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19 November 2018

Proposed Loan
Yunnan Lincang Border Economic Cooperation Zone
Development Project
(People's Republic of China)

1. The Report and Recommendation of the President (RRP: PRC 49310-002) on the proposed loan to the People's Republic of China for the Yunnan Lincang Border Economic Cooperation Zone Development Project is circulated herewith.
2. This Report and Recommendation should be read with *Country Operations Business Plan: People's Republic of China, 2018–2020*, which was circulated to the Board on 5 April 2018 (DOC.IN.63-18).

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Report and Recommendation of the President to the Board of Directors

Project Number: 49310-002
November 2018

Proposed Loan People's Republic of China: Yunnan Lincang Border Economic Cooperation Zone Development Project

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 12 November 2018)

Currency unit	–	yuan (CNY)
CNY1.00	=	\$0.1437
\$1.00	=	CNY6.9569

ABBREVIATIONS

ADB	–	Asian Development Bank
EIA	–	environmental impact assessment
EMP	–	environmental management plan
GAP	–	gender action plan
GMS	–	Greater Mekong Subregion
km	–	kilometer
LBECZ	–	Lincang Border Economic Cooperation Zone
LMG	–	Lincang Municipal Government
m ²	–	square meter
MSW	–	municipal solid waste
O&M	–	operation and maintenance
PAM	–	project administration manual
PMO	–	project management office
PRC	–	People's Republic of China
RCI	–	regional cooperation and integration
SMEs	–	small and medium-sized enterprises
t/d	–	ton per day
TVET	–	technical and vocational education and training

NOTE

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

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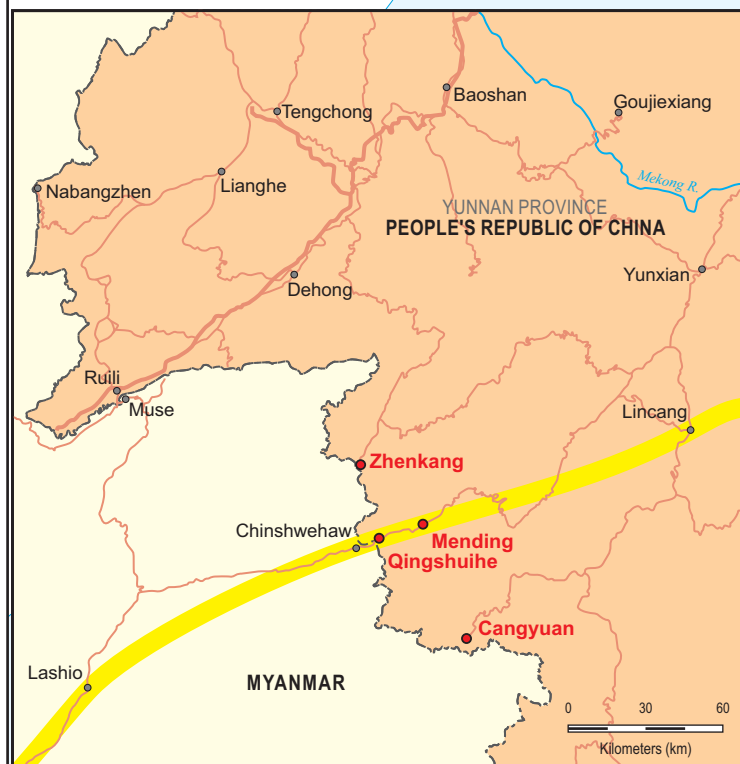
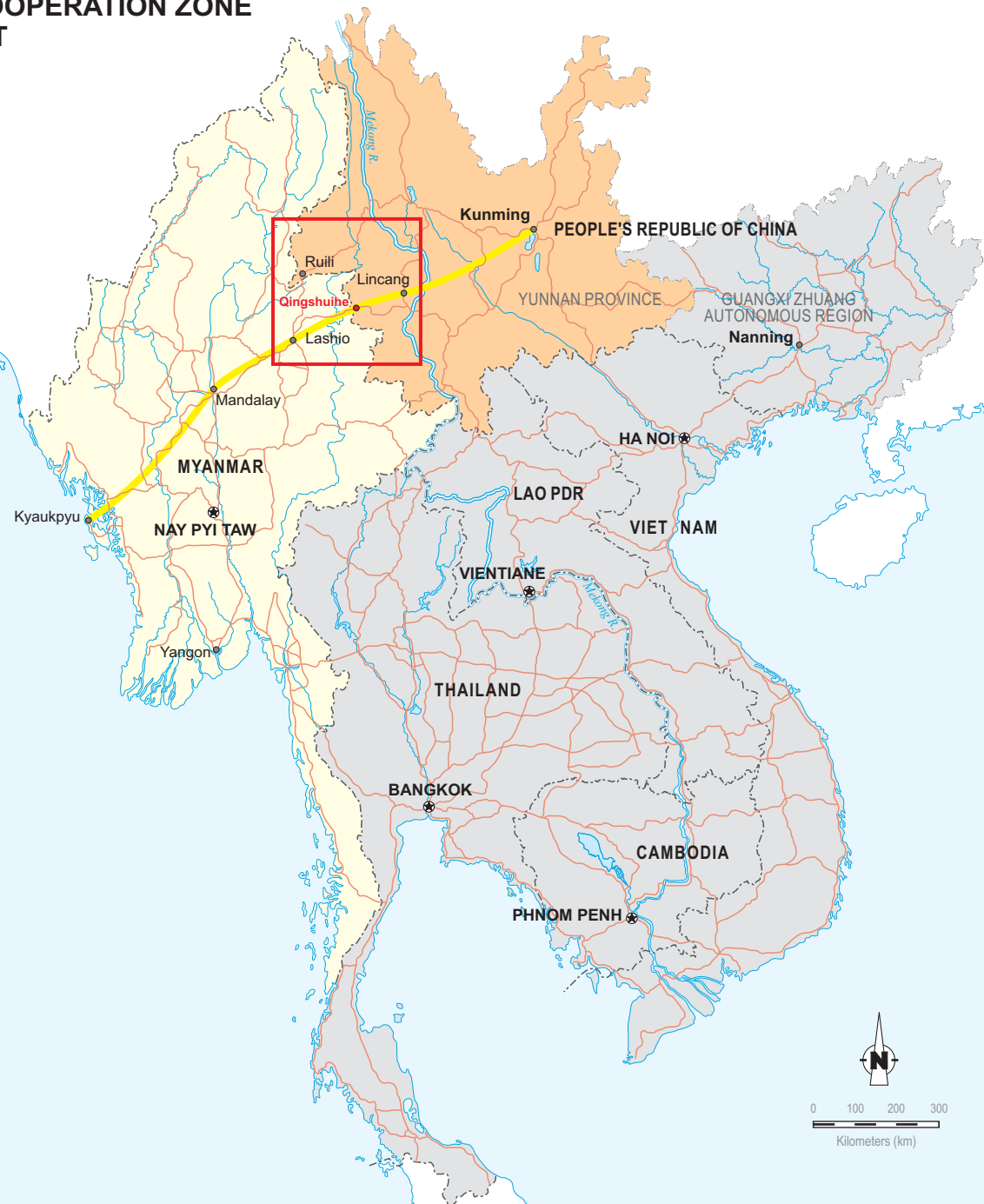
PROJECT AT A GLANCE

