



Periodic Financing Request

Project Number: 51192-002
December 2020

PRC: Inner Mongolia Sustainable Cross-Border Development Investment Program – Tranche 1

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Asian Development Bank

PERIODIC FINANCING REQUEST

Date: 26 August 2020

To: Asian Development Bank
6 ADB Avenue
Mandaluyong City, Metro Manila

ATTENTION: Director General
East Asia Department
Asian Development Bank
Fax No. (632) 8636-2444
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Sir/Madam:

**RE: Inner Mongolia Sustainable Cross-Border Development Investment Program:
Periodic Financing Request # 1**

Please refer to the Framework Financing Agreement (FFA) for Inner Mongolia Sustainable Cross-Border Development Investment Program dated 26 August 2020 between Asian Development Bank (ADB) and the People's Republic of China (the PRC). Expressions defined in the FFA shall have the same meanings herein.

Pursuant to the provisions of the FFA, the PRC requests ADB to process this Periodic Financing Request for the first tranche, in the form of loan from its ordinary capital resources (in regular terms). The proposed financing amounts, terms, conditions, and financing plan are specified in Attachment hereto. Descriptions of the components for which financing is hereby requested are set out in Annexes 1 to 6 hereto.

By:



Yixin Yao
Chief Negotiator
Director, Division of Finance and Project Programming
Department of International Economic and
Financial Cooperation
Ministry of Finance

People's
Republic of China

Attachment

Project Description

The Inner Mongolia Sustainable Cross-Border Development Investment Program Tranche 1 proposed for financing under the Periodic Financing Request includes the following components and subprojects:

- (i) **Under Output 1, it includes:**
 - a) **Inspection Area Construction for the PRC–Mongolian Erenhot–Zamyn-Uud ECZ**, including (1) construction of inspection area; and (2) establishment of smart port management platform; (3) construction of cross-border economic cooperation center; (4) establishment of fencing, alarm and monitoring system in the ECZ; (5) construction of clean energy heating and pipe network for the ECZ;
 - b) **Upgrading the Mandula Port International (Highway) Logistics Park**, including (1) expansion of port freight passage roads; (2) construction of service area; (3) construction of customs supervision center; and
 - c) **Upgrading Medical Equipment and Facilities for the Hospital**, including procurement of 50 sets of advanced medical equipment and facilities.
- (ii) **Under Output 2, it includes:**
 - a) **Ecological Restoration for the PRC–Mongolian Erenhot–Zamyn-Uud ECZ**, including (1) ecological protection greenbelt along the central axis, including reclaimed water storage and irrigation facilities, and landscape lighting; and (2) ecological protection greenbelt along roadsides, including reclaimed water storage and irrigation facilities; and
 - b) **Waste Collection and Transfer Station in ECZ, and Sanitation Intelligent Cloud Platform in Erenhot**, including (1) construction of one waste collection and transfer station; (2) procurement of supporting facilities; and (3) establishment of sanitation intelligent cloud platform.
- (iii) **Under Output 3, it includes:**
 - a) **Loans to SMEs in IMAR through selected FIs**, including (1) providing credit to SMEs that are engaged in cross-border trade and logistics, agribusiness, manufacturing, and cross-border tourism in IMAR using the FIL modality (the eligibility criteria for SMEs is listed in Appendix 2); (2) strengthening IMAR's business development services system for SMEs; and (3) supporting IMAR's pilot project of providing well-designed business support program for female entrepreneurs and SMEs owned or led by women in the border areas; and
 - b) **Establishment of Quarantine Station in Mandula Port and Expansion of Sheep Breeding Bases**, including (1) upgrading stud sheep breeding base; (2) construction of a quarantine station in Mandula Port; (3) upgrading five sheep farming bases; (4) establishment of product

traceability and management system; (5) establishment of a PAP; (6) Construction of sheep slaughtering, processing and logistic park; and (7) project management and monitoring.

(iv) **Under Output 4, it includes:**

- a) Cross-border policy dialogue workshops;
- b) providing training to the private agricultural enterprise, large-scale farmer households, rural cooperatives and poor households to increase their use of livestock farming technology, animal disease prevention and livestock waste management;
- c) providing on-job training to doctors and nurses, customs and inspection staff, other technicians to enhance their service capacity;
- d) providing training in safeguards, procurement, financial management and reporting to executing agency, implementing agencies and PIEs to improve their project management capacity, under the support from project implementation consultants (PICs); and
- e) carrying out social surveys to identify the benefits accompanied with the promotion of RCI to local people.

The Design and Monitoring Framework for Tranche 1 is in Annex 1. Additional details are in the Facility Administration Manual (FAM).

**Cost Estimates
and Financing
Plan**

The total cost of the subprojects is estimated at €345.14 million, inclusive of taxes, duties, and interest and other charges on the loan during construction. The detailed cost estimates and financing plan are in Annex 2.

Table 1: Cost Estimates and Financing Plan
(€ million)

Item	Total Cost	ADB		Government		Privately owned	
		Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category
A. Investment Costs							
1. Civil Works	154.17	96.67	62.7%	43.39	28.1%	14.11	9.15%
1.1 Erenhot	88.71	57.20	64.5%	31.51	35.5%		
Financed by ADB	66.00	57.20	86.7%	8.81	13.3%		
Non-ADB Financed	22.71	-	-	22.71	100.0%		
1.2 Mandoula	49.46	37.58	76.0%	11.87	24.0%		
Financed by ADB	49.46	37.58	76.0%	11.87	24.0%		
Non-ADB Financed							
1.3 Xiaoweiayang	16.01	1.89	11.8%			14.11	88.2%
Financed by ADB	3.06	1.89	62.0%			1.16	38.0%
Non-ADB Financed	12.95	-	-			12.95	100.0%
2. Goods (Equipment & Materials)	32.59	20.79	63.8%	11.80	126.1%	-	-
2.1 Erenhot	25.92	19.15	73.9%	6.77	26.1%		
Financed by ADB	19.15	19.15	100.0%	-	-		
Non-ADB Financed	6.77	-	-	6.77	100.0%		
2.2 Mandoula	5.02	-	-	5.02	100.0%		
Financed by ADB							
Non-ADB Financed	5.02	-	-	5.02	100.0%		
2.3 Xiaoweiayang	1.64	1.64	100.0%	-	-		
Financed by ADB	1.64	1.64	100.0%				
Non-ADB Financed							
3. Stud Sheep Breeding Program	18.14	18.14	100.0%				
4. Poverty Alleviation Program	12.26	12.26	100.0%				
5. FIL-SME Financing	33.93	16.97	50.0%				
Financed by ADB	16.97	16.97	100.0%				
Non-ADB Financed	16.97	-	-				
6. Capacity Building	2.76	1.70	61.6%			1.06	38.4%
Financed by ADB	1.70	1.70	100.0%			-	-
Non-ADB Financed	1.06	1.06	100.0%			-	-
7. Land Acquisition and Resettlement	9.66	-	-	7.30	75.5%	2.37	24.5%
8. Project Management Fee	25.47	-	-	23.09	90.6%	2.38	9.4%
9. Working Capital	12.85	-	-	-	-	12.85	100.0%
Total Base Cost (A)	301.84	166.53	55.2%	85.57	28.3%	32.78	10.9%
B. Contingencies							
1. Physical Contingency	23.12	-	-	16.05	69.4%	4.34	18.8%
2. Price Contingency	18.22	-	-	12.40	68.0%	4.63	25.4%
Sub-total (B)	41.34	-	-	28.45	68.8%	8.97	21.7%
C. Financing Charges During Implementation							
1. Interest During Implementation	1.44			0.93	64.3%	0.32	22.2%
2. Commitment Charges	0.52			0.40	76.8%	0.09	18.0%
Sub-total (C)	1.96			1.33	67.6%	0.41	21.0%
Total Project Cost (A+B+C)	345.14	166.53	48.2%	115.35	33.4%	42.16	12.2%
% of Total Project Cost	100.00%	48.25%		33.42%		12.21%	

ADB = Asian Development Bank, FIL= financial intermediation loan, SME = small and medium-sized enterprise.

Source: Asian Development Bank estimates.

Loan Amount and Terms

Tranche 1 will comprise two loan components for a total amount of €166,525,000: (i) an Investment Loan amounting to €149,559,000 with a 25-year term, including a grace period of 6 years; and (ii) a financial intermediation modality loan amounting to €16,966,000 (equivalent to \$20 million) with an 18-year term with bullet repayment method. Interest and other charges during construction (IDC) will not be capitalized. Loan proceeds will have (i) a custom-tailored repayment method, (ii) an annual interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility, (iii) a commitment charge of 0.15% per year; (iv) an average maturity of 15.98 years and an average loan maturity premium of 0.1%; and (v) such other terms and conditions set forth in the draft loan and project agreements.

Period of Loan/Guarantee Utilization	The Tranche 1 is expected to be completed by 31 March 2027. No disbursements from the loan account will be requested or made later than 30 September 2027.
Advance Contracting	Advance contracting is requested for procurement of goods, works and consulting services, including (i) project management and other initial implementation support consulting services for executing agency and implementing agencies, and (ii) the urgent procurement of civil works and goods. ADB's prior review and approval of each step is required under advance contracting. Any approval of advance contracting will not constitute a commitment by ADB to finance the project.
Implementation Arrangements	<p>The Government of Inner Mongolia Autonomous Region (IMARG) will serve as the executing agency for the overall implementation of Tranche 1. IMAR Project Management Office (IPMO) established under the IMAR Development and Reform Commission will be responsible for the overall management of the Tranche 1.</p> <p>Under Tranche 1, the municipal governments of Baotou and Erenhot, and the selected Financial Intermediaries (FIs) will be the implementing agencies. Erenhot Municipal Project Management Office (EPMO) and Baotou Municipal Project Management Office (BPMO) were established and will be responsible for the coordination and supervision of the subprojects under its jurisdiction. The state-owned enterprises and the privately owned enterprises will serve as the PIEs. Each PIE will be responsible for the day-to-day implementation of its respective subproject, including procurement of goods and works, construction supervision, and monitoring and reporting.</p> <p>FAM for the Investment Program included the detailed implementation arrangements for Tranche 1.</p>
Procurement and Consulting Services	The procurement plan as Annex 3 and terms of reference for the engagement of consultants under this tranche are in the Attachment to the FAM.
Readiness of the Project for Implementation	The subprojects under Tranche 1 have been studied in depth. Feasibility studies, procurement and financial management assessments, and financial and economic analyses have been conducted (see Annexes 4–6). Project implementation arrangements have been put in place. Foreign Capital Utilization Plan has been approved by the PRC's central government. Procurement schedules, including proposed advance actions, are in the Attachments to the FAM.

Safeguards

Tranche 1 is expected to have minimal safeguard impacts. Tranche 1 is classified as Category B for environment, Category B for resettlement, and Category C for indigenous peoples. The mitigation measures identified in the following documents will be followed:

- (i) environmental assessment and review framework, dated 15 November 2019;
- (ii) resettlement framework, dated 15 November 2019;
- (iii) indigenous peoples planning framework, dated 15 November 2019;
- (iv) resettlement plan dated 15 November 2019;
- (v) initial environment examination and environmental management plan, dated 15 November 2019 for the first tranche; and
- (vi) environmental and social management system arrangement date 15 November 2019.

