services for project management support will be carried out by a team of consultants through a firm. A total of 81.00 person-months of international and 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 PMO according to ADB's Procurement Policy (2017, as amended from time to time), and ADB's Procurement Regulations for ADB Borrowers (2017, as amended from time to time). The consulting firm will be selected by (i) inviting full technical proposals; and (ii) using the quality- and cost-based selection method, with a quality-cost ratio of 90:10. The consulting services are expected to start on 1 July 2021 until 30 June 2027.

### **C. Reporting Requirements**

3. The consultant team will produce (i) an inception report within 4 weeks of the start of the consulting services, (ii) an annual report by the end of each year during 2021–2026, (iii) draft project completion report (PCR) by 31 March 2027, and (iv) a final PCR by 30 June 2017. The inception and annual reports and draft PCR will be subject to tripartite reviews by ADB, the PMO, and consultants. All reports are to be written in English and translated into Chinese. One soft and three hard copies of each report are to be submitted to ADB (English version only) and the PMO (both Chinese and English versions).

4. The inception report will present an approach for the consulting services, including a work plan and an implementation schedule. The annual reports will present activities conducted by the consultants, effects of the consulting services, issues encountered, and recommendations to improve project management. The draft and final PCRs will include summary and evaluation of project implementation; environmental management; land acquisition and resettlement (LAR); ethnic minority development; implementation of the social development action plan (SDAP) and the gender action plan (GAP); compliance to the loan and project covenants; and achievements of the project impact, outcome, and outputs; as well as lesson learned from the project implementation and follow-up actions recommended.

### **D. Other Requirements**

5. The consultant team will provide a fully qualified interpreter to work with the consultants on a full-time basis and support the ADB missions.

## **E. Scope of Services and Consultants' Inputs**

6. For each of the international consultant positions, (i) possession of a related degree, qualification, memberships of related academic societies, and/or participation in related training courses, (ii) experience in similar positions for projects or technical assistances, and (iii) experience in working in many countries and experience in working in the People's Republic of China with international organizations and consultants, will be highly evaluated. For each of the national consultant positions, (i) possession of a related degree, qualification, memberships of related academic societies, and/or participation in related training courses, (ii) experience in similar positions for projects or technical assistances, and (iii) experience in working with international organizations and consultants, will be highly evaluated.

### **1. Project Management Specialist and/or Team Leader (international, 16.5 person-months [pm])**

7. The specialist should have experience in project management support; have experience in working in several countries, including the People's Republic of China; and be proficient in spoken and written English. Possession of memberships of related academic societies and/or completion of related training courses will be highly regarded.

8. The specialist will (i) coordinate all project management support activities as team leader; (ii) finalize approaches for project management support; (iii) prepare the inception report, annual reports, draft PCR, and final PCR; (iv) assist the PMO in implementing, monitoring, and evaluating the overall project and subprojects; (v) assist the PMO in preparing quarterly project progress reports in a format provided by ADB; (vi) assess needs for capacity development for staff of the PMO, local PMOs, and others; and plan, design, organize, and implement seminars, workshops, and/or training for project management; financial management; disbursement arrangements; implementation, monitoring and evaluation (M&E) of the LAR, ethnic minority development, social development, gender development, and environmental management; and project M&E; if necessary;<sup>1</sup> (vii) monitor compliance with the loan and project covenants, assess key implementation issues, and make recommendations for improvement; and (viii) conduct any other necessary work for smooth and appropriate implementation of the project.

### **2. Procurement and Contract Management Specialist (national, 18.0 pm)**

9. The specialist should have a related degree, qualification, and/or memberships of related academic societies and/or have completed related training courses, have experience in procurement and contract management for projects, have experience in working with international organizations and consultants, and be proficient in spoken and written English.

10. The specialist will (i) assist the PMO in recruiting a consultant team for technical support, capacity development, and knowledge dissemination for Outputs 1–3 (package number: OP41-PPMO-CS05) and an agency to plan, organize, and implement international study visits (package number: OP41-PPMO-CS09), as necessary; (ii) monitor procurement activities under the project and assist the PMO in updating and implementing the procurement plan; (iii) assist the PMO in conducting management of contracts for civil works, goods, and consulting services, including, but not limited to, supervision and inspection of activities under contracts; payments to contractors, suppliers, and consultants; preparation of withdrawal applications; improvement of

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<sup>1</sup> Costs for seminars, workshops, and training, excluding consulting services (costs for venues, printing, accommodation and transport for participants, etc.), will be funded from the ADB loan under the project separately from the contract for the consulting services.

fund flow efficiency by streamlining the preparation of withdrawal applications; and contract variations; (iv) assist the project management specialist and/or team leader in monitoring compliance with the loan covenants, assess key implementation issues, and make recommendations for improvement from procurement and contract management viewpoint; (v) provide the PMO with support for the preparation of procurement and contract management aspects of quarterly progress reports; (vi) provide support to the project management specialist and/or team leader for assessing needs for capacity development; and planning, designing, organizing, and implementing seminars, workshops, and/or training for procurement and contract management; (vii) provide support to the project management specialist and/or team leader for preparing the inception report, annual reports, draft PCR, and final PCR; and (viii) conduct any other necessary work for procurement and contract management assigned by the project management specialist and/or team leader.

### **3. Environment Specialist (national, 10.0 pm)**

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

12. **Tasks.** Working closely with focal staff of the PMO, local PMOs, and agencies involved in construction and other staff and agencies as needed, the specialist will do the following:

13. Before construction:

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

14. During project implementation:

- (i) Undertake site visits to all agencies involved in subprojects during subproject construction and operation phases.
- (ii) Assist in ongoing public consultation process as described in the initial environmental examination.
- (iii) Conduct and monitor project compliance with the EMP and all relevant assurances and covenants in the loan and project agreements for environmental safeguards, identify any environment-related implementation issues, and propose necessary responses in corrective action plans
- (iv) Assist the PMO and local PMOs in managing the accredited external environmental

- monitoring agency for conducting periodic environmental impact monitoring in compliance with the approved monitoring plan defined in the EMP.
- (v) Undertake training of relevant project agencies as required by the EMP training plan, and provide hands-on support and on-the-job training to the PMO, local PMOs, agencies involved in subprojects, and/or contractors on the specific requirements of the EMP.
  - (vi) Undertake simple and cost-effective on-site quantitative measurements to regularly check that the construction complies with the environmental monitoring standards and targets, especially for noise, using a basic hand-held meter.
  - (vii) Design a simple and cost-effective water monitoring program for subprojects involving crop production. The objective of the program is to assist the PMO, local PMOs, and agencies involved in the subprojects in measuring and reporting monthly and annual water use for agriculture in each subproject. This will enable (a) the PMO, local PMOs, and city or county water bureaus to monitor water use in relation to allocation quotas and overall sustainability; and (b) the PMO, local PMOs, and ADB to assess whether the project is achieving improvements in water use (compared with existing crop production). Prepare and finalize the program methodology in consultation with the PMO and local PMOs. The program should include the data collected through the soil moisture sensors to be installed by the project, and be integrated with the data collection and storage system to be prepared by the agencies involved in the subprojects, so that the water monitoring data is incorporated as part of the overall project computer systems and can be easily viewed as needed by the PMO and local PMOs.
  - (viii) Assist the PMO in preparing semiannual environmental monitoring reports for submission to ADB. The reports will focus on progress with the implementation of the EMP, compliance with environment-related assurances, and results of the water monitoring.
  - (ix) Undertake any other relevant work assigned by the project management specialist/team leader.

