



Completion Report

Project Number: 42010-013
Loan Number: 2657
September 2021

People's Republic of China: Guangxi Southwestern Cities Development Project

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Asian Development Bank

CURRENCY EQUIVALENTS

Currency unit – yuan (CNY)

	At Appraisal (27 November 2009)	At Project Completion (31 December 2018)
CNY1.00 =	\$0.1465	\$0.1454
\$1.00 =	CNY6.8265	CNY6.8780

ABBREVIATIONS

ADB	– Asian Development Bank
ASEAN	– Association of Southeast Asian Nations
COVID-19	– coronavirus disease
CPS	– country partnership strategy
CQS	– consultants' qualifications selection
DMF	– design and monitoring framework
EIA	– environmental impact assessment
EIRR	– economic internal rate of return
EMP	– environmental management plan
GAP	– gender action plan
GMS	– Greater Mekong Subregion
GPMO	– Guangxi Project Management Office
GZAR	– Guangxi Zhuang Autonomous Region
GZARG	– Guangxi Zhuang Autonomous Region Government
LAR	– land acquisition and resettlement
M&E	– monitoring and evaluation
O&M	– operation and maintenance
PIA	– project implementing agency
PIC	– project implementation company
PRC	– People's Republic of China
QCBS	– quality- and cost-based selection
TA	– technical assistance

WEIGHTS AND MEASURES

ha	– hectare
km	– kilometer
m	– meter
m ²	– square meter
m ³	– cubic meter
<i>mu</i>	– 666.67 square meters

NOTES

- (i) The fiscal year (FY) of the Government of the People's Republic of China and its agencies ends on 31 December. "FY" before a calendar year denotes the year in which the fiscal year ends, e.g., FY2020 ends on 31 December 2020.
- (ii) In this report, "\$" refers to United States dollars.

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CONTENTS

	Page
BASIC DATA	i
I. PROJECT DESCRIPTION	1
II. DESIGN AND IMPLEMENTATION	1
A. Project Design and Formulation	1
B. Project Outputs	3
C. Project Costs and Financing	4
D. Disbursements	4
E. Project Schedule	4
F. Implementation Arrangements	5
G. Technical Assistance	5
H. Consultant Recruitment and Procurement	5
I. Gender Equity	6
J. Safeguards	7
K. Monitoring and Reporting	8
III. EVALUATION OF PERFORMANCE	9
A. Relevance	9
B. Effectiveness	9
C. Efficiency	10
D. Sustainability	10
E. Development Impact	11
F. Performance of the Borrower and the Executing Agency	12
G. Performance of the Asian Development Bank	12
H. Overall Assessment	12
IV. ISSUES, LESSONS, AND RECOMMENDATIONS	13
A. Issues and Lessons	13
B. Recommendations	13
APPENDIXES	
1. Design and Monitoring Framework	15
2. Project Costs	18
3. Disbursement of ADB Loan Proceeds	20
4. Chronology of Main Events	21
5. Contract Awards of ADB Loan Proceeds	22
6. Gender Action Plan Evaluation and Achievements	23
7. Environmental Impact Analysis	32
8. Land Acquisition and Resettlement	36
9. Status of Compliance with Loan Covenants	42
10. Economic Reevaluation	52
11. Financial Reevaluation	57

BASIC DATA

A. Loan Identification

1.	Country	People's Republic of China
2.	Loan number and financing source	2657, ordinary capital resources
3.	Project title	Guangxi Southwestern Cities Development Project
4.	Borrower	People's Republic of China
5.	Executing agency	Guangxi Zhuang Autonomous Region Government
6.	Amount of loan	\$150 million
7.	Financing modality	Project loan

B. Loan Data

1.	Appraisal	
	– Date started	23 November 2009
	– Date completed	8 January 2010
2.	Loan negotiations	
	– Date started	11 June 2010
	– Date completed	12 June 2010
3.	Date of Board approval	26 July 2010
4.	Date of loan agreement	24 January 2011
5.	Date of loan effectiveness	
	– In loan agreement	24 April 2011
	– Actual	19 May 2011
	– Number of extensions	2
6.	Project completion date	
	– Appraisal	31 December 2015
	– Actual	31 December 2018
7.	Loan closing date	
	– In loan agreement	31 December 2015
	– Actual	31 December 2018
	– Number of extensions	3
8.	Financial closing date	
	– Actual	19 August 2019
9.	Terms of loan	
	– Interest rate	London interbank offered rate (LIBOR) + 0.6%–0.4%
	– Maturity (number of years)	25
	– Grace period (number of years)	5
10.	Terms of relending (if any)	
	– Interest rate	LIBOR-based
	– Maturity (number of years)	25
	– Grace period (number of years)	5
	– Second-step borrower	Guangxi Zhuang Autonomous Region Government

11. Disbursements

a. Dates

Initial Disbursement 8 March 2012	Final Disbursement 21 August 2018	Time Interval 78 months
Effective Date 19 May 2011	Actual Closing Date 19 August 2019	Time Interval 99 months

b. Amount (\$ million)