1. Basic Data		Project Number: 49310-002	
Project Name	Yunnan Lincang Border Economic Cooperation Zone Development Project	Department /Division	EARD/EASS
Country Borrower	China, People's Republic of People's Republic of China	Executing Agency	Lincang Municipal Government
2. Sector	Subsector(s)	ADB Financing (\$ million)	
Water and other urban infrastructure and services	Other urban services	80.00	
	Urban flood protection	30.00	
	Urban sanitation	70.00	
	Urban solid waste management	20.00	
	Education	Pre-primary and primary	25.00
Health	Health system development	25.00	
		Total	250.00
3. Strategic Agenda	Subcomponents	Climate Change Information	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive	Climate Change impact on the Project	Medium
Environmentally sustainable growth (ESG)	Disaster risk management	ADB Financing	
	Global and regional transboundary environmental concerns	Adaptation (\$ million)	20.15
	Urban environmental improvement	Mitigation (\$ million)	14.36
Regional integration (RCI)	Pillar 2: Trade and investment		
4. Drivers of Change	Components	Gender Equity and Mainstreaming	
Governance and capacity development (GCD)	Institutional development	Effective gender mainstreaming (EGM)	
5. Poverty and SDG Targeting		Location Impact	
Geographic Targeting	No	Urban	High
Household Targeting	No		
SDG Targeting	Yes		
SDG Goals	SDG3, SDG4, SDG6, SDG9, SDG11		
6. Risk Categorization:	Complex		
7. Safeguard Categorization	Environment: A Involuntary Resettlement: B Indigenous Peoples: B		
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		250.00	
Sovereign Project (Regular Loan): Ordinary capital resources		250.00	
Cofinancing		0.00	
None		0.00	
Counterpart		152.80	
Government		152.80	
Total		402.80	
Currency of ADB Financing: USD			

GREATER MEKONG SUBREGION YUNNAN LINCANG BORDER ECONOMIC COOPERATION ZONE DEVELOPMENT PROJECT

- Project Town
 - Kunming–Lincang–Lashio–Mandalay–Kyaukpyu Corridor
 - ★ National Capital
 - City/Town
 - Road
 - River
 - Provincial Boundary
 - - - International Boundary
 - LAO PDR Lao People's Democratic Republic
- Boundaries not necessarily authoritative.

This map was produced by the cartography unit of the Asian Development Bank. The boundaries, colors, denominations, and any other information shown on this map do not imply, on the part of the Asian Development Bank, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries, colors, denominations, or information.



I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to the People's Republic of China (PRC) for the Yunnan Lincang Border Economic Cooperation Zone Development Project.

2. The project will address cross-border trade capacity, border connectivity, and urban and social development issues in the Cangyuan Wa, Gengma Dai and Wa, and Zhenkang counties in Lincang Prefecture; and support Yunnan Province in enhancing regional cooperation and integration (RCI) under the Greater Mekong Subregion (GMS) program, focusing on economic corridor development. It is expected to enhance RCI in the Shan border province of Myanmar by providing benefits to Myanmar nationals who trade, work, and use social services in the project counties.

II. THE PROJECT

A. Rationale

3. **Remote location and high poverty levels.** Lincang Prefecture is situated in the remote southwest region of Yunnan Province on the border with Myanmar, and is characterized by significant urban and rural poverty. Per capita gross domestic product in the prefecture reached CNY21,967 in 2016 up 10.6% over 2015, however the annual disposable income of urban residents was CNY22,901 per capita, well below the PRC average. The counties of Cangyuan Wa and Zhenkang are officially designated as national poverty counties, and are home to a large share of the prefecture's urban poor. Many Myanmar nationals live and work in these counties, which are located on the PRC–Myanmar border. Most are seasonal workers who increasingly secure manual jobs in factories established near the land ports and border cities of Lincang Prefecture. Many people from Myanmar use hospitals and schools in the three project counties in preference to the poor municipal services available in Myanmar. Most of the seasonal workers belong to ethnic minorities, which account for a significant proportion of the population in the three counties: 93.9% in Cangyuan Wa County (Wa is the major ethnic group), 52.2% in Gengma Dai and Wa County, and 31.5% in Zhenkang County.

4. **Regional cooperation and integration potential.** Lincang Prefecture's location and 300 kilometer (km) border with Myanmar provide the potential for it to become an important trade gateway by which the PRC can reach key Indian Ocean ports, and thereby facilitate access to South Asia, the Middle East, and Europe. Lincang Prefecture complements other border regions of Yunnan by enabling the growing trade between the PRC and Myanmar, which reached \$9.7 billion in 2015, up from \$3.6 billion in 2010. Much of the trade originates at the local level, and is conducted largely by private sector small and medium-sized enterprises (SMEs). In May 2017, the ministries of commerce of the PRC and Myanmar signed a memorandum of understanding for the joint development of border economic cooperation zones. Lincang Prefecture's comparative advantage is its location—along the shortest route from Kunming to Myanmar's Kyaukpyu Port, on the Bay of Bengal. Yunnan's economic and social development strategies have highlighted the potential for the border areas of Lincang Prefecture to become an important manufacturing and logistics hub along an economic corridor currently being developed through major investment projects such as the Kunming–Mandalay highway and the freight railway linking Kunming to Kyaukpyu.