#### **4. Resettlement Specialist (national 7.0 pm)**

15. The specialist should have a related degree, qualification, and/or memberships of related academic societies and/or have completed related training courses, have experience in the LAR for projects, have experience in working with international organizations and consultants, and be proficient in spoken and written English.

16. The specialist will (i) assist the PMO, the local PMOs, and design institute in updating the resettlement plan approved by ADB, in ADB's format, and based on the change; disclose them to the affected persons prior to ADB's approval; and obtain ADB's approval of them; (ii) assist the PMO, local PMOs, and relevant agencies of the XPG and the implementing agencies in implementing and monitoring of the resettlement plan, including frameworks for land use rights transfer (LURT) and land use for rural public infrastructure (LURPI); (iii) assist the local PMOs and relevant agencies of the implementing agencies in supervising contractors to ensure compliance with requirements of the resettlement plan, applicable laws and regulations, and ADB's Safeguard Policy Statement; (iv) assist the PMO, local PMOs, and relevant agencies of the XPG and the implementing agencies in supervising the processes of the LAR, LURT, and LURPI by collecting and updating basic data and closely coordinating between the PMO, local PMOs, relevant agencies of the XPG and the implementing agencies, and an external resettlement and social development M&E agency; (v) review external resettlement and social development M&E reports prepared by the external resettlement and social development M&E agency; review ADB's comments on the reports; monitor compliance with relevant requirements; assess the degree of effectiveness and key implementation issues; explain key issues to the PMO, local PMOs, and relevant agencies of the XPG and the implementing agencies; and assist

them in conducting follow-up actions to address the key issues; (vi) assist the PMO in monitoring compliance with the resettlement plan (including frameworks for LURT and LURPI), assessing key implementation issues, and formulating remedial measures; and assist them in conducting follow-up actions; (vii) provide the PMO with support for the preparation of the LAR, LURT, and LURPI aspects for semiannual internal resettlement and social monitoring reports and project progress reports; (viii) provide support to the project management specialist and/or team leader for assessing needs for capacity development; and planning, designing, organizing, and implementing seminars, workshops, and/or training for the implementation and the M&E of the LAR, LURT, and LURPI; (ix) provide support to the project management specialist and/or team leader for preparing the inception report, annual reports, draft PCR, and final PCR; and (x) undertake any other necessary work assigned by the project management specialist and/or team leader.

## **5. Social Development Specialist (national, 8.5 pm)**

17. The specialist should have a related degree, qualification, and/or memberships of related academic societies and/or have completed related training courses; have experience in ethnic minority and social development for projects; have experience in working with international organizations and consultants; and be proficient in spoken and written English.

18. The specialist will (i) if there is a change in the project scope, assist the PMO, the local PMOs, and design institute in updating the ethnic minority development plan (EMDP) approved by ADB, in ADB format, and based on the change; and obtain ADB's approval of it; (ii) assist the PMO and the local PMOs in implementing and monitoring the EMDP and the SDAP prepared during project preparation; (iii) assist the PMO, local PMOs, and relevant agencies of the XPG and the implementing agencies in supervising contractors to ensure compliance with requirements of the EMDP and SDAP; and applicable laws and regulations; (iv) assist the PMO, local PMOs, and relevant agencies of the XPG and the implementing agencies in supervising implementation of the EMDP and SDAP by collecting and updating basic data and closely coordinating between the PMO, local PMOs, relevant agencies of the XPG and the implementing agencies, and the external resettlement and social development M&E agency; (v) review external resettlement and social development M&E reports prepared by the external resettlement and social development M&E agency; review ADB's comments on the reports; monitor compliance with the EMDP and SDAP; assess the degree of impacts and key implementation issues; explain key issues to the PMO, local PMOs, and relevant agencies of the XPG and the implementing agencies; and assist them in conducting follow-up actions to address the key issues; (vi) assist the PMO in monitoring compliance with the EMDP and SDAP, assessing key implementation issues, and formulating remedial measures; and assist them in conducting follow-up actions; (vii) provide the PMO with support for the preparation of ethnic minority and social development aspects for quarterly project progress reports; (viii) together with an international agricultural value chain specialist and national agricultural and forestry product specialist (under package number: OP41-PPMO-CS05) and national social development specialists (under package numbers: OP41-PPMO-CS07 and 08), ensure that all facilities for exhibition of agricultural and forestry products and ethnic minorities' history and culture, which are constructed by the project, integrate cultural elements of ethnic minorities, and; (ix) provide support to the project management specialist and/or team leader for assessing needs for capacity development, and planning, designing, organizing, and implementing seminars, workshops, and/or training for implementation and the M&E of the EMDP and SDAP; (x) provide support to the project management specialist and/or team leader for preparing the inception report, annual reports, draft PCR, and final PCR;

and (xi) undertake any other necessary work assigned by the project management specialist and/or team leader.

## **6. Gender Specialist (national, 8.5 pm)**

19. The specialist should have a related degree, qualification, and/or memberships of related academic societies and/or have completed related training courses; have experience in gender development for projects; have experience in working with international organizations and consultants; and be proficient in spoken and written English.

20. The specialist will (i) assist the PMO and the local PMOs in implementing and monitoring the GAP prepared during project preparation; (ii) assist the PMO, local PMOs, and relevant agencies of the XPG and the implementing agencies in supervising contractors to ensure compliance with requirements of the GAP and applicable laws and regulations; (iii) assist the PMO, local PMOs, and relevant agencies of the XPG and the implementing agencies in supervising the implementation of the GAP by collecting and updating basic data and closely coordinating between the PMO, local PMOs, relevant agencies of the XPG an implementing agencies, and the external resettlement and social development M&E agency; (iv) review external resettlement and social development M&E reports prepared by the external resettlement and social development M&E agency; review ADB's comments on the reports; monitor compliance with the GAP; assess the degree of impacts and key implementation issues; explain key issues to the PMO, local PMOs, and relevant agencies of the XPG and the implementing agencies; and assist them in conducting follow-up actions to address the key issues; (v) assist the PMO in monitoring compliance with the GAP, assessing key implementation issues and formulating remedial measures; and assist them in conducting follow-up actions; (vi) provide the PMO with support for the gender development aspects for quarterly project progress reports; (vii) together with an international agricultural value chain specialist and national agricultural and forestry product specialist (under package number: OP41-PPMO-CS05) and national social development specialists (under package numbers: OP41-PPMO-CS07 and 08), ensure that the e-commerce platforms constructed under the project cater to specific needs of women entrepreneurs in the project area; (viii) ensure that national social development specialists recruited under package numbers: OP41-PPMO-CS07 and 08 (a) provide business start-up training to at least 240 women, to promote women's entrepreneurship and management capacity in agricultural and ecotourism industry; and (b) organize networking and experience sharing workshops for at least 240 women, inviting women who have taken the training in (a) above and started their own businesses; (ix) provide support to the project management specialist and/or team leader for assessing needs for capacity development; and planning, designing, organizing, and implementing seminars, workshops, and/or training for the implementation and the M&E of the GAP; (x) provide support to the project management specialist and/or team leader for preparing the inception report, annual reports, draft PCR, and final PCR; and (xi) undertake any other necessary work assigned by the project management specialist and/or team leader.

## **7. Economist (national, 5.0 pm)**

21. The specialist should have a related degree, qualification, and/or memberships of related academic societies and/or have completed related training courses; have experience in economic analysis for projects; have experience in working with international organizations and consultants; and be proficient in spoken and written English.

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

and each subproject at the midterm of project implementation (in 2023), and at physical completion of the project; (iii) provide support to the project management specialist and/or team leader for assessing needs for capacity development; and planning, designing, organizing, and implementing seminars, workshops, and/or training for economic analysis, as necessary; (iv) provide support to the project management specialist/team leader for preparing the inception report, annual reports, draft PCR, and final PCR; and (v) undertake any other necessary work assigned by the project management specialist and/or team leader.