List of Annexes

Annex 1	Design and Monitoring Framework for Tranche 1
Annex 2	Costs and Financing
Annex 3	Procurement Plan and Tentative Contract Packages – Tranche 1
Annex 4	Summary of Economic Analysis
Annex 5	Summary of Financial Analysis
Annex 6	Summary of Financial Management Assessment

Annex 1: Design and Monitoring Framework for Tranche 1

Impact the Investment Program is aligned with: Sustainable economic development and shared prosperity for CAREC region achieved ^a .			
Project Results Chain	Performance Indicators with Targets and Baselines	Data Sources or Reporting Mechanisms	Risks
Outcome Sustainable economic opportunities and living conditions in areas along the IMAR–Mongolia border improved	By 2027: a. 1,500 additional jobs ^b created in Erenhot and Mandula Ports, at least 40% of employment opportunities are taken up by women (2018 Baseline: 950 ^c ; 30%) (RFI A) b. Mongolian patients reception at the Hospital increased by 100% (2018 baseline: 2,150) (RFI B) c. Annual income ^d of poor households from poverty alleviation program increased by CNY 10,000/year (2018 baseline: 0)	a. Annual statistics by Bureau of Statistics, IMAR Government b. Hospital records and annual reports c. Tripartite agreements and lamb purchasing receipts	External market and economic factors cause slow economic growth and cross-border trade
Outputs 1. Sustainable infrastructure and services for cross-border connectivity improved	By 2026: 1a. New smart port with one-stop inspection system established and operated at Erenhot Port (2018 baseline: 0) 1b. New logistics park with international logistics parking service area constructed and operated at Mandula port (2018 baseline: 0) 1c. Customs inspection center established and operated at Mandula port (2018 baseline: 0) 1d. At least 550 jobs ^e generated by Erenhot and Mandula Ports subprojects (2018 baseline: 0) 1e. 86 sets of advanced medical equipment purchased for the Hospital to replace outdated equipment in the departments of radiology and laboratory, emergency center and operating rooms (2018 baseline: 0)	1a–e. Semiannual progress reports and Tranche 1 project completion report by the executing agency and implementing agencies	Frequent staff changes cause delay in approval of project implementation plans and funds disbursement
2. Ecological environment in key border towns improved	2a. Coverage area of protective forest in Erenhot-Zamyn Uud ECZ increased by 35.5 hectares (2018 baseline: 0) 2b. Garbage collection and transfer system established in Erenhot-Zamyn Uud ECZ (2018 baseline: 0) 2c. Sanitation intelligent cloud service platform operated in Erenhot (2018 baseline: 0)	2a–c. Semiannual progress reports and Tranche 1 project completion report by the executing agency and implementing agencies	

Project Results Chain	Performance Indicators with Targets and Baselines	Data Sources or Reporting Mechanisms	Risks
3. Income-generating opportunities expanded	<p>3a. At least 10 SMEs provided with credits from the financial intermediation loan annually (2018 baseline: 0)</p> <p>3b. At least 20% of SMEs receiving financing from the selected financial intermediary banks owned or led by women^f (2018 baseline: 4%, women owned or led SME borrowers in IMAR) (RFI C)</p> <p>3c. At least 20 new SMEs receiving business development services (2018 baseline: 0)</p> <p>3d. At least 30% of SMEs receiving business development services are owned or led by women (2018 baseline: 0)</p> <p>3e. At least 2,000 poor households participated in decision making and implementation of the PAP, including at least 50% of current poor women-headed households (2018 baseline: 0)</p> <p>3f. At least 100 jobs (including short-term jobs) provided to the poor households annually starting from 2020 (2018 baseline: 0)</p> <p>3g. Animal quarantine station established in Mandula Port (2019 baseline: 0)</p>	<p>3a. Subloan agreement</p> <p>3b–d. Semiannual progress reports and Tranche 1 project completion report by the executing agency and implementing agencies</p> <p>3e. Tripartite agreements</p> <p>3f-g. Semiannual progress reports and Tranche 1 project completion report by the executing agency and implementing agencies</p>	External market instability causing mutton price decreasing
4. Cross-border mechanisms, technical project management and institutional capacity strengthened	<p>4a. Improved skills and knowledge on regional cooperation and services, project management, safeguards, and gender issues provided to at least 250 government officials, of whom at least 40% are women (2018 baseline: 0)</p> <p>4b. At least 200 medical professionals such as managers, doctors, and nurses at least 50% of whom are women, participate in on-site job training, report improved skills in diagnosis, treatment, ward mangement, hospital operation, and operation of upgraded medical equipment (2018 baseline: 0)</p> <p>4c. Quarterly coordination meeting conducted between two ADB projects for Erenhot-Zamyn Uud ECZ (2018 baseline: 0)</p>	<p>4a–b. Semiannual progress reports and Tranche 1 project completion report by the executing agency and implementing agencies</p> <p>Capacity development completion reports</p> <p>Training participants' survey reports</p> <p>4c. Meeting minutes</p>	
Key Activities with Milestones 1: Sustainable infrastructure and services for cross-border connectivity improved 1.1. Detailed design completed by Q1 2021; 1.2. Advertisement by Q2 2021; 1.3. Complete bidding process by Q4 2021; 1.4. Procurement of medical facilities of the Hospital in Erenhot completed by Q4 2022;			

- 1.5. Functions of smart port facilities and systems in Erenhot Port confirmed by Q1 2027; and
- 1.6. Construction of logistics park facilities and buildings in Mandula Port completed by Q1 2027.

2: Ecological environment in key border towns improved

- 2.1. Detailed design completed by Q1 2021;
- 2.2. Advertisement by Q2 2021;
- 2.3. Complete bidding process by Q4 2021;
- 2.4. Protective forest in the Erenhot-Zamyn Uud ECZ completed by Q1 2027; and
- 2.5. Functions of sanitation intelligent cloud service platform operated confirmed by Q1 2027.

3: Income-generating opportunities expanded

- 3.1. Onlending to selected qualified SME subborrowers completed by Q1 2027;
- 3.2. Detailed design completed by Q4 2020;
- 3.3. Advertisement starts from Q1 2021;
- 3.4. Complete bidding process by Q3 2021;
- 3.5. Carry out the Poverty Alleviation Program by Q1 2027;
- 3.6. Carry out the stud sheep breeding program, recruit embryo transplantation service providers and sign sheep farming service contracts with local farmer households by Q1 2027;
- 3.7. Upgrading sheep farming bases by Q3 2024;
- 3.8. Establishment of product traceability and management system by Q3 2024; and
- 3.9. Construction of quarantine station facilities completed by Q1 2027.

4: Cross-border cooperation mechanisms, technical project management, and institutional capacity strengthened

- 5.1. Carry out annual RCI International Workshops and share project experience by Q1 2027;
- 5.2. Carry out technical and project management training workshops by Q1 2027;
- 5.3. On-site job trainings to the Hospital Management, doctors, and nurses (all relevant female staff) on upgraded medical equipment operation, diagnosis, treatment skills, ward management, and hospital operation by Q1 2027; and
- 5.4. Carry out capacity building activities by Q1 2027.

Project Management Activities

1. Recruit and manage program start-up consultants by Q3 2021;
2. Recruit and manage program implementation consultants by Q3 2027;
3. Develop and maintain the program performance monitoring system by Q3 2027;
4. Ensure timely delivery of regular progress reports by Q3 2027;
5. Carry out annual review missions, mid-term review mission and completion review mission by Q3 2027;
6. Submit project audited financial statements by Q2 2027;
7. Submit entity financial statements (FIs and PIEs) by Q3 2027; and
8. Prepare and submit project completion report for Tranche 1 in Q3 2027.

Inputs

ADB: €166.53 million
 Government: €115.35 million
 Private-owned Enterprise: €42.16 million
 Financial intermediaries: €21.11 million

Assumptions for Partner Financing

None.

ADB = Asian Development Bank, CAREC = Central Asia Regional Economic Cooperation, ECZ = economic cooperation zone, IMAR = Inner Mongolia Autonomous Region, PIEs = project implementing entities; Q = quarter, RCI = regional cooperation and integration, RFI = results framework indicator, SMEs = small and medium-sized enterprises.

^a ADB. 2017. *CAREC 2030: Connecting the Region for Shared and Sustainable Development*. Manila.

^b 1,000 skilled and 500 unskilled employment during the operation phases.

^c The baseline of 950 jobs comprises the current jobs at Erenhot and Mandula ports, including port staff and business employees. Jobs to be created will be mainly from ECZ and BCPs for skilled and unskilled positions, based on further increase in trade and improved living conditions in IMAR.

^d Income increase for poor households is generated directly from participating in the PAP by raising ewes and selling lambs to Xiaoweiayang.

^e Including 125 skilled and 425 unskilled employment during project construction.

^f SMEs owned or led by women are defined as: enterprises with majority ownership by one or more women; or enterprises where senior management responsibility is held by one or more women.

Contribution to the ADB Results Framework

RFI A: Jobs generated. Excepted: 1,500 (40% female).

RFI B: Reduced health risks through regional public goods. Expected: Mongolian patients reception in the hospital in Erenhot increased to 4,300.

RFI C: Loan accounts opened by SMES owned or led by women or end-borrowers reached by SMES owned or led by women. Excepted: 20 SMEs owned or led by women.

Source: Asian Development Bank.

Annex 2: Costs and Financing

A. Cost Estimates Preparation and Revisions

1. The project investment costs include goods, works, and consulting services to support the sustainable infrastructure and service for cross-border connectivity, improve local people's living conditions, including ecological environment and medical services, and equipment and materials as well as capacity building and training. Furthermore, the project will provide subloans to qualified SMEs through eligible FIs.

2. **Preparation.** The cost estimates were prepared jointly by the design institutes, IPMO, Erenhot Municipal Project Management Office (EPMO), Baotou Municipal Project Management Office (BPMO), Damaoqi County Project Management Office (DPMO), PIEs, FIs and ADB with assistance from the transaction technical assistance (TRTA) consultants. The sources and basis for cost estimates were reviewed during the project preparation and had been confirmed by related parties. The process was facilitated by a model in excel software which enabled easy updating or revision, if necessary. The model is maintained by both IPMO and ADB.

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

B. Key Assumptions

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

- (i) Exchange rate: \$1.00 = CNY6.9196, €1 = 8.1568 (as of 25 August 2020).
- (ii) Price contingencies based on expected cumulative inflation over the implementation period are as follows:

Table 1: Escalation Rates for Price Contingency Calculation

Item	2019	2020	2021	2022	2023	2024	2025	Average
Foreign rate of price inflation	1.5%	1.5%	1.6%	1.6%	1.6%	1.6%	1.6%	1.57%
Domestic rate of price inflation	1.9%	1.8%	2.0%	2.1%	2.1%	2.1%	2.1%	2.01%

Source: Asian Development Bank estimates.

C. Summary Cost Estimates and Financing Plan

5. The first tranche of the MFF will comprise two loan components for a total amount of €166,525,000: (i) an Investment Loan Component amounting to €149,559,000 with a 25-year term, including a grace period of 6 years; and (ii) a FIL Component using the FIL modality amounting to €16,966,000 (equivalent to \$20 million) with an 18-year term with bullet repayment method. Interest and other charges during construction (IDC) will not be capitalized. Loan proceeds will have (i) a custom-tailored repayment method, (ii) an annual interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility, (iii) a commitment charge of 0.15% per year; (iv) an average maturity of 15.98 years and an average loan maturity premium of 0.1%; and (v) such other terms and conditions set forth in the draft loan and project agreements. Under the Tranche 1, the ADB loan will finance 48.25% of the project costs, including civil works, goods and taxes and duties for eligible ADB-financed expenditures. IMARG will make counterpart funds available for physical and price contingencies, and financing charges during implementation.