5. **Development needs.** Lincang Prefecture's poor infrastructure and the low competitiveness of its second- and third-tier cities are hindering the enhancement of cross-border

trade, and the achievement of sustainable economic and social development. The existing customs and quarantine inspection facilities at Qingshuihe, the prefecture's main land port, are inadequate to handle the border crossing point's growing trade volume. Further, the current trading market area and warehouses are outdated and in poor condition, affecting the quality of logistical services provided to local traders and SMEs. A similar situation exists in the town supporting the land port. Qingshuihe's urban road network is inadequate for current residential and commercial needs and the lack of road capacity makes urban areas difficult to access, causing economic losses and safety concerns for road users and pedestrians. Access to basic utilities is limited—26% of households lack access to clean piped water and 29% are not connected to the sewerage system. Municipal solid waste (MSW) management capacity is limited, sorting facilities are lacking, and collection systems are basic, resulting in considerable environmental pollution and general nuisance. Qingshuihe is crossed by the Nanting River, which lacks flood alleviation infrastructure; some areas experience seasonal flooding, causing significant economic losses. Limited customs and logistical facilities in the city and its land port inhibit the activity of local enterprises and traders, slowing the flow of goods across the border. In addition, the prefecture's border counties of Cangyuan Wa, Gengma Dai and Wa, and Zhenkang have outdated social services (e.g., schools and hospitals), and are unable to serve growing populations of local urban–rural residents, and of Myanmar migrants.

6. **Lincang Border Economic Cooperation Zone.** As a first step in addressing constraints to cross-border trade, as well as economic and social development in Lincang Prefecture, on 23 September 2013 the PRC's State Council approved the establishment of a national-level border economic cooperation zone that aims to (i) eliminate bottlenecks created by inadequate infrastructure, (ii) promote cross-border trade and investment to improve living conditions of residents, (iii) promote sustainable regional economic and social development, and (iv) strengthen neighborly cooperation with Myanmar. The Lincang Border Economic Cooperation Zone (LBECZ) is comprised of several core industrial zones covering 3.47 square kilometers and located in the counties of Cangyuan Wa, Gengma Dai and Wa, and Zhenkang (including a tier 1 national port in Qingshuihe). To boost socioeconomic benefits, the LBECZ Management Committee has devised plans to develop 200 square kilometers of adjacent land in State Council-approved core industrial zones, which will provide complementary commercial and residential development areas; and additional industrial, logistics, and trading capacity. In light of the security situation in Myanmar, the LBECZ is instrumental in building cooperation dialogue with authorities in Myanmar (nationally and in Shan State) to enhance the development of the economic corridor beyond the PRC.

7. **Strategic fit.** The development of the LBECZ is supported by the national and provincial strategic frameworks for urban development and RCI. The PRC's Thirteenth Five-Year Plan for National Economic and Social Development, 2016–2020 and the National New-Type Urbanization Plan, 2014–2020 both call for the development of small and medium-sized urban centers in key strategic border areas of the PRC, and establishment of border economic cooperation zones.¹ Similar focus for the PRC is the development of border areas and the enhancement of cross-border cooperation to promote connectivity and strengthen economic partnerships in the spirit of open regionalism. Additionally, RCI constitutes an important means to increase integration with the regional and global economy, and is highlighted as a priority in the Thirteenth Five-Year Plan. In 2016, the State Council approved a list of key border areas and trade ports, and identified actions for their development, while the governments of the PRC and

¹ Government of the PRC, State Council. 2016. *The Thirteenth Five-Year Plan for National Economic and Social Development of the People's Republic of China, 2016–2020*. Beijing; and Government of the PRC, State Council. 2014. *National New-Type Urbanization Plan, 2014–2020*. Beijing.

Myanmar began an ambitious cooperation program in 2014 intended to develop a “PRC–Myanmar corridor” from Kunming to the sea port of Kyaukpyu, in which the LBECZ plays a key role. The corridor includes highway and railway links, as well as key urban and logistic centers. Many sections of the corridor in both countries are already under construction, with others in the planning and design stage.

8. Urban development and RCI are integral to Yunnan Province’s Thirteenth Five-Year Plan, which emphasizes (i) strengthening cooperation with the GMS countries, (ii) participating in major international economic corridors linking Yunnan and the GMS, and (iii) serving as the gateway for the PRC’s southeast region.² However, Yunnan Province is constrained by its low urbanization rate; despite rapid development in the Kunming area, many of the province’s small and medium-sized cities suffer from inadequate urban infrastructure and limited connectivity. Through the GMS, Yunnan has been prioritizing the development of economic corridors, while highlighting the importance of cross-border cooperation as a way to enhance the benefits for neighboring countries, particularly Myanmar. Yunnan’s RCI action plan includes priority investments for development of the PRC–Myanmar corridor through Lincang Prefecture, which are intended for financing by various sources, including the PRC and Yunnan governments, multilateral development banks, and the private sector.

9. The project (i) supports Strategy 2030 of the Asian Development Bank (ADB) in making cities more livable, fostering RCI, and accelerating progress in gender equality; (ii) is in line with (a) ADB’s urban and water operational plans by promoting green, competitive, and inclusive cities; and (b) ADB’s operational plan for RCI by strengthening connectivity between economies; (iii) is consistent with ADB’s country partnership strategy for the PRC, 2016–2020 in terms of facilitating inclusive urbanization and enhancing RCI; (iv) is included in the country operations business plan for the PRC, 2018–2020, which references inclusive development of small cities; (v) is aligned with the latest strategic priorities of the GMS, and (vi) is in support of the achievement of several sustainable development goals of the United Nations related to health, education, sanitation, economic growth, and sustainable cities.³

10. **Continuity of development initiatives and lessons learned.** The project is part of ADB’s continuous engagement to assist Yunnan in achieving green and sustainable urban development, and support the PRC in enhancing RCI. The project design incorporates lessons learned from previous ADB-financed urban development projects in Yunnan, as well as in small and medium-sized cities in the PRC. These lessons include enhanced implementation arrangements with integral capacity support from the Yunnan provincial authorities and improved design of project components in order to further support urban–rural integration. The project will also build on ADB’s experience from recent urban development and RCI projects in strategic border areas of the PRC on key issues such as construction and management of logistics and industrial parks and on the role of cross-border migrant workers.⁴

² Government of Yunnan Province, State Council. 2016. *The Thirteenth Five-Year Plan for Economic and Social Development of the Province of Yunnan, People’s Republic of China, 2016–2020*. Beijing.

³ ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila; ADB. 2013. *Urban Operational Plan, 2012–2020*. Manila; ADB. 2011. *Water Operational Plan, 2011–2020*. Manila; ADB. 2016. *Country Partnership Strategy: People’s Republic of China, 2016–2020—Transforming Partnership: People’s Republic of China and Asian Development Bank*. Manila; ADB. 2018. *Country Operations Business Plan: People’s Republic of China, 2018–2020*. Manila; and ADB. 2018. *GMS Economic Cooperation Program: Regional Investment Framework 2022*. Manila.

⁴ Relevant ADB projects are listed in Development Coordination (accessible from the list of linked documents in Appendix 2).

11. **Value addition of ADB assistance.** By designing a multisector project that includes urban, social, and trading infrastructure, ADB has strengthened a holistic approach that enhances competitive, green, and inclusive development in the small and medium-sized urban centers of this border region. The project is thus aligned with the livable cities vision endorsed by both the PRC and ADB. Throughout the project implementation, ADB will provide recommendations to LBECZ regarding their master plan review process to introduce best practices in urban planning and development. Although the project is being implemented entirely in the PRC, ADB has ensured cross-border spillover effects by designing each component so that Myanmar nationals will also be beneficiaries. This is particularly the case for (i) trading markets and logistics parks, which will accommodate farmers and traders from Myanmar; and (ii) schools and hospitals, which will benefit large numbers of children and other family members from Myanmar. Output 4 of the project (on institutional capacity development) includes features that complement the infrastructure components, thereby enhancing their RCI impact. Some of these features, such as those focusing on SMEs and technical and vocational education and training (TVET), will be designed to enhance the capacity of entrepreneurs and workers from Myanmar. The project will also be effectively mainstreaming gender equality through its social infrastructure and services components. For instance, the hospitals will have specialized maternity and obstetrics and gynecology departments promoting safe motherhood and women's reproductive health, and the schools will have gender-inclusive design features and will be staffed by at least 60% women.

B. Impacts and Outcome

12. The project is aligned with the following impacts: (i) economic growth potential for LBECZ and border areas of Myanmar enhanced; (ii) benefits of RCI in LBECZ and border areas of Myanmar realized; and (iii) living conditions and public health of residents of LBECZ and border areas of Myanmar improved (footnote 1). The project will have the following outcome: competitiveness of urban centers, logistics and industrial parks, and land ports in project counties and LBECZ enhanced.⁵

C. Outputs

13. **Output 1: Cross-border trade infrastructure improved.** This includes (i) construction and operationalization of a border resident trade market, with a total building area of 107,454 square meters (m²); (ii) construction of an international border cooperation area with a total building area of 171,633 m²; and (iii) construction of five urban secondary roads of 4.55 km and a new 350 meter-long bridge over Nanting River with approach roadway, and rehabilitation of a 523-meter Class II road to link Qingshuihe and Mangka border port.

14. **Output 2: Integrated urban environment infrastructure in Mengding and Qingshuihe National Port areas improved.** This includes (i) construction of a water supply system in Qingshuihe, including a treatment plant with a total capacity of 20,000 cubic meters per day, a water intake structure and water transmission line of 35 km, and a water distribution network of 28.1 km; (ii) construction of a wastewater treatment system in Qingshuihe, including a treatment plant with a total treatment capacity of 10,000 cubic meters per day and wastewater collection pipe network of 7.26 km; (iii) establishment of a MSW management system with six collection stations with a capacity of 7 tons per day (t/d), and toilets, in Mengding; two transfer stations (capacity of 27 t/d and 21 t/d) and one collection station (capacity of 7 t/d), and a toilet, in Qingshuihe; and MSW handling equipment for both towns; (iv) rehabilitation of 2.38 km of Qingshui River and 1.00 km of Nanpa River, including ecological embankments and landscaping;

⁵ The design and monitoring framework is in Appendix 1.

and (v) delivery of six electric buses and construction of electric charging stations (one each in Mengding and Qingshuihe) for urban public transportation.

15. **Output 3: Social infrastructure and services improved.** This includes (i) construction of a new PRC–Myanmar Friendship Hospital with 499 bed capacity and a total building area of 56,009 m²; (ii) construction of a new Qingshuihe Hospital with 99 bed capacity and a total building area of 9,006 m²; (iii) construction of a new Cangyuan Guomen No. 2 Elementary School with 1,080 student capacity and a total building area of 13,194 m²; and (iv) upgrading and expansion of the existing Qingshuihe Guomen Elementary School to 1,080 student capacity; and construction of new classroom building, student dormitory, and cafeteria, with a total building area of 7,721 m².

16. **Output 4: Institutional capacity of involved agencies improved.** This includes (i) project implementation management and support and safeguards monitoring for the implementation of the environmental management plan (EMP), resettlement plans, ethnic minority development plan, and gender and social development action plans; (ii) cross-border trade and logistics capacity building; (iii) development of SMEs; (iv) teacher training and border elementary school curriculum enhancement; (v) TVET school leadership; (vi) health care services and hospital management improvement; (vii) RCI development and capacity building; (viii) LBECZ master plan development and improvement study;⁶ and (ix) policy dialogue on water tariff system.

D. Summary Cost Estimates and Financing Plan

17. The project is estimated to cost \$402.80 million (Table 1). Detailed cost estimates by expenditure category and by financier are included in the project administration manual (PAM).⁷

Table 1: Summary Cost Estimates
(\$ million)

Item	Amount ^a
A. Base Cost^b	
1. Output 1: Cross-border trade infrastructure improved	198.92
2. Output 2: Integrated urban environment infrastructure in Mengding and Qingshuihe National Port areas improved	46.08
3. Output 3: Social infrastructure and services improved	76.13
4. Output 4: Institutional capacity of involved agencies improved	7.00
Subtotal (A)	328.13
B. Contingencies^c	43.05
C. Financial Charges During Implementation^d	31.62
Total (A+B+C)	402.80

^a Includes taxes and duties of \$15.69 million, of which \$12.20 million will be financed by the Asian Development Bank. Such amount does not represent an excessive share of the project cost. The government will finance taxes and duties of \$3.49 million through cash contribution.

^b In 2018 prices as of 10 September 2018.