## 8. Finance Specialist (national, 7.5 pm)

23. The specialist should have a related degree, qualification, and/or memberships of related academic societies and/or have completed related training courses; have experience in financial analysis and financial management assessment for projects; have experience in working with international organizations and consultants; and be proficient in spoken and written English.

24. The specialist will (i) review background documents, including the financial analysis and financial management assessment of the project undertaken during project preparation; (ii) conduct financial analysis at the midterm of project implementation (in 2023); and at physical completion of the project, including (a) financial sustainability analysis to assess the fiscal sustainability of the XPG and the implementing agencies, and debt repayment capacity of the XPG; and (b) an assessment of the financial viability of the revenue-generating components, i.e., development of local-featured ecological agricultural and forestry products; (iii) assist the PMO, local PMOs, and relevant agencies of the XPG and the implementing agencies in establishing and implementing a financial management system; (iv) assist the PMO, local PMOs, and relevant agencies of the XPG and the implementing agencies in preparing the withdrawal applications; and streamlining the preparation of withdrawal applications; (v) assist the Hunan Provincial Finance Department, the Hunan Provincial Audit Office, the PMO, and local PMOs in meeting requirements of the financial management action plan (Table V-1, project administration manual); (vi) provide support to the project management specialist and/or team leader for assessing needs for capacity development; and planning, designing, organizing, and implementing seminars, workshops, and/or training for financial analysis and financial management, as necessary; (vii) provide support to the project management specialist and/or team leader for preparing the inception report, annual reports, draft PCR, and final PCR; and (ix) undertake any other necessary work assigned by the project management specialist and/or team leader.

## F. Cost Estimate

**Table A2.4: Cost Estimate**

Item		Total Cost (CNY'000)
1.	Consultants	
a.	Remuneration and per diem	
	International consultant (16.5 person-months)	2,544.3
	National consultants (64.5 person-months)	3,687.2
b.	International travel	385.0
c.	Local travel	402.5
d.	Reports and communications	15.0
2.	Surveys	36.0
3.	Miscellaneous administration and support costs	150.0
4.	Contingencies	380.1
<b>Total</b>		<b>7,600.0</b>

Source: Asian Development Bank estimates.

## **INDICATIVE TERMS OF REFERENCE FOR CONSULTING SERVICES FOR PACKAGE OP41-PPMO-CS03: EXTERNAL ENVIRONMENTAL MONITORING AGENCY**

### **A. Introduction**

1. This document sets out the indicative terms of reference for external environmental monitoring to ensure that the Hunan Xiangxi Rural Environmental Improvement and Green Development Project will be implemented in conformity with the People's Republic of China (PRC) laws and regulations and the Asian Development Bank's (ADB) Safeguard Policy Statement (2009). The direct client is the project management office (PMO). The PMO is under the Xiangxi Tujia and Miao Autonomous Prefectural Government (XPG, the executing agency of the project) and physically located in the Development and Reform Committee of the XPG. The consulting services will be also provided to two local PMOs which are physically located in the Development and Reform Committees of the Jishou City Government and the county governments of Baojing, Fenghuang, Guzhang, Huayuan, Longshan, Luxi, and Yongshun (implementing agencies). As a part of the loan conditions, an initial environmental examination (IEE) and an environmental management plan (EMP) have been prepared. The EMP requires that environmental monitoring of the construction and operation of the facilities will be conducted by an external monitoring agency (EMA).

### **B. Implementation Arrangements**

2. The external environmental monitoring will be carried out by a team of specialists through a competent EMA, twice a year during the construction of the facilities and in the first year of the operation of the facilities. The monitoring will be financed by ADB, and an EMA will be recruited by the PMO according to ADB's Procurement Policy (2017, as amended from time to time) and ADB's Procurement Regulations for ADB Borrowers (2017, as amended from time to time) through consultants' qualifications selection. The EMA will work closely with the environment officers of the PMO and local PMOs; the Ecological and Environmental Protection Bureaus of the XPG and the implementing agencies; and contractors, consultants, communities, and/or other personnel; as required. The consulting services are expected to start in July 2021 until June 2027.

3. The PMO, local PMOs, and relevant agencies of the XPG and the implementing agencies will assist the EMA, particularly in the aspects of field survey, staffing, and logistics. Specifically, they will (i) provide the EMA with hard and soft copies of the EMP, domestic environmental impact assessment, IEE, domestic feasibility study report, loan and project agreements, maps, and other supporting materials, as necessary; (ii) facilitate and arrange meetings with key project agencies, including contractors and construction supervision companies; (iii) conduct overall coordination, including review of external environmental monitoring reports; and a consolidated external environmental monitoring report; and (iv) take final responsibility for submission of the external environmental monitoring reports and the consolidated external environmental monitoring report to ADB.

### **C. Reporting Requirements**

4. The EMA will submit to ADB, the PMO, and local PMOs external environmental monitoring reports regularly twice a year during the construction of the facilities and in the first year of the operation of the facilities, and a consolidated external environmental monitoring report within 2 months after the completion of the project. For each report, the EMA will submit a soft copy of the



English version to ADB and soft copies of the English and Chinese versions to each of the PMO and local PMOs.

5. The external environmental monitoring reports will include, but not be limited to, (i) description of activities conducted in the reporting period and results; (ii) all cumulative data collected up to the current reporting period; (iii) any cases of noncompliance with the target standards; (iv) any additional observations (qualitative or quantitative); (iv) lessons learned; and (f) work schedule for the next semiannual monitoring period.

6. The consolidated external environmental monitoring report will summarize the results, conclusions, lessons learned, and recommendations for the overall monitoring program. All raw data will be handed over to the PMO and local PMOs in a clear and simple format. The EMA will submit to ADB (i) a draft final consolidated external monitoring report for review by ADB, the PMO, and local PMOs; and (ii) a final report incorporating comments made by ADB, the PMO, and local PMOs.

7. The EMA will take full responsibility for the content and quality of the reports and, if necessary, must revise reports based on comments of ADB. Format of the reports will be proposed by the EMA in the technical proposal. The EMA may seek guidance from examples of reports on ADB's website.

#### **D. Scope of Services**

8. The EMA should (i) possess relevant domestic certifications required to conduct environmental monitoring; (ii) ensure the provision of all certified equipment and other resources needed for monitoring, analyses, and reporting, including field sampling and laboratory equipment and logistical resources (vehicles etc.); and (iii) assign qualified and experienced staff to be directly involved in site visits, monitoring, analyses, and reporting activities who has (a) a degree in environmental management or related field (preferable master's or higher degree); (b) an ability to communicate and work effectively with local communities, contractors, and government agencies; (c) experience in data collection and analyses and report preparation; and (d) good physical health and fitness to visit remote project construction sites and in different seasons.

9. The EMA will conduct the following tasks:

(i) Gain familiarity with the project sites and monitoring requirements through (a) review of the items listed as "external monitoring" in Table EMP-5 of the EMP, as well as the overall IEE and EMP; (b) meetings with the project agencies; and (c) site visits.

(ii) If needed, recommend additional monitoring variables and/or changes in the monitoring methods (e.g., monitoring locations or frequency) for the items listed as "external monitoring" in Table EMP-5 of the EMP and provide a clear rationale for any proposed changes. Note: No changes to the monitoring plan in Table EMP-5 will be made without the prior review and endorsement by the PMO and ADB.