D. Detailed Cost Estimates by Expenditure Category**Table 2: Detailed Cost Estimates by Expenditure Category – Tranche 1**
(€ million)

Item	CNY Million			€ Million			% of Total Base Cost
	Foreign Exchange	Local Currency	Total Cost	Foreign Exchange	Local Currency	Total Cost	
A. Investment Costs							
1. Civil Works	314.393	943.178	1257.571	38.544	115.631	154.174	51.1%
Financed by ADB	241.675	725.026	966.702	29.629	88.886	118.514	39.3%
Non-ADB Financed	72.717	218.152	290.869	8.915	26.745	35.660	11.8%
2. Goods (Equipment & Materials)	212.647	53.162	265.808	26.070	6.517	32.587	10.8%
Financed by ADB	135.678	33.919	169.597	16.634	4.158	20.792	6.9%
Non-ADB Financed	76.969	19.242	96.211	9.436	2.359	11.795	3.9%
3. Stud Sheep Breeding Program	118.36	29.59	147.96	14.51	3.63	18.14	6.0%
4. Poverty Alleviation Program	0.00	100.00	100.00	0.00	12.26	12.26	4.1%
5. FIL-SME Financing	221.43	55.36	276.78	27.15	6.79	33.93	11.2%
Financed by ADB	110.71	27.68	138.39	13.57	3.39	16.97	5.6%
Non-ADB Financed	110.71	27.68	138.39	13.57	3.39	16.97	5.6%
6. Capacity Building	13.84	8.65	22.48	1.70	1.06	2.76	0.9%
Financed by ADB	13.84	0.00	13.84	1.70	0.00	1.70	0.6%
Non-ADB Financed	0.00	8.65	8.65	0.00	1.06	1.06	0.4%
7. Land Acquisition and Resettlement	0.00	78.81	78.81	0.00	9.66	9.66	3.2%
8. Project Management Fee	0.00	207.76	207.76	0.00	25.47	25.47	8.4%
9. Working Capital	0.00	104.85	104.85	0.00	12.85	12.85	4.3%
Total Base Cost (A)	880.67	1,581.36	2,462.03	107.97	193.87	301.84	100.0%
B. Contingencies							
1. Physical Contingency	70.45	118.12	188.57	8.64	14.48	23.12	7.7%
2. Price Contingency	39.79	108.86	148.65	4.88	13.35	18.22	6.0%
Sub-total (B)	110.24	226.98	337.22	13.52	27.83	41.34	13.7%
C. Financing Charges During Implementation							
1. Interest During Implementation	11.74	0.00	11.74	1.44	0.00	1.44	0.5%
2. Commitment Charges	4.26	0.00	4.26	0.52	0.00	0.52	0.2%
Sub-total (C)	16.00	0.00	16.00	1.96	0.00	1.96	0.6%
Total Project Cost (A+B+C)	1,006.91	1,808.34	2,815.25	123.44	221.70	345.14	114.3%

ADB = Asian Development Bank, FIL = financial intermediation loan, SMEs = small and medium-sized enterprises.

Notes: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

E. Allocation and Withdrawal of Investment Loan Proceeds**Table 3: Allocation and Withdrawal of Loan Proceeds-Tranche 1**

No.	Category	Total Amount Allocated for ADB Financing (€)	Percentage and Basis for Withdrawal from Loan Account
1	Civil Works, Goods, Stud Sheep Breeding Program, Poverty Alleviation Program, Capacity Building, Training and Workshops ^b	149,559,000	Up to 100% of total expenditure claimed ^a
2	FIL Component ^c	16,966,000	100% of total expenditures claimed
Total		166,525,000	

^a Detailed category allocations and disbursement percentages to be used during disbursement are indicated in Table 10 of the FAM or otherwise agreed between the Borrower and ADB.

^b Subject to the condition for withdrawal described in paragraph 6 of Schedule 3 of the Loan Agreement for the purpose of the Xiaowei yang subproject.

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

Source: Asian Development Bank estimates.

Table 4: Detail Allocation and Withdrawal of Loan Proceeds-Tranche 1

Item	Total Amount Allocated for ADB Financing (€)		Percentage and Basis for Withdrawal from the Loan Account
	Category	Subcategory	
1. Civil Works	96,672,000		
1A Erenhot		57,197,000	87% of total expenditures claimed
1B Mandula Port		37,580,000	76% of total expenditures claimed
1C Xiaowei yang ^a		1,895,000	62% of total expenditures claimed
2. Goods, Stud Sheep Breeding Program, Poverty Alleviation Program, Capacity Building, Training and Workshops	52,887,000		
2A Erenhot		19,153,000	100% of total expenditures claimed
2B Xiaowei yang ^a		1,639,000	100% of total expenditures claimed
2C Stud Sheep Breeding ^a		18,139,000	100% of total expenditures claimed
2D Poverty Alleviation Program ^a		12,259,000	100% of total expenditures claimed
2E Capacity Building, Training and Workshops		1,697,000	100% of total expenditures claimed
3. FIL Component^b	16,966,000		100% of total expenditures claimed
Total	166,525,000		

FIL= financial intermediation loan, SME = small- and medium-sized enterprise.

^a Subject to the condition for withdrawal described in paragraph 6 of Schedule 3 of the Loan Agreement.

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

Source: Asian Development Bank estimates.

F. Detailed Cost Estimates by Financier

Table 5: Detailed Cost Estimates by Financier – Tranche 1
(€ million)

Item	Total Cost	ADB		Government		Privately owned		FILs		Taxes and duties
		Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	
A. Investment Costs										
1. Civil Works	154.17	96.67	62.7%	43.39	28.1%	14.11	9.15%			12.73
1.1 Erenhot	88.71	57.20	64.5%	31.51	35.5%					7.32
Financed by ADB	66.00	57.20	86.7%	8.81	13.3%					5.45
Non-ADB Financed	22.71	-	-	22.71	100.0%					1.88
1.2 Mandoula	49.46	37.58	76.0%	11.87	24.0%					4.08
Financed by ADB	49.46	37.58	76.0%	11.87	24.0%					4.08
Non-ADB Financed										0.00
1.3 Xiaoweiayang	16.01	1.89	11.8%			14.11	88.2%			1.32
Financed by ADB	3.06	1.89	62.0%			1.16	38.0%			0.25
Non-ADB Financed	12.95	-	-			12.95	100.0%			1.07
2. Goods (Equipment & Materials)	32.59	20.79	63.8%	11.80	126.1%	-	-			3.75
2.1 Erenhot	25.92	19.15	73.9%	6.77	26.1%					2.98
Financed by ADB	19.15	19.15	100.0%	-	-					2.20
Non-ADB Financed	6.77	-	-	6.77	100.0%					0.78
2.2 Mandoula	5.02	-	-	5.02	100.0%					0.58
Financed by ADB										0.00
Non-ADB Financed	5.02	-	-	5.02	100.0%					0.58
2.3 Xiaoweiayang	1.64	1.64	100.0%	-	-					0.19
Financed by ADB	1.64	1.64	100.0%							0.19
Non-ADB Financed										0.00
3. Stud Sheep Breeding Program	18.14	18.14	100.0%							1.03
4. Poverty Alleviation Program	12.26	12.26	100.0%							0.69
5. FIL-SME Financing	33.93	16.97	50.0%					16.97	50.0%	0.99
Financed by ADB	16.97	16.97	100.0%							0.49
Non-ADB Financed	16.97	-	-					16.97	100.0%	0.49
6. Capacity Building	2.76	1.70	61.6%			1.06	38.4%			0.08
Financed by ADB	1.70	1.70	100.0%			-	-			0.05
Non-ADB Financed	1.06	1.06	100.0%			-	-			0.03
7. Land Acquisition and Resettlement	9.66	-	-	7.30	75.5%	2.37	24.5%	-	-	0.28
8. Project Management Fee	25.47	-	-	23.09	90.6%	2.38	9.4%	-	-	0.74
9. Working Capital	12.85	-	-	-	-	12.85	100.0%	-	-	0.37
Total Base Cost (A)	301.84	166.53	55.2%	85.57	28.3%	32.78	10.9%	16.97	5.6%	20.67
B. Contingencies										
1. Physical Contingency	23.12	-	-	16.05	69.4%	4.34	18.8%	2.73	11.8%	
2. Price Contingency	18.22			12.40	68.0%	4.63	25.4%	1.19	6.6%	
Sub-total (B)	41.34	-	-	28.45	68.8%	8.97	21.7%	3.92	18.4%	
C. Financing Charges During Implementation										
1. Interest During Implementation	1.44			0.93	64.3%	0.32	22.2%	0.19	13.5%	
2. Commitment Charges	0.52			0.40	76.8%	0.09	18.0%	0.03	5.2%	
Sub-total (C)	1.96			1.33	67.6%	0.41	21.0%	0.22	11.3%	
Total Project Cost (A+B+C)	345.14	166.53	48.2%	115.35	33.4%	42.16	12.2%	21.11	6.1%	
% of Total Project Cost	100.00%	48.25%		33.42%		12.21%		6.12%		20.67

ADB = Asian Development Bank, FIL= financial intermediation loan, SME = small and medium-sized enterprise.

Notes: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

G. Detailed Cost Estimates by Outputs

Table 6: Detailed Cost Estimates by Outputs – Tranche 1
(€ million)

Item	Total Cost	Output 1: Sustainable infrastructure and services for cross-border connectivity improved		Output 2: Ecological environment in key border towns improved		Output 3: Income-generating opportunities expanded		Output 4: Cross-border cooperation mechanism, technical project management and institutional capacity strengthened	
		Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category
A. Investment Costs									
1. Civil Works	154.17	126.76	82.2%	11.41	7.4%	16.01	10.4%		
2. Goods (Equipment & Materials)	32.59	30.95	95.0%	0.00	0.0%	1.64	5.0%		
3. Stud Sheep Breeding Program	18.14					18.14	100.0%		
4. Poverty Alleviation Program	12.26					12.26	100.0%		
5. FIL-SME Financing	33.93					33.93	100.0%		
6. Capacity Building	2.76						0.0%	2.76	100.00%
7. Land Acquisition and Resettlement	9.66	4.77	49.4%	2.52	26.1%	2.37	24.5%		
8. Project Management Fee	25.47	21.42	84.1%	1.67	6.6%	2.38	9.4%		
9. Working Capital	12.85	0.00	0.0%	0.00	0.0%	12.85	100.0%		
Total Base Cost (A)	301.84	183.90	60.9%	15.60	5.2%	99.58	33.0%	2.76	0.91%
B. Contingencies									
1. Physical Contingency	23.12	14.80	64.0%	1.26	5.4%	7.06	30.6%		
2. Price Contingency	18.22	10.84	59.5%	1.56	8.6%	5.82	32.0%		
Sub-total (B)	41.34	25.64	62.0%	2.81	6.8%	12.89	31.2%		
C. Financing Charges During Implementation									
1. Interest During Implementation	1.44	0.91	62.9%	0.02	1.4%	0.51	35.7%		
2. Commitment Charges	0.52	0.35	67.3%	0.05	9.5%	0.12	23.2%		
Sub-total (C)	1.96	1.26	64.1%	0.07	3.6%	0.63	32.4%		
Total Project Cost (A+B+C)	345.14	210.79	61.1%	18.48	5.36%	113.11	32.8%	2.76	0.80%

ADB = Asian Development Bank, FIL= financial intermediation loan, SME = small and medium-sized enterprise.