^c Physical contingencies computed at 8% for civil works; and 8% for field research and development, training, surveys, and studies. Price contingencies computed at average of 1.6% on foreign exchange costs and 2.3% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

^d Includes interest and commitment charges. Interest during construction for the ordinary capital resources loan has been computed at the 5-year United States dollar fixed swap rate plus an effective contractual spread of 0.5% and maturity premium of 0.1%. Commitment charges for the ordinary capital resources loan are 0.15% per year to be charged on the undisbursed loan amount.

Source: Asian Development Bank estimates.

⁶ The project will provide inputs toward the review of the LBECZ master plan and identify best practices and innovative features of urban planning aimed at enhancing the livability of urban centers in the LBECZ.

⁷ Project Administration Manual (accessible from the list of linked documents in Appendix 2).

18. The government has requested a regular loan of \$250 million from ADB's ordinary capital resources to help finance the project. 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 London interbank offered rate (LIBOR)-based lending facility; a commitment charge of 0.15% per year; and such other terms and conditions set forth in the draft loan and project agreements. Based on the straight-line method, the average maturity is 15.75 years, and the maturity premium payable to ADB is 0.10% per year. The PRC is the borrower of the loan and will make the loan available through the Yunnan Provincial Government to the Lincang Municipal Government (LMG), and to the LBECZ and Cangyuan Wa and Zhenkang county governments, which will assume the foreign exchange and interest variation risks of the ADB loan.

19. The summary financing plan is in Table 2. ADB will finance the expenditures in relation to civil works, goods, consulting services, and capacity development activities.

Table 2: Summary Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank ^a		
Ordinary capital resources (regular loan)	250.0	62.07
Government	152.8	37.93
Total	402.8	100.00

^a Because two of the project counties are officially designated as national poverty counties by the government, the Asian Development Bank has been requested to finance more than 50% of the total project cost.

Source: Asian Development Bank estimates.

20. Climate mitigation is estimated to cost \$14.36 million and climate adaptation is estimated to cost \$20.15 million. ADB will finance 62.07% of mitigation costs and 62.07% of adaptation costs. Details are in the PAM.⁸

E. Implementation Arrangements

21. LMG is the executing agency; and LBECZ and Cangyuan Wa and Zhenkang county governments are the project implementing agencies. A project leading group, headed by the mayor of LMG and with representatives from the Lincang Municipal Finance Bureau, Lincang Municipal Development and Reform Commission, and other key bureaus of Lincang municipality, has been established for effective coordination for the project implementation. A project management office (PMO) has been established within LBECZ Management Committee, headed by the director, with staff from other LBECZ units and offices. The PMO will provide overall guidance, supervision, coordination, and management support for project implementation on behalf of LMG. A project implementation unit has been established in each implementing agency for interagency coordination, and management and implementation. The LBECZ PMO will also serve as the project implementation unit for LBECZ's components. Procurement (including consulting services) to be financed by the loan will follow the ADB Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time).⁹ The implementation arrangements are summarized in Table 3 and described in detail in the PAM (footnote 7).

⁸ Climate Change Assessment (accessible from the list of linked documents in Appendix 2).

⁹ ADB. 2017. *ADB Procurement Policy: Goods, Works, Nonconsulting and Consulting Services*. Manila; and ADB. 2017. *Procurement Regulations for ADB Borrowers: Goods, Works, Nonconsulting and Consulting Services*. Manila.

Table 3: Implementation Arrangements

Table 3: Implementation Arrangements			
Aspects	Arrangements		
Implementation period	January 2019–December 2024		
Estimated completion date	June 2024		
Estimated loan closing date	December 2024		
Management			
(i) Oversight body	Project Leading Group Mayor of Lincang Municipal Government (chair) Representatives from Lincang Municipal Finance Bureau, Lincang Municipal Development and Reform Commission, and other key bureaus of Lincang municipality (members)		
(ii) Executing agency	Lincang Municipal Government		
(iii) Key implementing agencies	LBECZ, CCG, and ZCG		
(iv) Implementation unit	Project management office within LBECZ Management Committee; headed by the director, with staff from other LBECZ units and offices Project implementation units at LBECZ, CCG, and ZCG LBECZ – 10 staff (adequate) CCG – 2 staff (4 proposed) ZCG – 3 staff (5 proposed)		
Procurement	OCB (advertised internationally)	2 contracts	\$18.38 million
	OCB (advertised nationally)	35 contracts	\$268.45 million
Consulting services	Quality- and cost-based selection (7 contracts)	407 person-months (74 international and 333 national)	\$4.90 million
	Consultants' qualifications selection (4 contracts)	95 person-months (3 international and 92 national)	\$0.93 million
	Individual consultant selection (3 contracts)	14 person-months (national)	\$0.14 million
Retroactive financing and/or advance contracting	Advance contracting includes one civil works and four consulting services packages. Retroactive financing will apply up to 20% of the loan amount for contracts incurred prior to loan effectiveness, but not earlier than 12 months prior to the signing of the loan agreement.		
Disbursement	The loan proceeds will be disbursed following ADB's <i>Loan Disbursement Handbook</i> (2017, as amended from time to time) and detailed arrangements agreed between the government and ADB.		

ADB = Asian Development Bank, CCG = Cangyuan Wa County Government, LBECZ = Lincang Border Economic Cooperation Zone, OCB = open competitive bidding, ZCG = Zhenkang County Government.
Source: Asian Development Bank.

III. DUE DILIGENCE

A. Technical

22. The project was assessed as technically feasible due to its compatibility with the PRC's engineering guidelines, regulations, topography and climate, and strategic and sector priorities. Design options were compared before selecting the best technologies in terms of cost, and environmental and social impacts. Climate change adaptation measures were incorporated based on climate risk and vulnerability assessments. The capacity-building components were based on a needs assessment for the successful implementation and operation of project facilities. The PMO will provide funding and a mechanism for operation and maintenance (O&M) for all infrastructure to be developed under the project.

B. Economic and Financial

23. **Economic analysis.** The economic analysis prepared for the overall project and individual subprojects concluded the project is economically viable.¹⁰ The base case economic internal rate of return for the entire project is 12.5%, which exceeds the economic opportunity cost of capital. Calculation of the project's economic benefits considered (i) willingness to pay for incremental water supply, wastewater treatment, and improved solid waste collection and treatment services; (ii) avoided losses and improved amenity associated with the river rehabilitation subproject; (iii) welfare gains through increased production of agricultural and industrial products, and trade market and international cooperation zone cost savings for border residents; (iv) time savings, vehicle operating cost savings, and accident reduction for Qingshuihe border infrastructure subproject; and (v) human resource returns associated with education facilities and disability-adjusted life-year values for hospital subprojects. Economic costs comprise capital costs, including physical contingencies and O&M costs.