(iii) Design an environmental monitoring plan which (a) focuses on specific variables listed in Table EMP-5 of the EMP for "external monitoring"; (b) includes a clear methodology and work schedule; and (c) includes any additional variables recommended.

(iv) Design and establish a simple database (e.g., in Excel) to store all collected data. Data should be entered and stored in a clear and simple format that enables comparison of values over

time; and ensure that data is backed up on at least one external storage device.

(v) Implement the monitoring program.

(vi) While on site, provide demonstrations to the project agencies (including the PMO, local PMOs, contractors, and construction supervision companies) in the monitoring; and emphasize the links between good construction practices and reduction of environmental risks.

(vii) Immediately report to the local PMOs any cases of noncompliance with the EMP monitoring standards and/or any other environmental management issues that may be observed while on site.

(viii) Identify any cases of exceedance of values against the project standards, and the reasons for such exceedance.

(ix) Prepare and submit external environmental monitoring reports and a consolidated external environmental monitoring report (paras. 4–7).

(x) Work closely with the PMO, local PMOs, contractors, construction supervision companies, consultants, communities, and other stakeholders, as necessary, to conduct these tasks.

10. Three national specialist positions will provide a total of 14.25 person-months of consulting services to support extremal environmental monitoring. The key responsibilities are proposed but not limited to the following.

#### **1. Environmental Specialist/Team Leader (national, 6.75 person-months)**

11. 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 monitoring activities; (iv) lead and conduct the monitoring activities and required surveys to collect data and information at office and project sites, and then analyze the findings; (v) prepare external environmental monitoring reports which include conclusions and recommendations; (vi) discuss findings with the PMO and local PMOs to reach agreement on follow-up actions; and (vii) participate in ADB's review missions. Specifically, the specialist will

- (i) coordinate overall monitoring activities in compliance with contract requirements;
- (ii) develop detailed work plan and procedures;
- (iii) conduct regular site visits for guidance to local site workers;
- (iv) hold regular meetings to review work progress, and propose actions for improvement;
- (v) review monitoring work plan;
- (vi) review and finalize monitoring reports and consolidated monitoring report;
- (vii) propose suggestions based on progress, and participate in handling pollution accidents; and
- (viii) review environmental sections contained in construction management plans, and review compliance of environmental protection systems developed by contractors.

#### **2. Field Surveyors (national, two surveyors, 3.75 person-months each)**

12. The surveyors will (i) assist the environmental specialists in carrying out external environmental monitoring to ensure that environmental management is in compliance with the environmental management plan; (ii) under the guidance of the environmental specialists, carry

out field surveys; (iii) analyze data collected from the field surveys; (iv) provide assistance to the environmental specialists for the preparation of external environmental monitoring reports; and (v) conduct any other duties assigned by the environmental specialist/team leader. Specifically, the surveyors will

- (i) undertake field survey and inspection under the guidance of environmental specialist;
- (ii) participate in preparation of environmental monitoring procedures;
- (iii) conduct environmental monitoring at project sites, and evaluate control of pollutants for compliance with relevant environmental standards and regulations;
- (iv) identify issues, report them in a timely manner, and propose mitigation measures;
- (v) arrange site meetings for effective coordination with clients and contractors, and deliver training on a need basis;
- (vi) participate in handling pollution accidents under the guidance of the environment specialist;
- (vii) prepare external environmental monitoring reports and consolidated monitoring report; and
- (viii) undertake other tasks assigned by the environmental specialist.

## E. Cost Estimate

**Table A2.5: Cost Estimate**

<b>Item</b>		<b>Total Cost (CNY'000)</b>
1.	Consultants	
	a. Remuneration and per diem	
	National consultants (14.25 person-months)	599.6
	b. Local travel	30.6
	c. Reports and communications	3.0
2.	Surveys	20.0
3.	Miscellaneous administration and support costs	12.0
4.	Contingencies	34.8
<b>Total</b>		<b>700.0</b>

Source: Asian Development Bank estimates.

**INDICATIVE TERMS OF REFERENCE FOR CONSULTING SERVICES FOR  
PACKAGE OP41-PPMO-CS04: EXTERNAL RESETTLEMENT AND SOCIAL  
DEVELOPMENT MONITORING AND EVALUATION AGENCY**

**A. Introduction**

1. This document sets out the indicative terms of reference for external resettlement and social development monitoring and evaluation (M&E) agency needed to ensure that the Hunan Xiangxi Rural Environmental Improvement and Green Development Project will be implemented in conformity with the People's Republic of China (PRC) laws and regulations and the Asian Development Bank's (ADB) Safeguard Policy Statement (2009), including involuntary resettlement and indigenous people. The direct client is the project management office (PMO). The PMO is under the Xiangxi Tujia and Miao Autonomous Prefectural Government (XPG, the executing agency of the project) and physically located in the Development and Reform Committee of the XPG. The external resettlement and social development M&E will be conducted for the resettlement plan (including frameworks for land use rights transfer [LURT] and land use for rural public infrastructure [LURPI]) and social plans (implementation of the ethnic minority development plan [EMDP], social development action plan [SDAP], and gender action plan [GAP]) in Jishou City and the counties of Baojing, Fenghuang, Guzhang, Huayuan, Longshan, Luxi, and Yongshun. Each of the Jishou City Government and the county governments of Baojing, Fenghuang, Guzhang, Huayuan, Longshan, Luxi, and Yongshun (implementing agencies) has a local PMO. Each local PMO is physically located in the Development and Reform Committee of the government.

**B. Implementation Arrangements**

2. The external resettlement and social development M&E will be carried out by a team of specialists through a competent external M&E agency. 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 ADB's Procurement Regulations for ADB Borrowers (2017, as amended from time to time) through consultants' qualifications selection. The PMO, local PMOs, and relevant agencies of the XPG and the implementing agencies will assist the M&E agency, particularly in the aspects of field survey, staffing, and logistics. The consulting services are expected to start in February 2021 until January 2027.

**C. Reporting Requirements**

3. The M&E agency will submit to ADB, the PMO, and the local PMOs external resettlement and social development M&E reports semiannually.<sup>2</sup> For each report, the M&E agency will submit a soft copy of the English version to ADB; and soft copies of the English and Chinese versions to each of the PMO and the local PMOs, not later than 30 days after the completion of the field investigations.

4. The M&E agency will take full responsibility for 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 M&E agency in the technical proposal. The M&E agency may seek guidance

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<sup>2</sup> The M&E of the implementation of the resettlement plan will be conducted semiannually during the implementation of the resettlement plan and annually for 2 years after that.

from ADB's relevant sourcebooks on resettlement, ethnic minorities, gender, etc. and from examples of reports on ADB's website.

#### **D. Scope of Services and Consultants' Inputs**

5. According to ADB's requirements, the implementation of the resettlement plan (including frameworks for LURT and LURPI), EMDP, SDAP, and GAP—besides internal monitoring undertaken by the PMO and local PMOs—should be monitored by the M&E agency. The M&E agency will monitor the implementation of the resettlement plan (including frameworks for LURT and LURPI), EMDP, SDAP, and GAP; and report progress to ADB semiannually (footnote 2).

6. The general objective of the external resettlement and social development M&E is to assess the compliance with principles, policies, and requirements mentioned in the resettlement plan (including frameworks for LURT and LURPI), EMDP, SDAP, and GAP, including (i) determining and assessing whether or not the relevant project activities are being carried out in compliance with principles, requirements, and procedures according to the resettlement plan (including frameworks for LURT and LURPI), EMDP, SDAP, and GAP; (ii) reviewing whether or not the objectives of the resettlement plan (especially those that improve or at least restore affected persons' living standards), EMDP, SDAP, and GAP are adequately implemented and achieved; and (iii) reviewing shortcomings in the implementation of the resettlement plan (including frameworks for LURT and LURPI), EMDP, SDAP, and GAP; and developing recommended solutions for discussion with the PMO, local PMOs, and relevant agencies of the XPG and the implementing agencies.