Notes: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

H. Detailed Cost Estimates by Year

Table 7: Detailed Cost Estimates by Year – Tranche 1
(€ million)

Item	Total Cost	2021	2022	2023	2024	2025	2026
A. Investment Costs							
1. Civil Works	154.17	13.85	27.98	43.80	34.39	23.29	10.86
2. Goods (Equipment & Materials)	32.59	-	24.17	3.39	5.02	-	-
3. Stud Sheep Breeding Program	18.14	-	9.62	8.52	-	-	-
4. Poverty Alleviation Program	12.26	-	4.90	3.68	3.68	-	-
5. FIL-SME Financing	33.93	6.79	20.36	6.79	-	-	-
6. Capacity Building	2.76	0.69	0.96	0.46	0.33	0.17	0.15
7. Land Acquisition and Resettlement	9.66	7.15	2.51	-	-	-	-
8. Project Management Fee	25.47	5.09	5.77	5.22	3.97	2.87	2.55
9. Working Capital	12.85	-	-	-	5.14	5.14	2.57
Total Base Cost (A)	301.84	33.58	96.28	71.85	52.54	31.47	16.13
B. Contingencies							
1. Physical Contingency	23.12	2.69	7.70	5.75	3.79	2.11	1.08
2. Price Contingency	18.22	0.64	3.54	4.25	4.34	3.35	2.10
Sub-total (B)	41.34	3.32	11.25	10.00	8.14	5.45	3.19
C. Financing Charges During Implementation							
1. Interest During Implementation	1.44	0.00	0.09	0.23	0.33	0.38	0.41
2. Commitment Charges	0.52	0.12	0.20	0.11	0.06	0.02	0.01
Sub-total (C)	1.96	0.13	0.28	0.34	0.38	0.41	0.42
Total Project Cost (A+B+C)	345.14	37.03	107.81	82.19	61.06	37.33	19.73

ADB = Asian Development Bank, FIL= financial intermediation loan, SME = small and medium-sized enterprise.

Notes: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

I. Contract and Disbursement S-Curve

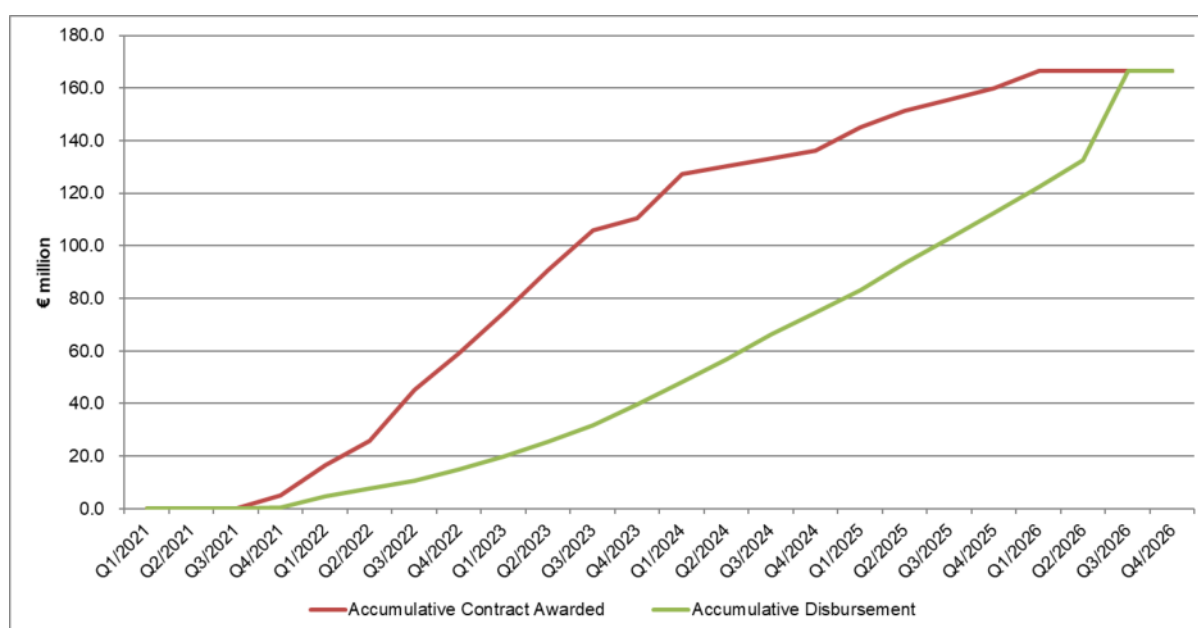
Table 8: Contract Awards and Disbursements -Tranche 1
(€ million)

Year	Projected Contract Awards					Projected Disbursement				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2021	0.07	0.00	0.00	4.89	4.96	0.00	0.00	0.01	0.49	0.50
2022	11.69	9.00	19.50	13.94	54.13	4.24	2.95	3.04	4.28	14.52
2023	15.40	16.34	15.14	4.48	51.35	5.01	5.56	6.16	7.91	24.63
2024	16.73	2.97	2.97	3.14	25.81	8.59	8.71	9.56	8.15	35.01
2025	8.90	6.10	4.40	4.40	23.80	8.58	9.99	9.56	9.76	37.88
2026	6.48	0.00	0.00	0.00	6.48	9.97	10.15	33.87	0.00	53.99
Total	59.27	34.41	42.00	30.84	166.53	36.38	37.36	62.19	30.59	166.53

Q = quarter.

Source: Asian Development Bank estimates.

S-curve – Tranche 1



Annex 3: Procurement Plan and Tentative Contract Packages - Tranche 1

1. Basic Data

Project Name: Proposed Multitranchise Financing Facility: People's Republic of China: Inner Mongolia Sustainable Cross-Border Development Investment Program – Tranche 1		
Project Number: 51192-001	Approval Number:	
Country: People's Republic of China	Executing Agency: Government of Inner Mongolia Autonomous Region	
Project Procurement Classification: Category B	Implementing Agency: Erenhot Municipal Government, Baotou Municipal Government, Bank of Inner Mongolia	
Procurement Risk: Low		
Project Financing Amount: €345.14 million ADB Financing: €166.53 million (loan) Non-ADB Financing: €178.61 million	Project Closing Date: 30 September 2027 (loan closing for Tranche 1)	
Date of First Procurement Plan: September 2019	Date of this Procurement Plan: 19 August 2020	
Procurement Plan Duration (in months): 18	Advance Contracting: Yes	e-Procurement: No

2. Methods, Review and Procurement Plan

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

Procurement of Goods, Works and Nonconsulting Services	
Methods	Comments
Open competitive bidding with national advertising for goods	Roads, buildings materials and equipment are available locally and local market is competitive
Open competitive bidding with international advertising for goods	For Erenhot Smart Port and Erenhot PRC-Mongolia International Hospital
Open competitive bidding with national advertising for works	Local contractors are experienced
Open competitive bidding with national advertising for non-consulting services	6 contracts for embryo transplantation services under Xiaowei yang stud sheep breeding program
Community participation for Xiaowei yang stud sheep breeding program – sheep raising services	300 contracts with local households/herders will be signed
Consulting services	
Open competitive bidding with international advertising, using quality- and cost-based selection (QCBS) for consulting services with a quality–cost ratio of 90:10	1 consulting firm for supporting the project implementation and capacity building, and international advertising is warranted.
Open competitive bidding with national advertising, using Consultants' Qualifications Selection (CQS) for consulting firm	1 consulting firm for external environmental monitoring, with national advertising.
Individual Consultants' Selection	4 project start-up individual consultants will be recruited

ADB = Asian Development Bank.

3. Lists of Active Procurement Packages (Contracts)

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

Goods, Works, and Nonconsulting Services							
Package No.	General Description	Estimated value (\$)	Procurement method	Review	Bidding procedure	Advertisement Date (quarter, year)	Comments
ECW1-1	Erenhot - Inspection center: 1) a building area of 4,000 m ² . 2) an auxiliary building with floor area of 2,000 m ²	3,641,829	OCB	Prior	1S1E	Q2, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works E-procurement: No
ECW1-2	Erenhot inspection area - infrastructure for the North Plaza, including: 1) Roads and pipeline network cover 162,000 m ² ; 2) Greening 49,700 m ² ; 3) 2,500 m fences	25,554,945	OCB	Prior	1S1E	Q2, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works E-procurement: No
EG2-1	Erenhot - Smart Port management system	15,160,863	OCB	Prior	1S1E	Q2, 2021	Advertising: International Number of contracts: 1 Prequalification of bidders: Yes Advance contracting: No Bidding document: Goods E-procurement: No
ECW3-1	PRC-Mongolia Regional Cooperation Center, with a floor area of 20,000 m ²	17,118,829	OCB	Prior	1S1E	Q3, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works E-procurement: No
EG4-1	86 sets of medical equipment and facilities for PRC-Mongolia International Hospital in Erenhot	Lot 1: 4,494,497 Lot 2: 216,053 Lot 3: 1,085,323 Lot 4: 830,973 Lot 5: 210,995 Lot 6: 534,713 Lot 7: 43,355	OCB	Prior for Lots 1 and 2, Post (sampling) for Lots 3-7	1S1E	Q2, 2021	Advertising: International Number of contracts: 7 Prequalification of bidders: No Advance contracting: No Bidding document: Goods E-procurement: No
MCW1-1	Mandula Port - freight passage roads, with a total length of 4.4 km and a width of 9 m	20,221,166	OCB	Prior	1S1E	Q2, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works, E-procurement: No
MCW2-1	Mandula Port – service area (317 mu of land area): 1) a closed parking area; 2) a vehicle repair service area; 3) a new 3-floor service building	16,625,611	OCB	Prior	1S1E	Q1, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works E-procurement: No
XWY-ET-1	Xiaowei yang - Stud sheep breeding program - Embryo transplantation services – 20,000 pieces	Lot 1: 2,095,496 Lot 2: 2,095,496	OCB	Prior for the first contract, post (sampling) for the second contract	1S1E	Q2, 2021	Advertising: National Number of contracts: 2 Prequalification of bidders: No Advance contracting: No Bidding document: non-consulting services E-procurement: No
XWY-ET-2	Xiaowei yang - Stud Sheep Breeding Program - Embryo transplantation services – 27,000 pieces	Lot 1: 1,414,461 Lot 2: 1,414,461	OCB	Post (sampling)	1S1E	Q2, 2021	Advertising: National Number of contracts: 4 Prequalification of bidders: No Advance contracting: No

Goods, Works, and Nonconsulting Services							
Package No.	General Description	Estimated value (\$)	Procurement method	Review	Bidding procedure	Advertisement Date (quarter, year)	Comments
		Lot 3: 1,414,461 Lot 4: 1,414,461					Bidding document: non-consulting services E-procurement: No
XWY-SSR	Xiaoweiyang - Stud sheep breeding program – stud sheep raising services	11,532,055	Community participation	Prior for the 1 st two contracts, the rest for post (sampling)		Q3 2021	Advertising: No Number of contracts: 300 Prequalification of bidders: No Advance contracting: No Bidding document: community participation agreements E-procurement: No
XWY-G	Xiaoweiyang - Establishment of products traceability and management system	1,932,915	OCB	Prior	1S1E	Q2, 2021	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Goods E-procurement: No

Consulting Services							
Package No.	General Description	Estimated value (\$)	Selection method	Review	Type of Proposal	Advertisement Date (quarter, year)	Comments
ICS-1	Project start-up support – Municipal Engineer	23,000	ICS	Prior	EOI	Q4, 2020	Advance contracting, 3 person-months
ICS-2	Project start-up support – Procurement and Contract Management Specialist	23,000	ICS	Prior	EOI	Q4, 2020	Advance contracting, 3 person-months
ICS-3	Project start-up support – Environment Safeguard and ESMS Specialist	17,000	ICS	Prior	EOI	Q4, 2020	Advance contracting, 2 person-months
ICS-4	Project start-up support – Social Safeguard and ESMS Specialist	17,000	ICS	Prior	EOI	Q4, 2020	Advance contracting, 2 person-months
CS-1	Project implementation consulting services for project management support and capacity building	1,059,000	QCBS	Prior	FTP	Q2, 2021	Quality-cost ratio of 90:10
CS-2	External environment monitoring services	220,000	CQS	Prior	STP	Q2, 2021	

CQS = Consultants' Qualifications Selection, CS = consulting service, EOI = expression of interest, ESMS = environmental and social management system, ICS = individual consultant selection, FTP = full technical proposal, QCBS = quality- and cost-based selection, STP = simplified technical proposal.