24. **Financial analysis.** A financial analysis has been undertaken to establish the project's financial viability and sustainability.¹¹ For the three revenue-generating subprojects, financial viability assessment was based on the comparison between the projected real financial internal rate of return and the weighted average cost of capital; the water subproject is assessed as financially viable as its projected financial internal rate of return exceeds the weighted average cost of capital. The financial sustainability assessment indicates that the project county governments have sufficient funds to pay the debt service and O&M costs during operation, given that the higher-level (provincial and federal) governments are expected to continue providing adequate budget allocations, however reliance on these allocations poses a risk to financial sustainability. A policy dialogue with LMG on water tariff systems to meet the PRC regulations and improve project sustainability is to be undertaken during implementation.¹²

C. Governance

25. A financial management assessment was conducted for LMG and the implementing agencies. The financial management risk is *moderate* mainly because the (i) PMO and implementing agencies are unfamiliar with ADB financial management policy and procedures, including annual project reporting; and (ii) implementing agencies lack accounting staff for the review procedure. These risks will be mitigated by contracting with financial specialists as part of the project implementation consultants. A procurement capacity assessment concluded that the overall procurement risk for the project is *moderate*. The project is not the first externally financed development project in Yunnan. However, it is the first for LMG and the implementing agencies. It was confirmed that LMG will receive advice and support from other agencies of the Yunnan provincial government with experience in implementing ADB projects. Mitigation measures agreed with LMG have been incorporated into the project design, and will be closely monitored during project implementation as specified in the PAM.

26. ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government, LMG, and implementing agencies. The specific policy requirements and supplementary measures are described in the PAM (footnote 7).

¹⁰ Economic Analysis (accessible from the list of linked documents in Appendix 2).

¹¹ Financial Analysis (accessible from the list of linked documents in Appendix 2).

¹² In a recent regulatory decree issued by the State Council, the Government of the PRC has made it clear that tariffs for water, wastewater, and solid waste must be revised to realize cost recovery by no later than 2025.

D. Poverty, Social, and Gender

27. A poverty, social, and gender analysis was carried out to assess the impacts of the project on poor and vulnerable households, and a gender action plan (GAP) and social development action plan have been prepared, and their implementation will be monitored.¹³ There are 288,924 project direct beneficiaries, of which 47.37% (136,851) are women; 42.80% (123,650) are minority beneficiaries; and 6.59% (19,037) are poor. The project will enhance regional social inclusiveness because Myanmar border residents will enjoy improved public facilities and social services in the three project counties, and share the benefits from cross-border trade development. Two of the project counties are national poverty counties—poverty ratios in 2016 were 18.5% in Cangyuan Wa and 8.2% in Zhenkang—much higher than the 5.05% average of Lincang. Lack of public infrastructure and social facilities, low education levels, low agricultural productivity, and lack of industrial competitiveness are key factors causing poverty in the project areas. The project will positively impact poor people, who will benefit from improved infrastructure and social services, increased business opportunities, and economic development. A rapid health impact assessment identified health risks from both vector-borne and lifestyle-related diseases, and the need for expanded health services for local and migrant populations. Implementation of a public health management plan (to complement the hospital subproject) using technical assistance resources is being explored.

28. The project is categorized *effective gender mainstreaming* and will significantly benefit women, who are primarily responsible for water collection and conservation, wastewater and solid waste disposal and management, and related household activities. Women use public transport more than men, and consider traffic safety and public transport access improvements as important benefits that will enhance their quality of life. The GAP will (i) ensure job opportunities for women during construction and operation (30%); (ii) ensure gender-responsive physical design features in the project; (iii) enhance opportunities for women through capacity development (i.e., development of SMEs and TVET); and (iv) support women's equitable participation in all project-related public consultations (50%). Social and gender specialists will be hired to ensure the effective implementation of the GAP.

E. Safeguards

29. In compliance with ADB's Safeguard Policy Statement (2009), the project's safeguard categories are as follows.¹⁴

30. **Environment (category A).** The categorization was based on the project having numerous multisector components and potential accumulative impacts to the project area. An environmental impact assessment (EIA), including an EMP was finalized in compliance with ADB's Safeguard Policy Statement and disclosed on ADB's website on 25 May 2018. The EIA incorporates findings of the domestic feasibility studies, domestic EIAs, climate risk and vulnerability assessment, and technical reports conducted. The domestic EIAs were approved by the local environmental protection bureau in March 2018. The EMP complies with the PRC's environmental laws and ADB's Safeguard Policy Statement. An external monitoring entity will be recruited by the PMO to perform evaluation and assessment of the implementation and compliance with the EMP during all stages of the project. During project preparation, two rounds

¹³ The analysis was conducted in accordance with ADB. 2012. *Handbook on Poverty and Social Analysis*. Manila; and ADB. 2012. *Guidelines for Gender Mainstreaming Categories of ADB Projects*. Manila. Gender Action Plan (accessible from the list of linked documents in Appendix 2).

¹⁴ ADB. [Safeguard Categories](#).

of meaningful consultations have been conducted with all relevant stakeholders, and the findings were incorporated in the project design. Any potential environmental disputes will be handled in accordance with the grievance redress mechanism established for the project. Mitigation measures identified in the EMP require environmental compliance for air pollution, water treatment, MSW, and hospital and industrial wastes. An assessment to determine the significance of project impacts on and risks to biodiversity and natural resources has been conducted. Particular attention has been given to the potential impact on extractive commercial activity in Myanmar derived from enhanced border trade. The project includes specific capacity-building measures to address this important issue.

31. **Climate change assessment.** Construction sites are vulnerable to floods and intense precipitation. The project sites should be designed with surface water interceptors and other flood control structures to capture drainage. Supply of water to construction sites should be secured during droughts. Special attention will be paid to the cutting of rubber trees in collective land acquired for project implementation, and carbon dioxide sequestration compensation will be built in.