7. To carry out the M&E, the M&E agency will address the following tasks:

- (i) **Semiannual monitoring and evaluation of the resettlement plan.** For each subproject during the implementation of the LAR, LURT, and LURPI, the M&E agency will semiannually monitor and evaluate the implementation of the resettlement plan (including frameworks for LURT and LURPI).
- (ii) **Annual evaluation of the land acquisition and resettlement.** After the completion of the LAR, the M&E agency will annually carry out annual M&E for 2 years to evaluate the results of the implementation of the resettlement plan and its impact of the affected persons.
- (iii) **Social development monitoring and evaluation.** For each subproject, during project implementation, the M&E agency will semiannually monitor and evaluate the implementation of the EMDP, SDAP, and GAP.
- (iv) Participate with the PMO in ADB's review missions, as required.

8. **Monitoring indicators.** There are various monitoring indicators on the implementation of the resettlement plan (including frameworks for LURT and LURPI), EMDP, SDAP, and GAP. Once selected, the M&E agency will have to present in detail the monitoring indicators to the PMO and ADB for approval. Below are main monitoring indicators for the resettlement plan:

- (i) For compliance of compensation payment and support provision
  - (a) In case of land-for-land compensation, whether the replaced land is equal in area and location as well as production, living conditions compared with

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

- (vi) For compliance of the satisfaction of the affected persons
  - (a) Satisfaction of the determination of losses and compensation valuation.
  - (b) Satisfaction of compensation payment and other assistance.
  - (c) Satisfaction of information disclosure and consultation.
  - (d) Satisfaction on life stabilization and income restoration support activities.
  - (e) Satisfaction of resettlement site, relocation site, and completeness of facilities (if applicable based on the resettlement plan updated during project implementation).
- (vii) For compliance of grievance redress mechanism of the affected persons
  - (a) Degree of efficiency of the grievance redress mechanism (time, efficiency of resolution).
  - (b) Results of complaint resolution at various levels.
  - (c) Satisfaction of the grievance redress mechanism.

9. For monitoring of LURT and LURPI, monitoring indicators are in the frameworks for LURT and LURPI (attached to the resettlement plan). For social development, monitoring indicators are in the EMDP, SDAP, GAP, and the design and monitoring framework (Table IX-1 of the project administration manual).

10. **Methodology of monitoring and evaluation.** The M&E agency will apply both qualitative and quantitative methods during M&E, including the following:

- (i) Quantitative methods
  - (a) Conduct baseline survey for the LAR (prior to start of the LAR) covering a representative sample of affected persons, focusing more on those seriously affected and vulnerable affected persons.
  - (b) Conduct semiannual and 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.
  - (e) Conduct final M&E of the LAR implementation (prior to project completion) by conducting a sample survey on 50% of severely affected households and 20% of all other affected households.
  - (f) Collect quantitative data against indicators in the frameworks for LURT and LURPI.
  - (g) Collect quantitative data against targets and indicators in the EMDP, SDAP, and GAP.
- (ii) Qualitative methods
  - (a) Review project documents (feasibility study reports and resettlement plan); ADB's relevant policies; and laws and regulations of the government, the Hunan Provincial Government, the XPG, and the implementing agencies.
  - (b) Consult and discuss with different stakeholders, including the XPG, implementing agencies, and social organizations, through consultation meetings, in-depth interviews, and group discussions.

- (c) Undertake focused group discussions, in-depth interviews with the target affected persons; and/or groups such as severely affected households, relocated households (if any), vulnerable households, and women's groups.
  - (d) Collect qualitative information on the implementation of frameworks for the LURT and the LURPI.
  - (e) Collect qualitative information on the progress of the EMDP, SDAP, and GAP.
- (iii) **Site visits.** Visit sites, including original housing areas and resettlement sites (if any), as well as project construction sites; and identify potential impacts on local people during civil works.

11. All information and data collected will be processed, analyzed, and included in the baseline or subsequent M&E reports. The M&E agency 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.

12. **Qualification required and detailed tasks of personnel.** The M&E agency should be a registered social organization (research institution, design institute, consulting institution, firm, university, or nongovernment organization) without direct administrative subordination relations with the XPG and the implementing agencies. The M&E agency should have five or more qualified technical staff members. Professional staff members of the M&E agency should have degree in economics, sociology, and/or anthropology, or relevant field of social sciences; be familiar with ADB's or World Bank's resettlement and social development policies and procedures; and have previous experience in the M&E of resettlement and social development for projects funded by ADB or the World Bank. The M&E agency should also have experience in undertaking resettlement and social development M&E for similar projects in the PRC.

13. The M&E agency will establish an M&E team. The main duties of the team are to (i) carry out the M&E on the resettlement plan (including frameworks for LURT and LURPI), EMDP, SDAP, and GAP implementation, ensuring that it is in compliance with the resettlement plan, EMDP, SDAP, and GAP; (ii) advise the PMO, local PMOs, and other relevant agencies of the XPG and the implementing agencies on the implementation of the resettlement plan (including frameworks for LURT and LURPI), EMDP, SDAP, and GAP to ensure that 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 resettlement and social development M&E reports.

14. All team members must be fluent in English as well as Chinese, and reports to ADB will be in English. For each of the members, (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 projects; and (iii) experience in working with international organizations and/or international consultants will be highly evaluated.

# **1. Resettlement Specialist and Team Leader (national, 5.5 person-months)**

15. The specialist will undertake the following tasks: (i) lead all the activities of the team; (ii) lead and set up the M&E 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 the M&E activities; (iv) lead and conduct the M&E activities and required surveys to collect data and information at office and project sites, and then analyze the findings; (v) prepare external



resettlement and social development M&E reports which include conclusions and recommendations; (vi) discuss findings with the PMO, local PMOs, and other relevant agencies of the XPG and the implementing agencies to reach agreement on follow-up actions; and (vii) participate in ADB's review missions.

## **2. Social Evaluation Specialist (national, 11.5 person-months)**

16. The specialist will undertake the following tasks: (i) monitor the implementation of the resettlement plan (including frameworks for LURT and LURPI), EMDP, SDAP, and GAP to ensure that they are being carried out in compliance with principles, requirements, and procedures according to relevant plans and the governments' laws and/or regulations; (ii) provide inputs to the external resettlement and social development 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's review missions, if required; and (iv) conduct any other duties assigned by the resettlement specialist/team leader.

## **3. Field Surveyors (national, two positions, 6.0 person-months each)**

17. The surveyors will (i) assist the resettlement and social evaluation specialists in carrying out the monitoring on the implementation of the resettlement plan (including frameworks for LURT and LURPI), EMDP, SDAP, and GAP to ensure that the implementation is in compliance with the resettlement plan, EMDP, SDAP, and GAP; (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 development M&E reports; and (v) conduct any other duties assigned by the resettlement specialist/team leader.

## **E. Cost Estimate**

**Table A2.6: Cost Estimate**

Item	Total Cost (CNY'000)
1.	Consultants
a.	Remuneration and per diem
	National consultants (29 person-months)
	1,289.6
b.	Local travel
	154.0
c.	Reports and communications
	3.5
2.	Surveys
	38.0
3.	Miscellaneous administration and support costs
	35.0
4.	Contingencies
	79.9
<b>Total</b>	
	<b>1,600.0</b>

Source: Asian Development Bank estimates.