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

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

Goods, Works, and Nonconsulting Services							
Package No.	General Description	Estimated value (\$)	Procurement method	Review	Bidding procedure	Advertisement Date (quarter, year)	Comments
ECW1-3	Erenhot inspection area - Infrastructure for the South Plaza. 1) Roads and pipeline network cover 132,300 m ² ; 2) greening 60,800 m ² ; 3) 2,300 m fences	21,478,698	OCB	Prior	1S1E	Q1, 2022	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works E-procurement: No

Goods, Works, and Nonconsulting Services							
Package No.	General Description	Estimated value (\$)	Procurement method	Review	Bidding procedure	Advertisement Date (quarter, year)	Comments
ECW5-1	Erenhot - Ecological protection greenbelt along the central axis, including reclaimed water storage and irrigation facilities, and landscape lighting, covers an area of 24.49 ha	9,295,902	OCB	Post (sampling)	1S1E	Q3, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works E-procurement: No
ECW6-1	Erenhot - 1) one waste collection and transfer station; 2) supporting facilities; and 3) sanitation intelligent cloud platform	712,614	OCB	Post (sampling)	1S1E	Q3, 2024	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works E-procurement: No
MCW3-1	Mandula Port - 1) Customs Inspection Center (400 mu of land area); and 2) a fully enclosed warehousing shed for coal transfer and storage	21,451,417	OCB	Prior	1S1E	Q1, 2022	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works E-procurement: No
XWY-CW-1	Xiaoweiyang - Quarantine station at Mandula Port	3,603,821	OCB	Prior	1S1E	Q4, 2023	Advertising: National Number of contracts: 1 Prequalification of bidders: No Advance contracting: No Bidding document: Works E-procurement: No

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

5. Lists of Awarded and Completed Contracts

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

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

ADB=Asian Development Bank.

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

ADB=Asian Development Bank.

6. Non-ADB Financing

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

DCG = Damaoqi County Government, EMG = Erenhot Municipal Government, OCB = open competitive bidding.

Goods, Works, and Nonconsulting Services				
General Description	Estimated Value (cumulative, \$)	Estimated No. of Contracts	Procurement Method	Comments
Erenhot: Inspection area: Joint Inspection center (floor area of 20,000 m ²)	19,420,920	1	OCB	Financed by counterpart funds of EMG Advertising planned: Q1, 2020- Q4 2025 Advertising: National Prequalification of bidders: No Domestic preference applicable: No Advance contracting: No Bidding document: Works E-procurement: Yes
Erenhot - Regional cooperation center - Enclosed fencing, alarm and monitoring system	3,910,154	1	OCB	
Erenhot - Regional cooperation center - clean energy heating supply and network	7,980,985	1	OCB	
Erenhot - Greening - Windbreak forest along the highway, covering an area of 15.05 ha	3,438,855	1	OCB	
Mandula Port – Customs inspection center - enclosed warehousing shed for coal transfer and storage	5,923,169	1	OCB	Financed by counterpart funds of DCG Advertising planned: Q4, 2021 Advertising: National Prequalification of bidders: No Domestic preference applicable: No Advance contracting: NA Bidding document: Goods E-procurement: Yes
Xiaoweiayang - Construction of a stud breeding base	528,543	1	Commercial practice	Financed by counterpart funds of Xiaoweiayang Advertising planned: Q1, 2020- Q4 2025 Advertising: National
Xiaoweiayang – Upgrading five sheep farming bases	5,938,696	1	Commercial practice	
Xiaoweiayang – Construction of a sheep processing and logistics base in Tuyouqi County	8,798,385	1	Commercial practice	

Consulting Services				
General Description	Estimated Value (cumulative)	Estimated No. of Contracts	Procurement Method	Comments
[None]				

Annex 4: Summary of Economic Analysis

1. The proposed Multitranche Financing Facility (the MFF) for Inner Mongolia Sustainable Cross-Border Development Investment Program will assist the People's Republic of China (PRC) support the participation of the Inner Mongolia Autonomous Region (IMAR) in regional cooperation and integration (RCI) with focus on economic corridor development. The MFF, with three tranches, is designed to address key constraints in economic corridor and border area development. Economic cost-benefit analysis (CBA) is prepared for Tranche 1 subprojects based on the identified program outputs.

Cost-Benefit Analysis

2. **Basic assumptions.** The economic analysis covers 25 years. Implementation period is six years, 2020–2026. Benefits start when facilities become fully operational in 2027. Economic costs and benefits are expressed in August 2019 prices. Works, goods and physical contingency are converted from financial costs. A shadow wage rate factor of 0.67 is applied to unskilled labor which comprises 25% of project labor requirement.¹ Tradeable items are converted at the shadow exchange rate factor of 1.09,² non-tradeable items at 1.0.

3. **Economic costs.** Project capital and operation and maintenance (O&M) costs are distributed into traded and non-traded components and labor. Annual economic capital cost distribution follows the annual financial investment plan and cost disbursement schedule. The financial investment cost, excluding inflation and financing charges, amounts to CNY2,579 million, equivalent to CNY2,272 million in economic terms. Economic O&M costs include staff salaries, power and fuel, utilities, and maintenance average CNY269 million annually.

4. Economic benefits

Output 1 Subproject 1: Inspection Area Construction for the PRC-Mongolian Erenhot–Zamyn-Uud ECZ.

5. *Economic gains for new ECZ workers.* The master plan forecasts job creation of about 18,000 with the realization of the Erenhot–Zamyn-Uud Port.³ RCI initiatives are also attained as employment will also be open to Mongolians.⁴ Top job sectors include processing/manufacturing (38%), financial services (11%), services (47%), and tourism (4%). Half of the jobs will benefit Chinese nationals, and about 900 of these are linked to the subproject covering Customs inspection area and mutual trade commercial operations. It is assumed future ECZ workers are transferees from other jobs outside the zone, and the transfer is driven by higher wages. Incremental direct economic gains arise from difference in annual wages paid to Chinese ECZ jobs (CNY62,000) and wages outside the port (CNY21,000) prior to transfer.⁵

6. *Time savings from smart system platform installation.* The Customs Integrated Inspection System is being used in the Erenhot Port. With project, entry-exit inspection channels will be upgraded with new hardware while systems software will be updated. Inspection activities will be quicker for trucks and cars thus shortening time spent at the one-stop channels, avoiding long queues and accommodating more transactions at any given period. Drivers and other road users (50% assumed wage-earners), each spending over 3 hours annually in their vehicles while queueing. The value of time saved is estimated by multiplying these values by the hourly wage rate at CNY30 (average wage for ECZ jobs adjusted to 2026 gross domestic product [GDP]).

¹ ADB. 2016. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of China for Guangxi Regional Cooperation and Integration Promotion Investment Program*. Manila.

² Calculated using ADB guidelines on estimating shadow exchange rate factor. Export and import data are based on ADB 2017 Key Indicators for Asia and the Pacific.

³ Based on the discussions with IMAR government on the IMAR Master Plan (IMP), between 18,000 and 24,000 new job opportunities will be available when the ECZ becomes fully operational.

⁴ Article 9, *Agreement Between the Government of Mongolia and the Government of the People's Republic of China on Establishing "PRC-Mongolian Erenhot–Zamyn-Uud Economic Cooperation Zone"*.

⁵ Average sector wages applied in the analysis are based on the 2018 Inner Mongolia Statistical Yearbook adjusted to current period using GDP growth rate. Minimum wage rate represents wages prior to transfer to ECZ jobs.

7. *Increased tourist arrivals and tourist spending with port development.* With shorter pass-through and inspection time at the channels, higher volume of goods from Chinese traders enter the mutual trade center at the ECZ. More Mongolian and domestic tourists can be accommodated as more vehicles can then enter the port. Improved access through the port will attract tourists to visit places of interest that promote cultural heritage, experience local food varieties, shop for goods and souvenirs, all leading to longer stays and higher spending. The incremental increase in tourist numbers (from 20,000 in 2027 and 20% annually) is multiplied by the average spending based on the expected extended stay of 1.5 days at value added of CNY300 per day or 38% of the average spending per tourist.

8. *Reduced cargo sampling time.* Customs conduct sampling inspection of trucks carrying coal, iron ore, mineral and other minor products. Current system calls for 100% inspection as the procedure is not aided by electronic equipment. Under this system, trucks spend about 12 days, two days for the sampling and ten days awaiting laboratory results. With the smart system installed, trucks will need only 1 day to complete the process. Benefit is valued by multiplying the 11 saved days by number of trucks (70,000 by 2027) by the daily costs to trucks of CNY9 for sampling and storage, and CNY13 for parking.

9. *Reduced dependence on coal for heating facility.* The subproject introduces innovative technology with the proposed installation of electric boilers supported by stored energy captured through wind-powered turbines. The new storage equipment, acting as battery, will capture what will otherwise be wasted energy surplus thereby reducing annual dependence on coal by 2,008 tons, the amount required to energize the ECZ heating facility. Benefit derived from savings in cost of coal at CNY824/ton adjusted to current period using GDP growth multiplied by coal consumption. Green-house gases (GHG) produced at 14 tons annually comprise sulfur dioxide and carbon dioxide. The price of GHG will not impact upon benefits calculation.

Output 1 Subproject 2: Upgrading the Mandula Port International (Highway) Logistics Park.

10. *Willingness-to-pay for improved service area facilities and cost savings for vehicle repair.* Presently, truck drivers and helpers live under squalid conditions in portable housing due to unavailable alternative accommodations within the port while waiting to load/unload cargo. Waiting time takes between one and three days, and due to the limited space in temporary housing, some drivers stay overnight in their trucks. Trading/trucking companies that employ the drivers were interviewed and drivers are given the option to stay in service facilities that include hotel, diner and parking at the average willingness-to-pay (WTP) price of CNY150.⁶ The subproject also offers more efficient and time-saving vehicle repair service for which the drivers/companies are also willing to pay, compared to current practice that charges higher repair cost because auto-mechanics need to be brought in from town one-hour away. About 20% of vehicles require regular maintenance. Time savings is valued at wage rate of CNY33/hour multiplied by travel time (two hours round-trip) and number of vehicles for repair (1,600 in 2027).