32. **Involuntary resettlement (category B).** There are 145 households (766 persons) who will be affected by the acquisition of collective farmland (1,038.37 *mu*) in the Mengding subproject; 28 households (110 persons) belong to the Wa and Yi ethnic groups.¹⁵ The impacts are found to be insignificant because the loss of land per household is less than 5% of their total landholdings and households have other sources of income. For the Cangyuan subproject, the impacts are found to be marginal, as four households (20 persons) will lose about 7.65 *mu* of cultivated land, while one household (4 persons) will be affected by house demolition. These five households are from the Wa and Dai ethnic group. Impacts are also found to be marginal for the Zhenkang subproject, where the loss of an estimated 38.24 *mu* of collective land will be affecting nine households (41 persons) from the De'ang ethnic group. An estimated 125 *mu* of unallocated state-owned rubber forest land in Mengding and a 39.53 *mu* of state-owned construction land owned by a real estate company in Cangyuan will be required. For Zhenkang, where 85.26 *mu* of state-owned construction land was acquired in the past, due diligence indicated that there are no outstanding issues. There are three resettlement plans that have been prepared in consultation with the affected persons and various stakeholders to address land acquisition and resettlement issues. Key information in the resettlement plans has been disclosed to the affected persons.

33. **Indigenous peoples (category B).** The ethnic population makes up 42.8% of project beneficiaries. Among ethnic minority beneficiaries, Dai, De'ang, Wa, and Yi minorities comprise 83.57% of the total. Ethnic people will benefit from improved municipal infrastructure and social services, and additional business and job opportunities. With the exception of one household (4 persons) that will be required to relocate, the 41 ethnic minority households (171 people) will be marginally affected by acquisition of their farmland. An ethnic minority development plan has been prepared and endorsed by the PMO.¹⁶

F. Summary of Risk Assessment and Risk Management Plan

34. Significant risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.¹⁷ The project has no unusual technical risks, and the integrated benefits and impacts are expected to outweigh costs and risks.

¹⁵ A *mu* is a Chinese unit of measurement (1 *mu* = 666.67 m²).

¹⁶ Ethnic Minority Development Plan (accessible from the list of linked documents in Appendix 2).

¹⁷ Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

Table 4: Summary of Risks and Mitigating Measures

Risks	Mitigation Measures
Project encounters delay in procurement and implementation due to lack of experience at executing and implementing agency levels on Asian Development Bank-funded projects	Engage experienced loan implementation consultants to assist executing and implementing agencies, aligned with training and capacity development to improve management capacity, supported by enhanced monitoring and guidance by loan implementation consultants
Project encounters delay in implementation due to weak management and coordination capacity of the project management office and implementing agencies	Secure assurances from the executing and implementing agencies on availability of adequate staffing for project management office and project implementation units to deliver daily management and operation functions in a timely manner
Financial sustainability is dependent on continued availability of upper-level government funding to county governments	Government assurances on subsidies have been included in the loan agreement and will continue to provide counterpart funds to support the O&M costs of the project

Source: Asian Development Bank.

IV. ASSURANCES

35. The government and LMG have assured ADB that implementation of the project shall conform to all applicable ADB policies, including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the PAM and loan documents.

36. The government and LMG have agreed with ADB on certain covenants for the project, which are set forth in the draft loan agreement and project agreement.

V. RECOMMENDATION

37. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loan of \$250,000,000 to the People's Republic of China for the Yunnan Lincang Border Economic Cooperation Zone Development Project from ADB's ordinary capital resources, in regular terms, with interest to be determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; for a term of 25 years, including a grace period of 6 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan and project agreements presented to the Board.

Takehiko Nakao
President

19 November 2018

DESIGN AND MONITORING FRAMEWORK

Impacts the Project is Aligned with Economic growth potential for LBECZ and border areas of Myanmar enhanced; benefits of regional cooperation and integration in LBECZ and border areas of Myanmar realized; and living conditions and public health of residents of LBECZ and border areas of Myanmar improved (PRC Thirteenth Five-Year Plan, 2016–2020) ^a			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
Outcome Competitiveness of urban centers, logistics and industrial parks, and land ports in project counties and LBECZ enhanced	By 2025: a. Lincang Prefecture trade volume with Myanmar increased by 10% annually (2017 baseline: \$775 million) b. LBECZ border trade volume increased by 20% annually (2017 baseline: \$520 million) c. Student enrollment rate in elementary school in project counties increased by 0.5% annually (2017 baseline: 18,741 students) d. Ratio of medical staff per population in LBECZ increased by 2% annually (2017 baseline: 242 medical staff) e. Urban residents' rate of satisfaction with use of road, water supply, wastewater, and municipal solid waste increased to 60% (2017 baseline: 31% [road], 23% [water supply], 11% [wastewater], and 20% [solid waste])	a. Yunnan provincial yearbook b. Annual reports of LBECZ c. Lincang education bureau annual reports d. Lincang health bureau annual reports e. PMO quarterly project progress reports	Security situation in Myanmar worsens Enterprises do not invest in LBECZ because the returns are too low
Outputs 1. Cross-border trade infrastructure improved 2. Integrated urban environment infrastructure in Mengding and Qingshuihe National Port areas improved	By 2024: 1a. Border resident trade market of 107,454 m ² constructed and operationalized, with women accounting for at least 50% of employees in technical and administrative staff positions and 40% in management positions (2018 baseline: 0) 1b. Border international cooperation area of 171,633 m ² constructed (2018 baseline: 0) 1c. Five urban secondary roads of 4.55 km constructed; 350 m-long bridge constructed; 523 m Class II road rehabilitated (2018 baseline: 0) 1d. Project construction results in 530 jobs, 30% of which are held by women (2018 baseline: 0) 2a. Qingshuihe water supply system of 20,000 m ³ /day capacity constructed and operationalized, with at least 50% of jobs held by women (2018 baseline: 0) 2b. Qingshuihe wastewater treatment system of 10,000 m ³ /day capacity constructed and operationalized, with at least 50% of jobs held by women (2018 baseline: 0) 2c. 2.38 km of Qingshui River and 1.00 km of Nanpa River rehabilitated (2018 baseline: 0) 2d. Public transportation electric charging stations constructed in Mengding and Qingshuihe, with a total of 40 charging posts including safety features for women, and 6 electric buses delivered to county government authorities (2018 baseline: 0)	1a–d. PMO quarterly project progress reports 2a–f. PMO quarterly project progress reports	Weak institutional and staff capacity to implement the project, particularly for procurement Changes in government's administrative procedures delay provision of counterpart funds for the project