**INDICATIVE TERMS OF REFERENCE FOR CONSULTING SERVICES FOR  
PACKAGE OP41-PPMO-CS05: CONSULTANT TEAM FOR TECHNICAL SUPPORT, CAPACITY  
DEVELOPMENT, AND KNOWLEDGE DISSEMINATION FOR OUTPUTS 1–3**

**A. Introduction**

1. This document sets out indicative terms of reference for consulting services for technical support, capacity development, and knowledge dissemination for Outputs 1–3 of the Hunan Xiangxi Rural Environmental Improvement and Green Development Project. The direct client of the consulting services is the project management office (PMO). The PMO is under the Xiangxi Tujia and Miao Autonomous Prefectural Government (XPG, the executing agency of the project) and physically located in the Development and Reform Committee of the XPG. The consulting services will be also provided to eight local PMOs which are physically located in Development and Reform Committees of the Jishou City Government and the county governments of Baojing, Fenghuang, Guzhang, Huayuan, Longshan, Luxi, and Yongshun (implementing agencies).

**B. Implementation Arrangements**

2. The consulting services will be carried out by a team of consultants through a firm. A total of 18.00 person-months of international and 33.50 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 PMO according to ADB's Procurement Policy (2017, as amended from time to time), and ADB's Procurement Regulations for ADB Borrowers (2017, as amended from time to time). The consulting firm will be selected by (i) inviting simplified technical proposals; and (ii) using the quality- and cost-based selection method, with a quality–cost ratio of 90:10. The consulting services are expected to start on September 2021 until June 2027.

**C. Reporting Requirements**

3. The consultant team will produce (i) an inception report within 4 weeks of the start of the consulting services, (ii) an annual report by the end of each year during 2021–2026, (iii) a draft final report by 31 March 2020, and (iv) a final report by 30 June 2027. The inception, annual, and draft final reports will be subject to tripartite reviews by ADB, the PMO, and consultants. All reports are to be written in English and translated into Chinese. One soft and three hard copies of each report are to be submitted to ADB (English version only) and the PMO (both Chinese and English versions).

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

**D. Scope of Services and Consultants' Inputs**

5. The consultant team will undertake the following tasks.

6. **Designs of facilities to be constructed under the project.** Relevant consultants will ensure that (i) facilities constructed under the project integrate cultural elements of ethnic minorities, particularly all facilities for exhibition of agricultural and forestry products and ethnic minorities' history and culture; and (ii) e-commerce platforms constructed under the project cater to specific needs of women entrepreneurs in the project area).

7. **Monitoring and evaluation (M&E) of the project performance.** Relevant consultants will conduct M&E of project performance in accordance with the design and monitoring framework as follows.

- (i) For the impact, (a) set indicators appropriate for the impact statement (*Rural vitalization in the Yangtze River Economic Belt realized*); (b) find out data which show achievement of each indicator at the project completion; and (c) estimate ratio of project contribution to the achievement of each indicator in a logical manner.
- (ii) For one of the outcome indicators (*Overall rural residents' satisfaction with the living environment in Xiangxi increased to 80%*), (a) randomly select statistically significant number of households from the overall project area and randomly select the same number of households from the overall area in Xiangxi outside the project area; (b) conduct household surveys for the selected households using the same questionnaire, at the beginning of project implementation as the baseline survey, at the project completion, and for several times during project implementation to monitor relationship between survey results and project progress; and (c) make clear relationship between the project and residents' satisfaction with the living environment, by comparing the data in and outside the project area and project progress.
- (iii) For the other outcome indicator (*Average annual disposable income of rural residents in Xiangxi increased by 59% to CNY16,000*), (a) find average annual disposable income of rural residents in Xiangxi from statistical handbooks every year during project implementation; and (b) estimate how much of the change is attributed to the project in a logical manner.
- (iv) For output indicators, find all required data as the project progresses.

8. **Development of a public–private partnership model.** Relevant consultants will help the Huayuan County Government represented by the Huayuan County Zixia Agriculture, Tourism, and Culture Development Company Limited to (i) select a private company through a selection method acceptable ADB for operation and maintenance (O&M) of a wastewater treatment plant constructed under the Project in Xingnongyuan community in Huayuan County, and conclude an agreement with the company, before the completion of the wastewater treatment plant; and (b) develop a public–private partnership (PPP) model for O&M of small wastewater treatment facilities in rural areas.

9. **Operation and maintenance, and capacity development.** Relevant consultants will (i) provide relevant agencies of the XPG and the implementing agencies with technical assistance in O&M of wastewater management facilities, garbage transfer stations, bases for the development of local-featured ecological agricultural and forestry products, facilities for storage, cold storage, processing, packaging, exhibition, e-commerce, customer service, and logistics, and facilities for integration of agriculture and/or forestry with ecotourism constructed under the project; and (ii) help relevant agencies of the XPG and the implementing agencies organize and implement effective capacity development for (a) O&M of the facilities in (i) above; (b) garbage classification and recycling (particularly recycling of plastic) for farmers, dustmen, and village committee members; (c) technologies for local-featured ecological agricultural and forestry products for technicians and farmers; (d) protection of ethnic minority intangible heritage for famers; (e) management of fruit, vegetable, and tea picking gardens for ecotourism, for farmers; (f) updated technologies for ecotourism resource improvement, for staff of government agencies, including technicians; (g) ecotourism service skills for tourism service and management staff of government agencies; and (h) integration of agriculture and forestry with ecotourism for management staff of government agencies.

10. **Dissemination and replication of project initiatives.** Relevant consultants will disseminate and replicate project initiatives, such as the PPP model for the O&M of small wastewater treatment

facilities in rural areas; garbage classification and recycling (particularly recycling of plastic); technologies to produce quality local-featured ecological agricultural and forestry products; and methodologies to add values to agricultural and forestry products, including improvement of value chains and integration of agriculture and forestry with ecotourism, to other areas of the People's Republic of China and also other countries, through workshops, publications, disclosure of project information on website, submission of papers to academic societies, application for a model project for eco-civilization, application for award programs, etc.

11. The consultant team will consist of two international consultants: project monitoring and evaluation specialist and team leader (10.0 person-months [pm]) and agricultural value chain specialist (8.0 pm); and four national consultants: waste management specialist (8.0 pm), public-private partnership specialist (7.5 pm), agricultural and forestry product specialist (10.0 pm), and tourism specialist (8.0 pm). For each of the international consultant positions, (i) possession of a related degree, qualification, memberships of related academic societies, and/or participation in related training courses; (ii) experience in similar positions for projects or technical assistances; and (iii) experience in working in many countries and experience in working in the People's Republic of China with international organizations and consultants, will be highly evaluated. For each of the national consultant positions, (i) possession of a related degree, qualification, memberships of related academic societies, and/or participation in related training courses, (ii) experience in similar positions for projects or technical assistances, and (iii) experience in working with international organizations and consultants, will be highly evaluated.

## E. Cost Estimates

**Table A2.7: Cost Estimate**

Item	Total Cost (CNY'000)
1. Consultants	
a. Remuneration and per diem	
International consultants (18.0 person-months)	2,826.7
National consultants (33.5 person-months)	1,952.4
b. International travel	507.5
c. Local travel	290.5
d. Reports and communications	18.0
2. Surveys	900.0
3. Workshops, training, seminars, and conferences	140.0
4. Miscellaneous administration and support costs	110.0
5. Contingencies	354.9
<b>Total</b>	<b>7,100.0</b>

Source: Asian Development Bank estimates.