11. *Time savings from upgraded loading/unloading at coal storage warehouses.* Upgrading from manual to fully-automated system at the coal storage shortens time needed for loading and unloading activities at the coal storage by 9 minutes (from 12 minutes without-project to 3 minutes with-project.⁷ At full operation, an average of 30 Chinese trucks would queue daily at the warehouses to load/unload cargo. Time savings is measured using average wages of truckers at CNY39/hour multiplied by the total equivalent hours waiting to load/unload cargo.

12. *Time and vehicle operating cost (VOC) savings from road improvement.* The road from border crossing to storage area within the port will be widened and improved to accommodate expected growth in vehicular traffic. The road expansion will cut travel time and vehicle O&M cost, and reduce time accorded

⁶ WTP was based on phone survey conducted on 13 trading/trucking companies on 3-4 September 2019. [Refer to respondents list, Appendix A to SD-Economic Analysis]. Bid price of CNY 150 is based on prevailing average cost of overnight stays in Mandula town as given in FSR. Survey results reflected high WTP for the proposed facilities.

⁷ Actual time tests were undertaken at the Mandula Port in July 2019 by DI Consultant aided by Port officials.

to vehicular accidents and breakdown along the route.⁸ Available traffic flow and road conditions (i.e., pavement, slope, load, maintenance parts, crew cost, fuel and oils, overheads, etc.) are fed into the HDM4 model to estimate time and VOC savings.⁹

13. *Cost savings using reclaimed water to irrigate border crossing point (BCP) green zone.* The BCP green zone requires 41,000 cubic meter (m³) of water for irrigation. The existing water supply uses groundwater at the cost of over CNY6.00/m³. Under the project, reclaimed water will be stored in a reservoir and piped to the green zone at a lower price of CNY1.00/m³.

Output 1 Subproject 3: Upgrading medical equipment and facilities for the Erenhot International Traditional Chinese and Mongolian Medicine Hospital.

14. *Savings on patient travel.* Since recently being promoted as regional emergency medical center, patients needing urgent medical attention have sought treatment at the hospital. In 2018, about 600 cases (about 5% of total patients) cannot be admitted because they involved serious ailments that require special medical attention the existing hospital facilities cannot provide.¹⁰ As a result, these cases had to choose between travelling to Hohhot or to Beijing where hospitals can address their condition, or not seek medical attention at all. They had to spend considerably on travel fare and incidental costs, resources that would be avoided with the expansion project that includes specific emergency equipment and facilities. Expansion and refurbishing of the international hospital will generate travel cost savings for such patients.¹¹

15. *Prevention of untimely death/permanent disability.* Of the cases that cannot be admitted, 20% is estimated to be fatal when detected late and without administering emergency medical care, hence they were not able to travel to Hohhot or Beijing. The disease incidence per 100,000 population is calculated against the catchment population to estimate the number of cases per disease type. With project, 20% of cases will avoid premature death/permanent disability. The average mortality age, 55 without-project, and the average age with-project, 65 years assumed economically active based on national retirement age, is derived to measure the productive years saved. The labor participation rate is applied to determine the proportion of wage earners. The average wage rate is applied on the number of wage earners to estimate future lifetime earnings.

Output 2 Subproject 4: Ecological restoration for the PRC-Mongolian Erenhot-Zamyn Uud ECZ.

16. *Avoided cost of sand clearing activities.* To strengthen the existing ecological protection of Erenhot against damaging winds and sandstorms, a greenbelt covering 24.52 hectare (ha) will be established within the economic zone, while a shelterbelt will be planted to protect the stretch of the Shugang Highway. These additions to the existing 584,000 trees planted since 2015, will help achieve the long-term plan for wider ecological protection of Erenhot. Each year, roads and open areas need to be cleared of 50,000 m³ of sand and debris. About 2,080 trucks, each with 24 m³ load, are required in clearing operations annually. The O&M cost per truckload in 2019 is CNY690. With the project, the equivalent of CNY1.5 million annually can be avoided or saved.

17. *Cost savings from reclaimed water for irrigation use.* The innovative drip-irrigation system is utilized in 50% of the total planted protective area, with tankered water supplying the rest. The drip system is supplied from groundwater sources. To supplement irrigation water needs, the project will tap reclaimed water from the recycling plant to replace 2.88 million m³ of tankered supply. Tankered water is about CNY6.00/m³. The price of piped reclaimed water is at CNY1.00/m³ based on prevailing price resulting in economic cost savings of CNY5.00/m³.

⁸ Port officials reported frequent traffic jams arising from breakdowns and accidents involving incoming/outgoing trucks, including 100-tonner Mongol haulers that also damage the 2-lane 6.5 km road.

⁹ Refer to Appendix B of Supplementary Document Economic Analysis for the assumptions used in the HDM4 Model.

¹⁰ Erenhot City Hospital Annual Progress Report, 2018.

¹¹ Return travel fares by train and plane for Erenhot-Beijing at \$19.50 and \$84, respectively; for Erenhot-Hohhot at \$17 and \$152, respectively. Incidental travel cost is estimated at CNY50 per person per day.

18. *Willingness-to-pay for windbreak protection.* The strong sandstorms cause costly damage to private and public property so that affected households and establishments express WTP for project improvements that would prevent such damage.¹² Based on the social survey results, the WTP for the improvements amounts to CNY10.22 per capita per month, based on bid prices of CNY6, 8, 10, 12 and 14. WTP is valued by multiplying WTP price by the affected population.

Output 2 Subproject 5: Waste collection and transfer stations, and sanitation intelligent cloud platform.

19. *O&M cost savings from increased waste compression capacity.* With the project, the vertical compression process will be built in the waste transfer station. The compression equipment will reduce waste volume material by 2.5–3.0 times, creating more load space and less collection trips per vehicle. The proposed project covers the ECZ core area, about 3 square kilometer (km²), where 18,000 people generate an average 1.2 kilogram (kg) of refuse or a total 21.6 tons daily. To ensure normal operation of the transfer station, two sealed dump trucks will be acquired. O&M cost without compression is CNY42/ton; when compressed, this is reduced to CNY17/ton. Benefits derive from the O&M cost savings.

20. *Willingness to pay for improved solid waste collection service.* The WTP survey covered the urban area outside the ECZ. It is expected that 50% of the future 18,000 workers will be Chinese residing in the ECZ urban fringes. The average per capita WTP for improved solid waste services is CNY3.60/month, based on bid prices of CNY2, 2.5, 3.3, 5 and 6. The existing solid waste monthly service fee is CNY2.00/capita, but payment collection rate is only 20%.¹³ Subproject benefit derives from WTP the price increment at CNY1.60/capita for the improvement. The ECZ waste generation is estimated at 21.6 tons/day; with plant design capacity at 60,000 tons/day, services can be extended to benefit areas outside the ECZ.

Output 3 Subproject 6: Xiaoweiyang sheep breeding base and embryo transplantation technology.

21. *Economic gains for herders due to improved weight and quality of sheep, and savings on feeds cost.* Using improved propagation technologies under the project, the weight per sheep will increase 10-15 kg, while leaner and tastier meat is produced. The resulting higher product weight and quality will bring higher net gain to herders. Lamb, bred and raised using improved facilities and technologies are monitored from birth using tagging system that provides information on birth weight, immunization, feed and forage, etc., and help assuage buyers and mutton consumers about the quality of the company produce. Traceability increases brand value that yields higher demand for company processed mutton. More economical use and preparation of feeds to sustain the sheep breed quality also result in feed cost savings, further increasing net benefit.

22. *Direct economic gains to herders and contract raisers from Poverty Alleviation Program (PAP).* Under the project-supported PAP, individual herders or cooperatives can enter into agreement with the Xiaoweiyang and have the option to breed and raise company sheep either on their own and in own certified pasture lands, or use company pastures and facilities, ensuring brand security and product safety standard. Both options result in higher price per lamb, averaging CNY120 per head (CNY890 herder price less production, feeds and other costs at CNY700), than market price when sold back to Xiaoweiyang.

¹² WTP survey and focus group discussions were conducted in Erenhot and Mandula on 11-25 June 2019. A total of 125 questionnaires were collected, of which 123 or 98.4% were valid, including 83 in Erenhot and 40 in Mandula. In Erenhot, the survey area included the downtown, Xilin Community, Wanda Community, Nanyuan Community, and Sumu township. In Mandula, the survey team randomly selected samples from list of areas prepared by Project Management Office.

¹³ The current solid waste services cover the urban communities. The proposed project facilities, particularly the decompression equipment will be for the ECZ, although the design capacity is sufficient to include the existing service area. The ECZ is yet to be populated by locators when fully developed. The WTP price is designed for service to such locators. The WTP survey covered urban communities, proxying for ECZ “absent” population at time of survey. Survey results show 84% WTP despite the average WTP price at CNY3.60 is higher than current fee at CNY2.00. The respondents also understand the WTP price is set for 2026/27.

23. **Economic Internal Rate of Return.** The proposed Tranche 1 project investments are economically justified with each output and corresponding subprojects reflecting economic internal rate of return (EIRR) above the economic opportunity cost of capital at 9%. Base case EIRR is between 10.4% and 20.8%, with project overall at 14.3%, and ENPV at CNY1,515 million. Sensitivity analysis shows EIRR remains robust under the test scenarios, and is most sensitive to combined cost increase and benefit reduction at 11.5%. Table 1 summarizes the results.

Table 1: EIRR and Sensitivity Analysis Results

Particulars	Overall	Output 1	Output 2	Output 3
Base Case	14.3%	10.4%	13.3%	20.8%
Capital Cost + 10%	13.4%	9.7%	12.3%	19.7%
O&M Cost + 10%	13.9%	10.0%	13.2%	20.2%
Benefits - 10%	12.9%	9.2%	12.1%	19.0%
Combined Costs +10%, Benefits -10%	11.5%	8.2%	11.1%	17.4%
Delay Implementation by 1 Year	12.3%	8.7%	11.8%	17.8%

EIRR = economic internal rate of return, ENPV= economic net present value, O&M = operation and maintenance.

Source: Asian Development Bank estimates.

24. **RCI Impact on EIRR.** Direct benefits have been identified from infrastructure and smart innovative technologies that contribute to spreading RCI with border towns as portals to regions beyond, particularly Mongolia. Including the direct RCI benefits at CNY, overall EIRR is at 26.9%, and ENPV at CNY7,190 million (Table 2).