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
3. Social infrastructure and services improved	<p>2e. Mengding and Qingshuihe municipal solid waste management system established with total capacity of 27 tons per day (2018 baseline: 0)</p> <p>2f. Number of jobs during project construction is 350, 30% of which are held by women (2018 baseline: 0)</p> <p>3a. A new Cangyuan Guomen No. 2 Elementary School constructed with 1,080 student capacity (of which at least 40% are girls) and 13,194 m² building area with gender-inclusive design and amenities, and fully staffed, with women in at least 60% of staff positions (2018 baseline: 0)</p> <p>3b. A new PRC–Myanmar Friendship Hospital constructed with 499 inpatient bed capacity and 56,009 m² building area (including maternity and obstetrics and gynecology departments) (2018 baseline: 0)</p> <p>3c. A new Qingshuihe Hospital constructed with 99 inpatient bed capacity and 9,006 m² building area (including maternity and obstetrics and gynecology departments) (2018 baseline: 0)</p> <p>3d. Existing Qingshuihe Guomen Elementary School upgraded, with capacity expanded to 1,080 students of which at least 40% are girls, and with additional classroom, dormitory, and cafeteria buildings (totaling 7,721 m²) constructed (2018 baseline: 0)</p> <p>3e. Project construction provides 200 jobs, 30% of which are held by women (2018 baseline: 0)</p>	3a–e. PMO quarterly project progress reports	
4. Institutional capacity of involved agencies improved	<p>4a. At least one study or development plan completed on each of the following: (i) cross-border trade and logistics capacity building, (ii) small and medium-sized enterprises development, (iii) teacher training and border elementary school curriculum enhancement, (iv) technical and vocational education and training school leadership, (v) health care services and hospital management improvement, (vi) regional cooperation and integration development and capacity building, (vii) LBECZ master plan development and improvement study, and (viii) policy dialogue on water tariff system to meet the PRC regulations (2018 baseline: 0)</p> <p>4b. Technical and managerial knowledge and skills of 100 staff increased, of which 50% are women (2018 baseline: 0)</p>	<p>4a. Capacity development study completion reports</p> <p>4b. Training completion and participants' survey reports</p>	

Key Activities with Milestones

1. Cross-border trade infrastructure improved

- 1.1 Prepare preliminary design, Q3 2018–Q2 2020
- 1.2 Prepare construction drawings, Q4 2018–Q3 2020
- 1.3 Implement land acquisition and resettlement, Q3 2018–Q3 2019
- 1.4 Implement GAP, SDAP, and EMDP, Q4 2018–Q4 2024
- 1.5 Prepare bidding documents, Q4 2018–Q3 2020
- 1.6 Procure and award contract, Q4 2018–Q4 2021
- 1.7 Commence construction, Q1 2019–Q1 2024

2. Integrated urban environment infrastructure in Mengding and Qingshuihe National Port areas improved

Key Activities with Milestones
2.1 Prepare preliminary design, Q3 2018–Q3 2020 2.2 Prepare construction drawings, Q4 2018–Q4 2020 2.3 Implement land acquisition and resettlement, Q4 2018–Q4 2019 2.4 Implement GAP, SDAP, and EMDP, Q4 2018–Q4 2024 2.5 Prepare bidding documents, Q4 2018–Q4 2020 2.6 Procure and award contract, Q4 2018–Q1 2022 2.7 Commence construction, Q1 2019–Q2 2024 2.8 Purchase equipment, Q1 2020–Q4 2022 3. Social infrastructure and services improved 3.1 Prepare preliminary design, Q3 2018–Q2 2020 3.2 Prepare construction drawings, Q4 2018–Q3 2020 3.3 Implement land acquisition and resettlement, Q3 2018–Q3 2019 3.4 Implement GAP, SDAP, and EMDP, Q4 2018–Q4 2024 3.5 Prepare bidding documents, Q4 2018–Q3 2020 3.6 Procure and award contract, Q4 2018–Q4 2021 3.7 Commence construction, Q1 2019–Q1 2022 3.8 Purchase equipment, Q1 2020–Q4 2022 4. Institutional capacity of involved agencies improved 4.1 Recruit and mobilize consultants, Q4 2018–Q1 2019 4.2 Establish project performance monitoring system, Q4 2018–Q1 2019 4.3 Establish environmental impact assessment, resettlement plan, and project performance monitoring system, Q1 2019 4.4 Support project implementation, Q4 2018–Q4 2024 4.5 Conduct studies and research, workshops, and trainings, Q4 2018–Q4 2022 4.6 Implement GAP, SDAP, and EMDP, Q4 2018–Q4 2024
Project Management Activities
Project management support and environmental impact assessment, resettlement plan, GAP, and SDAP monitoring implemented
Inputs
Asian Development Bank: \$250 million (loan) Government: \$152.08 million
Assumptions for Partner Financing
Not applicable

EMDP = ethnic minority development plan, GAP = gender action plan, km = kilometer, LBECZ = Lincang Border Economic Cooperation Zone, m = meter, m² = square meter, m³ = cubic meter, PMO = project management office, PRC = People's Republic of China, Q = quarter, SDAP = social development action plan.

^a Government of the PRC, State Council. 2016. *The Thirteenth Five-Year Plan for National Economic and Social Development of the People's Republic of China, 2016–2020*. Beijing.

Source: Asian Development Bank.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/RRPs/?id=49310-002-3>

1. Loan Agreement
2. Project Agreement
3. Sector Assessment (Summary): Water and Other Urban Infrastructure and Services
4. Project Administration Manual
5. Contribution to the ADB Results Framework
6. Development Coordination
7. Financial Analysis
8. Economic Analysis
9. Country Economic Indicators
10. Summary Poverty Reduction and Social Strategy
11. Risk Assessment and Risk Management Plan
12. Climate Change Assessment
13. Gender Action Plan
14. Environmental Impact Assessment
15. Resettlement Plan: Cangyuan County
16. Resettlement Plan: Mengding Town
17. Resettlement Plan: Zhenkang County
18. Ethnic Minority Development Plan

Supplementary Documents

19. Regional Cooperation and Integration Summary
20. Rapid Health Impact Assessment Summary
21. Economic Analysis: Economic Internal Rate of Return and Sensitivity Analysis for Subprojects