**INDICATIVE TERMS OF REFERENCE FOR CONSULTING SERVICES FOR  
PACKAGE OP42-PPMO-CS07: INSTITUTE FOR RESEARCH ON PROBLEMS AND  
COUNTERMEASURES OF INTEGRATED DEVELOPMENT OF PRIMARY, SECONDARY, AND  
TERTIARY INDUSTRIES**

**A. Introduction**

1. This document sets out indicative terms of reference for consulting services for research on problems and countermeasures of integrated development of primary, secondary, and tertiary industries for the Hunan Xiangxi Rural Environmental Improvement and Green Development Project. The direct client of the consulting services is the project management office (PMO). The PMO is under the Xiangxi Tujia and Miao Autonomous Prefectural Government (XPG, the executing agency of the project) and physically located in the Development and Reform Committee of the XPG. The consulting services will be also provided to eight local PMOs which are physically located in Development and Reform Committees of the Jishou City Government and the county governments of Baojing, Fenghuang, Guzhang, Huayuan, Longshan, Luxi, and Yongshun (implementing agencies). The research will be concluded through review and acceptance by a group of specialists organized by the PMO.

**B. Implementation Arrangements**

2. The consulting services will be carried out by a national institute. A total of 22.00 person-months of national consulting services will be required. The consulting services will be financed by the Asian Development Bank (ADB), and a consultant team will be recruited by the PMO according to ADB's Procurement Policy (2017, as amended from time to time), and ADB's Procurement Regulations for ADB Borrowers (2017, as amended from time to time) through consultants' qualifications selection. The PMO, local PMOs, and relevant agencies of the XPG and the implementing agencies will assist the consultant team, particularly in the aspects of field survey, staffing, and logistics. The consulting services are expected to start in April 2021 until December 2025.

**C. Reporting Requirements**

3. The consultant team will produce (i) an inception report within 4 weeks of the start of the consulting services, (ii) an annual report by the end of each year during 2021–2024, (iii) a draft final report by 30 September 2025, and (iv) a final report by 31 December 2025. The inception, annual, and draft final reports will be subject to tripartite reviews by ADB, PMO, and consultants. All reports are to be written in English and translated into Chinese. One soft and three hard copies of each report are to be submitted to ADB (English version only) and the PMO (both Chinese and English versions).

4. The inception report will present an approach for the consulting services, including a work plan and an implementation schedule. The annual, draft final, and final reports will present activities conducted by the consultant team, effects of the consulting services, issues encountered, and recommendations.

**D. Scope of Services and Consultants' Inputs**

5. Objective of the research is to enhance the effectiveness of industrial integration in Jishou City and the counties of Baojing, Fenghuang, Guzhang, Huayuan, Longshan, Luxi, and Yongshun, analyzing problems and opportunities and finding out feasible measures. Identified measures will be tested and/or demonstrated by linking with the implementation of the project.

6. The consultant team will undertake the following tasks.
  - (i) Review and identify experiences, problems, and countermeasures on integrated development of primary, secondary, and tertiary industries in the first mover regions in the People's Republic of China and other countries.
  - (ii) Conduct field surveys and discussions with the XPG and the implementing agencies to collect first-hand data.
  - (iii) Analyze status of integrated development of primary, secondary, and tertiary industries in the one city and seven counties; and objectively assess problems, potentials, and opportunities of industrial integration in Xiangxi.
  - (iv) Based on the above findings, propose recommendations for improvement and demonstrations of the industrial integration through the implementation of the project by October 2022.
  - (v) Hold discussions, seminars, and workshops to share the staggered findings with the XPG, including the PMO; and the implementing agencies, including the local PMOs and other agencies involved in the project, by December 2022.
  - (vi) Conduct dissemination in the project area through the implementation of the project, including on-site guidance and technical support, from 2023.
  - (vii) Refine the research findings and recommendations by absorbing lessons learnt from the demonstrations.
  - (viii) Together with an international agricultural value chain specialist and a national agricultural and forestry product specialist (under package number: OP41-PPMO-CS05), a national gender specialist (under package numbers: OP41-PPMO-CS02) and/or national social development specialists (under package numbers: OP41-PPMO-CS02 and 08) will ensure that (a) all facilities for exhibition of agricultural and forestry products and ethnic minorities' history and culture, which are constructed by the project, integrate cultural elements of ethnic minorities; and (b) e-commerce platforms constructed under the project cater to specific needs of women entrepreneurs in the project area.
  - (ix) Together with a national social development specialist recruited under package number: OP41-PPMO-CS08, (a) provide business start-up training to at least 240 women to promote women's entrepreneurship and management capacity in agricultural and ecotourism industry; and (b) organize networking and experience sharing workshops for at least 240 women, inviting women who have taken the training in (a) above and started their own businesses.
  - (x) Participate in relevant annual seminars held by the PMO during project implementation for knowledge sharing.
  - (xi) Hold draft final and final seminars and/or workshops with attendance of staff of the XPG, including the PMO; the implementing agencies, including the local PMOs and other agencies involved in the project; and other relevant agencies to discuss and share the findings and recommendations before the submission of the draft final and final reports.
  
7. The consultant team will consist of five national consultants: agricultural economist (4 person-months [pm]), agribusiness specialist (3 pm), forestry product specialist (2 pm), social development specialist (2 pm), and rural tourism specialist (4 pm). For each position, (i) possession of a related degree, qualification, memberships of related academic societies, and/or participation in related training courses; (ii) experience in similar positions for projects or technical assistances; and (iii) experience in working with international organizations and consultants will be highly evaluated.

**E. Cost Estimate****Table A2.8: Cost Estimate**

Item	Total Cost (CNY'000)
1.	Consultants
a.	Remuneration and per diem
	National consultants (15 person-months)
	778
b.	Local travel
	18
c.	Reports and communications
	12
2.	Workshops, seminars, and conferences
	50
3.	Surveys
	41
4.	Miscellaneous administration and support costs
	50
5.	Contingencies
	51
<b>Total</b>	
	<b>1,000</b>

Source: Asian Development Bank estimates.

**INDICATIVE TERMS OF REFERENCE FOR CONSULTING SERVICES FOR  
PACKAGE OP42-PPMO-CS08: INSTITUTE FOR RESEARCH ON STRATEGY OF RURAL  
VITALIZATION IN CONCENTRATED POOR ETHNIC MINORITY AREAS**

**A. Introduction**

1. This document sets out indicative terms of reference for consulting services for research on research on strategy of rural vitalization in concentrated poor ethnic minority areas for the Hunan Xiangxi Rural Environmental Improvement and Green Development Project. The direct client of the consulting services is the project management office (PMO). The PMO is under the Xiangxi Tujia and Miao Autonomous Prefectural Government (XPG, the executing agency of the project) and physically located in the Development and Reform Committee of the XPG. The consulting services will be also provided to eight local PMOs which are physically located in Development and Reform Committees of the Jishou City Government and the county governments of Baojing, Fenghuang, Guzhang, Huayuan, Longshan, Luxi, and Yongshun (implementing agencies). The research will be concluded through review and acceptance by a group of specialists organized by the PMO.

**B. Implementation Arrangements**

2. The consulting services will be carried out by a national institute. A total of 30.00 person-months of national consulting services will be required. The consulting services will be financed by the Asian Development Bank (ADB), and a consultant team will be recruited by the PMO according to ADB's Procurement Policy (2017, as amended from time to time), and ADB's Procurement Regulations for ADB Borrowers (2017, as amended from time to time) through consultants' qualifications selection. The PMO, local PMOs, and relevant agencies of the XPG and the implementing agencies will assist the consultant team, particularly in the aspects of field survey, staffing, and logistics. The consulting services are expected to start in April 2021 until December 2025.