Table 2: Tranche 1 Project Discounted Cashflow Analysis (CNY Million)

Year	Benefits			Costs		Sensitive analysis					Implemtn Delay by 1-year
	Total Benefits	Regular PRC	RCI Mongolia	Total Costs	Base Case	Capital Cost + 10%	O&M Cost + 10%	Total Cost + 10%	Benefit - 10%	Benefits - Total Cost + 10%	
2020	-	-	-	732	(732)	(805)	(732)	(805)	(732)	(805)	(732)
2021	-	-	-	599	(599)	(659)	(599)	(659)	(599)	(659)	(599)
2022	1	-	1	448	(448)	(493)	(448)	(493)	(448)	(493)	(448)
2023	1	-	1	188	(187)	(206)	(187)	(206)	(187)	(206)	(187)
2024	1	-	1	168	(167)	(183)	(167)	(183)	(167)	(184)	(167)
2025	373	-	373	70	303	296	303	296	266	259	(69)
2026	594	41	553	87	507	500	505	499	448	439	286
2027	1,605	791	814	271	1,334	1,334	1,307	1,307	1,173	1,146	323
2028	1,753	809	943	273	1,480	1,480	1,453	1,453	1,305	1,277	1,332
2029	1,912	829	1,083	274	1,638	1,638	1,611	1,611	1,447	1,419	1,479
2030	1,981	852	1,130	307	1,675	1,675	1,644	1,644	1,477	1,446	1,606
2031	2,004	874	1,130	284	1,720	1,720	1,691	1,691	1,519	1,491	1,697
2032	2,030	900	1,130	282	1,747	1,747	1,719	1,719	1,544	1,516	1,722
2033	2,058	929	1,130	285	1,774	1,774	1,745	1,745	1,568	1,539	1,745
2034	2,091	961	1,130	288	1,803	1,803	1,775	1,775	1,594	1,566	1,771
2035	2,127	997	1,130	291	1,836	1,836	1,807	1,807	1,623	1,594	1,801
2036	2,164	1,034	1,130	293	1,871	1,871	1,841	1,841	1,654	1,625	1,833
2037	2,208	1,078	1,130	297	1,911	1,911	1,881	1,881	1,690	1,661	1,868
2038	2,258	1,128	1,130	300	1,959	1,959	1,929	1,929	1,733	1,703	1,908
2039	2,318	1,187	1,130	303	2,015	2,015	1,985	1,985	1,783	1,753	1,955
2040	2,387	1,257	1,130	342	2,045	2,045	2,010	2,010	1,806	1,772	1,975
2041	2,467	1,337	1,130	314	2,153	2,153	2,122	2,122	1,906	1,875	2,073
2042	2,562	1,432	1,130	313	2,250	2,250	2,218	2,218	1,993	1,962	2,155
2043	2,675	1,544	1,130	316	2,358	2,358	2,327	2,327	2,091	2,059	2,246
2044	2,807	1,677	1,130	320	2,487	2,487	2,455	2,455	2,207	2,175	2,355
EIRR					26.9%	25.6%	26.7%	25.4%	25.2%	23.7%	23.5%
ENPV	10,522	4,762	5,760	3,246	7,190	7,006	7,050	6,866	6,147	5,822	6,030

() = negative, EIRR = economic internal rate of return, ENPV= econ net present value, O&M = operation and maintenance, PRC = People's Republic of China, RCI = regional cooperation and integration.

Source: Asian Development Bank estimates.

Annex 5: Summary of Financial Analysis

A. Introduction

1. Financial analysis of Tranche 1 was carried out in accordance with the Asian Development Bank (ADB) guidelines.¹⁴ The analysis aims to assess the financial viability of the proposed subprojects under Tranche 1 development, and to ensure their financial sustainability given the limited capacity for cost recovery. The subprojects have revenue-generating and nonrevenue-generating components. Revenue activities are subjected to financial viability analysis to determine the financial internal rate of return (FIRR), which should be greater than the weighted average cost of capital (WACC).¹⁵ Nonrevenue activities are subjected to fiscal impact and sustainability analyses where the relevant government fiscal capacity to finance the incremental cost burden due to the subprojects is assessed. The financial intermediaries (FIs) are subjected to due diligence review.

B. Financial Viability Analysis of Revenue-generating Activities

2. *PRC–Mongolia Erenhot–Zamyn-Uud Economic Cooperation Zone Clean Energy Heating and Pipe Network.* The main content includes the construction of boiler room, heat exchange stations and pipe network. Financing will be through 100% local government budget appropriation. Costs include capital investment at CNY70.34 million, and incremental operation and maintenance (O&M) costs including salary, water, electricity, maintenance and others cost, estimated at CNY2.30 million annually. Revenues will be from service fees charged based on area size and heating load of building structures. The analysis shows it is financially viable with base case FIRR at 3.69%, exceeding the WACC at 2.94%.

3. *Medical Equipment Upgrading for the Erenhot International PRC-Mongolian Hospital.* The scope includes the purchase and upgrading of 50 sets of medical equipment and facilities. Costs include capital investment amounts to CNY65.94 million, with 78.4% financed by ADB loan. Incremental O&M costs including salary, materials, medicines, utilities, maintenance and miscellaneous materials average CNY2.30 million annually. Incremental revenues come from medical fees charged to outpatients and inpatients. The results of the analysis show it is financial viability with FIRR at 6.52%, exceeding the WACC at 0.64%.

4. *Mandula Port International (Highway) Logistics Park Upgrading.* The scope covers the expansion of freight passage at Mandula port, the port service area development (including hotel accommodations and dining facilities, and parking space), and the construction of the Customs supervision office. The capital investment amounts to CNY599.69 million. Annual O&M cost averages CNY66.60 million. Revenues derive from infrastructure facility maintenance fee, hotel accommodation, restaurant sales, parking fee, scouring bath charge, vehicle repair, building rental, and coal storage fee. It is financially viable with FIRR at 5.83%, against WACC at 1.37%.

5. *Establishment of Quarantine Station in Mandula Port, Upgrading of Stud Sheep Breeding Bases and Sheep Industry Comprehensive Development.* The scope includes (1) upgrading stud sheep breeding base; (2) quarantine station in Mandula Port; (3) upgrading five sheep farming

¹⁴ Financial management and Analysis of Projects, Manila, ADB, 2005; Financial Due Diligence: A Methodology Note, Manila, ADB 2009.

¹⁵ The WACC is computed based on the proposed subproject financing plan. ADB loan interest is calculated at 0.253%; cost of equity is assumed at 4.90%, the prevailing interest rate on long-term loan of commercial banks. WACC is calculated on after-tax basis, with income tax assumed at 25%. Real WACC is adjusted to international inflation rate at 1.5% for ADB financing, and national inflation rate at 1.9% for domestic financing.

bases; (4) establishing products traceability management system; (5) establishing Poverty Alleviation Program; (6) construction of sheep slaughtering, processing and logistic park in Tuyou County; (7) project management and capacity building. Subproject capital investment amounts to CNY623.57 million, with 46.4% financed by ADB loan, and the counterpart fund provided by the Inner Mongolia Xiao Wei Yang Stock Raising Sciences and Technologies Co., Ltd (Xiaoweiyang). The O&M costs include staff salaries, sheep procurement, feeds, butchering, and maintenance materials. Revenues come from incremental mutton and offal sales. FIRR is at 5.39%, higher than WACC at 1.58%.

6. The overall Tranche 1 is financially viable with base case at 5.47%. The base case sensitivity analysis reflects robust FIRR under test cases including cost overruns, lower revenues and implementation delay, except when revenue decreases by 10% (Table 1).

Table 1: Results of WACC, FIRR and Sensitivity Analysis (%)

Item	Tranche1 Overall	Innovative Heating	International Hospital	Logistics Center	Xiaoweiyang Subproject
WACC	1.27%	2.94%	0.64%	1.37%	1.58%
1. Base case	5.47%	3.69%	6.52%	5.83%	5.39%
2. Capital cost plus 10%	4.64%	2.78%	3.16%	4.85%	4.75%
3. Operating cost plus 10%	-0.36%	3.42%	<0.00%	4.53%	-4.10%
4. Implementation delayed by 1 year	5.14%	2.85%	6.62%	5.52%	5.07%
5. Revenue decreasing by 10%	-1.79%	2.39%	<0.00%	3.33%	-5.86%

FIRR = financial internal rate of return, WACC = weighted average cost of capital.

Source: Asian Development Bank estimates.

C. Financial Impact and Sustainability of Xiaoweiyang Subproject

7. Xiaoweiyang Subproject will be constructed and operated by Xiaoweiyang, which will provide counterpart fund during construction. Assessment of historical financial statements for the period 2016–2018 reflects net profit and positive cashflows from operating activities of Xiaoweiyang. Current ratio averaged 2.13, while debt-equity ratio levelled at 42:58 in 2017–2018 from 47:53 in 2016. Financial performance was sound and is expected to remain so as the future cash flow projections show sufficient cash generation to finance counterpart fund requirement. To ensure financial sustainability with the project, Xiaoweiyang should maintain current ratio higher than 2.0, debt-equity ratio at 45:55, and gradually decrease debt to achieve debt service coverage ratio to 1.3 by 2025. Table 2 presents the assessment results.

Table 2: Xiaoweiyang Sustainability Assessment (CNY million)

Item	2017	2018	2019	2020	2021	2022	2023	2024	2025
Operating Revenue	968	1,150	1,421	1,694	2,000	2,518	2,836	2,836	2,836
Less: Operation Cost	721	855	974	1,208	1,461	1,886	2,132	2,132	2,132
Taxes	3	4	7	7	8	10	11	11	11
Selling cost	130	151	275	294	311	358	387	387	387
Overhead Cost	37	38	34	39	43	47	52	52	52
Financial Charges	31	33	32	34	36	40	43	43	43
Operating Profit	50	72	99	112	141	176	212	212	212
Non-operation revenue	16	14	4	5	5	5	5	5	5
Profit	63	85	103	117	146	181	217	217	217
Less: Income Taxes	1	1	10	11	14	20	25	25	25
Net Profit	62	84	93	106	132	161	192	192	192
Cash from Operating Activity	80	143	93	106	132	161	192	192	192
Counterpart Fund				21	36	57	106	81	32
Surplus			93	84	96	104	86	111	160
Debt Service Coverage Ratio	0.22	0.34	0.34	0.40	0.51	0.68	0.90	1.07	1.32

Source: Asian Development Bank estimates.

D. Fiscal Impact and Sustainability of Nonrevenue-generating Activities

8. The 2016–2018 fiscal revenue and expenditure statements of Damaoqi County Government (DCG) and Erenhot Municipal Government (EMG) have been reviewed. The fiscal statements are regularly prepared by their respective finance bureaus in accordance with the budget law. Tax revenues are shared between the central and local governments. Revenues since 2017 grew by 4.1% and 2.9% for DCG and EMG, respectively. Budgetary transfers from the central government comprise about 59% and 55% of the total revenue of DCG and EMG, respectively. Both have managed their expenditures adequately, allowing comfortable surplus build-up during the period.

9. DCG will provide counterpart funds in support of the Mandula Port Subproject. Although the subproject is financially viable (para. 4), DCG has the capacity to support debt servicing if the project implementing entity (PIE) is unable to repay the loan. EMG will provide counterpart funds for all Erenhot activities during the construction period, as well as subsidy for O&M cost and debt servicing, if necessary.

10. The fiscal cost burden of the Mandula Port Subproject as a proportion of fiscal revenue ranges between 1.16% and 5.24% during construction period, and between 0.18% and 0.73% during debt repayment period. For the Erenhot Subproject, the proportion ranges between 0.95% and 6.58% during construction period, and between 1.94% and 3.95% during operation and debt repayment period. The findings imply that the DCG and EMG have the capacity to support subproject financial requirements even during peak construction period when investment requirements are highest (Refer to Table 4 for the sustainability analysis of DCG and EMG).

E. Financial Due Diligence of Financial Intermediaries

11. The FIs were assessed for their value to project support for small and medium-sized enterprises (SMEs) as vehicle to alleviate poverty and promote participation of women in business. The participating FI, Bank of Inner Mongolia (BOIM), was assessed in July–August 2019 using the ADB-prescribed financial due diligence (FDD) questionnaire. BOIM's responses were supported by bank financial statements, audit reports and available industry performance benchmark reviews. Both banks have been engaged in lending to SMEs and private enterprises, with BOIM long ahead of its peers in terms of SME lending. Reported total assets in 2018 for BOIM is at CNY140 billion.