**C. Reporting Requirements**

3. The consultant team will produce (i) an inception report within 4 weeks of the start of the consulting services, (ii) an annual report by the end of each year during 2021–2024, (iii) a draft final report by 30 September 2025, and (iv) a final report by 31 December 2025. The inception, annual, and draft final reports will be subject to tripartite reviews by ADB, the PMO, and consultants. All reports are to be written in English and translated into Chinese. One soft and three hard copies of each report are to be submitted to ADB (English version only) and the PMO (both Chinese and English versions).

4. The inception report will present an approach for the consulting services, including a work plan and an implementation schedule. The annual, draft final, and final reports will present activities conducted by the consultant team, effects of the consulting services, issues encountered, and recommendations.

**D. Scope of Services and Consultants' Inputs**

5. Objective of the research is to propose measures for rural vitalization in an integrated manner in concentrated poor ethnic minority areas in Jishou City and the counties of Baojing, Fenghuang, Guzhang, Huayuan, Longshan, Luxi, and Yongshun through analysis of problems and opportunities. Identified measures will be tested and/or demonstrated by linking with the implementation of the project.



6. The consultant team will undertake the following tasks:
  - (i) Assess problems, potentials, and opportunities on the development of concentrated poor ethnic minority areas in the country.
  - (ii) Conduct field surveys and discussions with the XPG and the implementing agencies to collect first-hand data.
  - (iii) Analyze the status of rural poverty and economic and social development (including ethnic minority development) in the one city and seven counties; and assess the problems, potentials, and opportunities.
  - (iv) Based on the above findings, propose recommendations for improvement and demonstrations of rural vitalization in an integrated manner through the implementation of the project by October 2022.
  - (v) Hold discussions, seminars, and workshops to share the staggered findings with staff of the XPG, including the PMO; and the implementing agencies, including the local PMOs and other agencies involved in the project, by December 2022.
  - (vi) Conduct dissemination in the project area through the implementation of the project, including on-site guidance and technical support, from 2023.
  - (vii) Refine the research findings and proposed measures for rural vitalization in Xiangxi by absorbing lessons learnt from the demonstrations.
  - (viii) Together with an international agricultural value chain specialist and a national agricultural and forestry product specialist (under package number: OP41-PPMO-CS05), a national gender specialist (under package numbers: OP41-PPMO-CS02) and/or national social development specialists (under package numbers: OP41-PPMO-CS02 and 07) will ensure that (a) all facilities for exhibition of agricultural and forestry products and ethnic minorities' history and culture, which are constructed by the project, integrate cultural elements of ethnic minorities; and (b) e-commerce platforms constructed under the project cater to specific needs of women entrepreneurs in the project area.
  - (ix) Together with a national social development specialist recruited under package number: OP41-PPMO-CS07, (a) provide business start-up training to at least 240 women to promote women's entrepreneurship and management capacity in agricultural and ecotourism industry; and (b) organize networking and experience sharing workshops for at least 240 women, inviting women who have taken the training in (a) above and started their own businesses.
  - (x) Participate in relevant annual seminars and/or workshops held by the PMO during the project implementation for knowledge sharing.
  - (xi) Hold seminars and/or workshops with the attendance of the XPG, including the PMO; the implementing agencies, including the local PMOs and other agencies involved in the project; and other relevant agencies to discuss and share the findings and recommendations before the submission of the draft final and final reports.
  
7. The consultant team will consist of five national consultants: agricultural economist (7 person-months [pm]), agribusiness specialist (6 pm), ecological environment specialist (5 pm), social development specialist (5 pm), and rural industrial planning specialist (7 pm). For each position, (i) possession of a related degree, qualification, memberships of related academic societies, and/or participation in related training courses; (ii) experience in similar positions for projects or technical assistances; and (iii) experience in working with international organizations and consultants will be highly evaluated.

**E. Cost Estimate****Table A2.9: Cost Estimate**

Item	Total Cost (CNY'000)
1.	Consultants
a.	Remuneration and per diem
	National consultants (30 person-months)
	1,037
b.	Local travel
	26
c.	Reports and communications
	15
2.	Workshops, seminars, and conferences
	149
3.	Surveys
	89
4.	Miscellaneous administration and support costs
	109
5.	Contingencies
	75
<b>Total</b>	
	<b>1,500</b>

Source: Asian Development Bank estimates.

**INDICATIVE TERMS OF REFERENCE FOR CONSULTING SERVICES FOR  
PACKAGE OP42-PPMO-CS09: AGENCY TO PLAN, ORGANIZE, AND IMPLEMENT  
INTERNATIONAL STUDY VISITS**

**A. Introduction**

1. This document sets out indicative terms of reference for consulting services needed to ensure the smooth management of the Hunan Xiangxi Rural Environmental Improvement and Green Development Project. The direct client of the consulting services is the project management office (PMO). The PMO is under the Xiangxi Tujia and Miao Autonomous Prefectural Government (XPG, the executing agency of the project) and physically located in the Development and Reform Committee of the XPG.

**B. Implementation Arrangements**

2. The consulting services for project management support will be carried out by an agency authorized by relevant governments to plan, organize, and implement international study visits. A total of 3.00 person-months of international and national consulting services will be required. The consulting services will be financed by the Asian Development Bank (ADB); and an agency will be selected by the PMO according to ADB's Procurement Policy (2017, as amended from time to time) and ADB's Procurement Regulations for ADB Borrowers (2017, as amended from time to time) through consultants' qualifications selection. The consulting services are expected to start in July 2022 until November 2024.

**C. Reporting Requirements**

3. The agency will produce a detailed plan for an international study visit in 2022 and 2024. Each plan is to be written in both English and Chinese and submitted to the PMO and ADB in well advance of the international study visit.

**D. Scope of Services and Consultants' Inputs**

4. The agency will plan, organize, and implement two international study visits to two different countries in 2022 and 2024.

**1. Resource Person 1 (international, 0.5 person-months [pm])**

5. The resource person 1 will (i) plan and organize the first international study visit with the coordinator, coordinating detailed schedule and content of the study visit with relevant agencies and securing transportation and arranging accommodation for the study team; and (ii) accompany the study team during the study visit. The source person should have the nationality of the country where the first study visit is conducted and experience in planning, organizing, and implementing study visits in the country for foreign people for fields related to wastewater and solid waste management, agricultural and forestry product development, value chain improvement for agricultural and forestry products, and integration of agriculture and forestry with ecotourism.

**2. Resource Person 2 (international, 0.5 pm)**

6. The resource person 2 will (i) plan and organize the second international study visit with the coordinator, coordinating detailed schedule and content of the study visit with relevant agencies and securing transportation and arranging accommodation for the study team; and (ii) accompany the study team during the study visit. The source person should have the nationality of the country where

the second study visit is conducted and experience in planning, organizing, and implementing study visits in the country for foreign people for fields related to wastewater and solid waste management, agricultural and forestry product development, value chain improvement for agricultural and forestry products, and integration of agriculture and forestry with ecotourism.

### 3. Coordinator (national, 2.0 pm)

7. The coordinator will (i) plan and organize the first and second international study visits with the source persons 1 and 2, coordinating with the PMO; and (ii) accompany the study teams during the study visits. The coordinator should have experience in planning, organizing, and implementing study visits.

## E. Cost Estimate

**Table A2.11: Cost Estimate**

Table A2.11: Cost Estimate		Total Cost (CNY'000)
Item		
1.	Consultants	
a.	Remuneration and per diem	
	International consultants (1 person-month)	122.8
	National consultant (2 person-months)	101.4
b.	International travel	28.0
c.	Local travel	30.0
2.	Miscellaneous administration and support costs	2.0
3.	Contingencies	15.9
	<b>Total</b>	<b>300.0</b>

Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.