12. Although historically, SME and agricultural lending have been the worst performing asset classes in the banking sector, BOIM has in place developed credit risk systems and processes to manage risks. BOIM continues to enhance their credit risk systems and comply with China Banking and Insurance Regulatory Commission (CBIRC) requirements to report capital adequacy ratios (CAR) stipulated in the Capital Management Measures for Commercial Banks (2013). All CAR indicators were being met by BOIM based on 2016–2018 records, however, in 2018, its CAR dropped to 10.53%, nearly equaling the minimum level at 10.50%. BOIM's largest shareholder at 20% is the Department of Finance of Inner Mongolia Autonomous Region, which could put its independence at risk. Despite these developments, FDD assessment of the BOIM finds no significant risks that will strongly impact the potential partnering with the ADB in the proposed project. Table 3 presents the past performance of BOIM.

Table 3: Financial Performance of Financial Intermediaries (CNY million)

Item	BOIM		
	2016	2017	2018
1. Profit and Loss statement			
Net interest income	1,219	541	808
Net fee and commission income	35	38	179
Investment Income	1,254	1,67	1,664
Operating Revenue	2,660	2,387	2,671
Operating expenses	2,001	1,680	1,987
Profit before income tax	668	715	703
Net profit	449	522	543
Net profit for equity shareholders	446	505	543
2. Cash Flow Statement			
Operating activities	2,931	2,156	-4,314
Investing activities	-3,945	-9,346	8,472
Financing activities	-15	918	-225
Net increase (decrease) in cash	-1,029	-6,272	3,933
Cash and equivalents yearend	9,938	3,667	7,599
3. Balance Sheet			
Total Assets	118,641	129,982	139,514
Loans and advances to customers	47,652	58,212	65,414
Total Liabilities	109,198	119,226	128,372
Deposits from customers	78,793	79,423	87,395
Share capital	3,120	3,461	3,461
Total equity for equity shareholders	9,444	10,757	11,141
1. Capital adequacy ratio (%)			
(i) Core tier-one CAR	9.85	10.51	9.53
(ii) Tier-one CAR	9.85	10.51	9.53
(iii) CAR	10.79	11.39	10.53
(iv) Total equity to total assets ratio	0	0	0
2. Asset Quality Indicator (%)			
(i) Non-Performing Loan ratio	2.61	2.62	2.71
(ii) Allowance to NPLs	163.57	154.74	150.54
(iii) Allowance to total loans			
3. Profitability indicator (%)			
(i) Return on assets	0.4	0.42	0.4
(ii) Return on equity	4.86	5.17	4.96
(iii) Cost to revenue ratio	55.88	52.99	52.09
(iv) Net income to operating income	0	0	0
(v) Net interest margin	0	0	0
(vi) Net interest difference	0	0	0
4. Liquidity indicator (%)			
(i) Liquidity ratio	48.16	35.76	29.57
(ii) Loan to deposit ratio	63.18	73.29	74.85

BOIM = Bank of Inner Mongolia, CAR = capital adequacy ratios, NPL = non-performing loan.

Sources: Bank of Inner Mongolia.

Table 4: Fiscal Cost Burden as Percentage of Fiscal Revenue Projection (CNY million)

Item	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2035	2040	2045
1. Damaoqi County Government														
1.1 Total revenue	3,301	2,277	2,436	2,536	2,640	2,748	2,861	2,978	3,100	3,227	3,359	4,820	5,891	7,200
1.1.1 General public budget revenue	3,119	2,188	2,278	2,371	2,468	2,569	2,675	2,784	2,898	3,017	3,141	4,507	5,509	6,733
1.1.2 Governmental fund budget	182	88	158	165	171	179	186	193	201	210	218	313	383	468
1.2 Total expenditure	2,925	2,019	2,431	2,531	2,635	2,742	2,855	2,972	3,093	3,220	3,352	4,810	5,879	7,186
1.2.1 General public budget	2,789	1,934	2,278	2,371	2,468	2,569	2,674	2,784	2,898	3,017	3,140	4,507	5,508	6,732
1.2.2 Governmental fund budget	136	85	154	160	166	173	180	188	195	203	212	304	371	454
1.3 Surplus	377	258	5	5	5	6	6	6	6	7	7	10	12	15
1.4 Total fiscal cost due to subproject					31	144	131	0	0	24	19	16	14	14
1. Counterpart Fund					31	144	131	0	0					
2. O&M and Debt Service										24	19	16	14	13
1.5 Fiscal cost burden as % of fiscal revenue					1.16%	5.24%	4.59%	0.00%	0.00%	0.73%	0.57%	0.33%	0.24%	0.18%
2. Erenhot City Government														
2.1 Total revenue	2,530	2,539	2,515	2,587	2,662	2,739	2,818	2,899	2,983	3,069	3,158	4,080	4,704	5,424
2.1.1 General public budget revenue	2,372	2,381	2,449	2,520	2,593	2,668	2,745	2,824	2,906	2,990	3,076	3,974	4,582	5,283
2.1.2 Governmental fund budget	158	158	65	67	69	71	73	75	77	79	82	106	122	140
2.2 Total expenditure	2,398	2,498	2,420	2,490	2,562	2,636	2,712	2,790	2,871	2,954	3,039	3,927	4,528	5,220
2.2.1 General public budget	2,320	2,342	2,357	2,425	2,495	2,567	2,641	2,717	2,796	2,876	2,959	3,824	4,409	5,083
2.2.2 Governmental fund budget	79	156	64	65	67	69	71	73	75	78	80	103	119	137
2.3 Surplus	132	40	94	97	100	103	106	109	112	115	118	153	176	203
2.4 Total fiscal cost due to subproject					175.2	166.5	169.6	74.32	28.25	121	119	112	109	105
1. Counterpart Fund					175	165.3	170	74	28	0	0	0	0	0
2. O&M and Debt Service					0	1.22	0	0	0	121	119	112	109	105
2.5 Fiscal cost burden as % of fiscal revenue					6.58%	6.08%	6.02%	2.56%	0.95%	3.95%	3.76%	2.75%	2.31%	1.94%

O&M = operation and maintenance.

Source: Asian Development Bank estimates.

Annex 6: Summary of Financial Management Assessment

1. The financial management assessment (FMA) was conducted in accordance with Asian Development Bank's (ADB) Guidelines for the Financial Management and Analysis of Projects and the Financial Due Diligence: A Methodology Note. The FMA considered the capacity of the executing agency – Government of Inner Mongolia Autonomous Region (IMARG), the implementing agencies for the Tranche 1 – Erenhot Municipal Government (EMG), Baotou Municipal Government (BMG), and FIs, and three PIEs, including two state-owned enterprises (SOE) and one private-owned enterprise (POE). The assessment covered funds-flow arrangements, staffing, accounting and financial reporting systems, financial information systems, and internal and external auditing arrangements.

2. **Executing agency.** On behalf of IMARG, the Inner Mongolia Autonomous Region Department of Finance (IDOF) is responsible for the financial management and supervision of the whole project. It has implemented a number of foreign-funded projects, including ADB projects, in recent years. IDOF has accumulated sufficient knowledge and experience in ADB policies and procedures, particularly on the management of advance accounts and processing of loan disbursements. The key staff at IDOF remain unchanged in recent years, and there has been no significant change in the policies and procedures on the side of the Government since the implementation of the Budget Law in 2015. It has been assessed as capable of undertaking the required financial supervision. IMAR has the capacity to manage the advanced account.

3. **Implementing agencies.** BMG and EMG, and selected FIs, namely Bank of Inner Mongolia (BOIM), and other FIs to be selected during the project implementation if any. Baotou Municipal BOF (BBOF) and Erenhot Municipal BOF (EBOF) will be responsible for the financial management and supervision of the respective subprojects, on the behalf of BMG and EMG respectively. IDOF will share financial management experience with BBOF and EBOF. BOIM has a sound financial management foundation.

4. **Project implementing entities.** The PIEs for Tranche 1 are (i) Erenhot Yixin Urban & Rural Development and Construction and Asset Management Co., Ltd (SOE) (Yixin), (ii) Damaoqi Pine Boolean Property Service Co.,Ltd (SOE) (Songbuer), and (iii) Inner Mongolia Xiao Wei Yang Stock Raising Sciences and Technologies Co., Ltd (POE) (Xiaoweiyang). Based on the assessment, Yixin and Xiaoweiyang have sound financial management but Songbuer is currently rather weak in financial management.

5. The assessment identified the main financial management risks as: (i) implementation risk – implementing agencies and PIEs lack of familiarity with ADB disbursement procedures and requirements, lack of the key financial accountant, financial management rules and regulations and budget management system, which could delay the project implementation; (ii) compliance risk - implementing agencies and PIEs lack of familiarity with ADB financial management requirements, particularly relating to accounting, reporting, and auditing, which may delay project reporting and the identification of issues on the use of loan proceeds; and (iii) financing risk – delays in provision of or inadequate counterpart funding which could delay project implementation; and (iv) foreign exchange and interest rate risks. Implementing agencies and PIEs lack of experience in managing foreign capital might increase the financial burden due to the potential depreciation of the CNY and the increase in interest rate.

6. The existing financial management arrangements for executing agency and implementing agencies indicate that they have adequate capacity to administer the proposed project having previously demonstrated the capacity to administer the SOE procedure. IDOF will be accountable

and responsible for the proper use of advances to advance account. The PIEs shall maintain a special bank account where ADB loan proceeds and counterpart funds will be channeled. The PIEs will enhance their capabilities by undertaking training on ADB's disbursement policies and procedures. The overall financial management risk-rating of the project, before considering mitigating measures is **substantial**. The identified financial management risks will be closely monitored during project implementation. The executing agency, the implementing agencies and PIEs have agreed to implement an action plan as key measures to address the deficiencies. The financial management action plan is provided in Table 1.

Table 1: Financial Management Action Plan

No.	Action	Responsibility	Timing
Investment Loan			
1.	Training on ADB financial management requirements and procedures, including loan disbursement, accounting and reporting, auditing, and foreign exchange risk management	IDOF, IPMO, IAs, ADB	1 month before loan effectiveness and any other time as needed
2.	Development of financial management manuals	IDOF, IPMO, IAs	Before loan effectiveness
3.	IAs and PIEs prepare/refine the written job descriptions for their financial staff involved in the project implementation	IPMO, IAs, PIEs	Before loan effectiveness
4.	Incorporating project annual investment and financial plan into the IAs' annual budgeting plan	IAs	During budget preparation
5.	Recruit a qualified accountant	Songbuer	No later than loan effectiveness
Financial intermediation modality loan			
6.	Training on ADB financial management requirements and procedures, including loan disbursement, accounting and reporting, auditing, and foreign exchange risk management	IDOF, IPMO, FIs, ADB	1 month before loan effectiveness and any other time as needed
7.	Development of financial management manuals	IDOF, IPMO, FIs	Before loan effectiveness

ADB = Asian Development Bank, FI = financial institution, FIL = financial intermediation loan, IAs = implementing agencies, IDOF = Inner Mongolia Autonomous Region Department of Finance, IPMO = Inner Mongolia Autonomous Region Project Management Office, PIEs = project implementing entities, Songbuer = Damaoqi Pine Boolean Property Service Co., Ltd.

Source: Asian Development Bank.