Category	Original Allocation (1)	Increased during Implementation (2)	Canceled during Implementation (3)	Last Revised Allocation (4=1+2-3)	Amount Disbursed (5)	Undisbursed Balance (6 = 4-5)
1A -Fangchenggang: Urban Road Network and Related Municipal Infrastructures	41.52	9.59	0.00	51.11	45.31	5.80
1B -Fangchenggang: Coastal Protection and Upgrading	15.44	(9.06)	0.00	6.38	5.57	0.81
1C -Chongzuo: Urban Road Network and Related Municipal Infrastructures	29.97	(12.44)	0.00	17.53	17.53	0.00
1D -Chongzuo: Shuikou Lake Environmental Improvement	4.12	(2.53)	0.00	1.59	1.69	(0.10)
1E -Baise: Urban Road Network and Related Municipal Infrastructures	22.88	2.34	0.00	25.22	24.78	0.44
1F -Baise: Longwang Bridge	13.00	2.35	0.00	15.35	15.35	0.00
1G -Chongzuo: Urban Road Network and Related Municipal Infrastructures	0.00	14.76	0.00	14.76	12.08	2.68
1H -Chongzuo: Urban Road Network and Related Municipal Infrastructures	0.00	0.61	0.00	0.61	0.23	0.38
2A -Fangchenggang: Street Lights Procurement and Installation	6.04	2.71	0.00	8.75	7.63	1.12
2B -Chongzuo: Street Lights Procurement and Installation	1.79	2.51	0.00	4.30	3.98	0.32
3 -Capacity Development	2.80	(0.84)	0.00	1.96	1.66	0.30
4 -Interest and Commitment Charge	12.44	(10.00)	0.00	2.44	2.44	0.00
Total	150.00	0.00	0.00	150.00	138.25	11.75

() = negative.

C. Project Data

1. Project cost (\$ million)

Cost	Appraisal Estimate	Actual
Foreign exchange cost	167.68	138.25
Local currency cost	131.35	125.32
Total	299.03	263.57

2. Financing plan (\$ million)

Cost	Appraisal Estimate	Actual
Implementation cost		
Borrower financed	73.48	109.44
ADB financed	137.56	135.81
Other external financing	63.68	4.59
Total implementation cost	274.71	249.84
Interest during construction costs		
Borrower financed	0.00	11.29
ADB financed	12.44	2.44
Other external financing	11.87	0.00
Total interest during construction cost	24.32	13.73

3. Cost breakdown by project component (\$ million)

Component	Appraisal Estimate	Actual
Fangchenggang City		
Urban road network and related municipal infrastructure	88.04	73.93
Coastal protection and upgrading	24.37	45.28
Chongzuo City		
Urban road network and related municipal infrastructure	45.04	47.22
Shuikou Lake environmental improvement	10.71	13.68
Baise City		
Urban road network and related municipal infrastructure	50.71	43.06
Longwang Bridge	21.96	25.01
Capacity Development	2.80	1.66
Contingencies	31.08	0
Financial Charges during Construction	24.32	13.73
Total	299.03	263.57

4. Project schedule

Item	Appraisal Estimate	Actual
Date of contract with consultants	15 Mar 2010	20 Jan 2014
Completion of engineering designs	3 Dec 2009	30 Jun 2018
Civil works contract		
Date of award	31 Dec 2010	8 Dec 2011
Completion of work	30 Jun 2015	31 Dec 2018
Equipment and supplies		
Dates		
First procurement	31 Dec 2010	16 Aug 2014
Last procurement	31 Mar 2011	4 Dec 2018
Completion of equipment installation	30 Sep 2011	31 Dec 2018
Start of operations		
Completion of tests and commissioning	30 Jun 2014	31 Dec 2018
Beginning of start-up	30 Jun 2014	31 Dec 2018

5. Project performance report ratings

Implementation Period	Single Project Rating
From 19 May 2011 to 30 June 2016	On Track
From 1 July 2016 to 30 September 2016	Potential Problem
From 1 October 2016 to 19 August 2019	On Track

D. Data on Asian Development Bank Missions

Name of Mission	Date	No. of Persons	No. of Person-Days	Specialization of Members
Loan fact-finding	22–27 November 2009	3	18	i, n, o
Loan appraisal	20–22 January 2010	4	12	h, n, o, p
Loan inception	30 November–6 December 2010	3	13	k, l, n
Loan review	5–9 September 2011	7	22	a, c, d, f, g, l, m
Loan review	8–12 October 2012	4	14	a, d, h, k
Loan review	4–9 August 2013	5	25	a, c, d, f, k
Midterm project review	19–27 May 2014	5	35	c, d, e, f, g
Loan review	24–26 September 2014	2	4	c, d
Loan review	6–14 May 2015	4	32	c, d, f, i
Loan review	16–19 December 2015	2	6	a, b
Loan review	27 June–4 July 2016	5	20	c, d, e, f, k
Special review	28 November–2 December 2016	1	4	c
Loan review	15–22 May 2017	4	27	c, d, f, k
Loan review	17–19 July 2017	4	8	c, f, h, j
Special review	9–13 October 2017	2	8	c, h
Loan review	25–30 March 2018	3	15	c, d, k
Loan review	25 February–1 March 2019	5	25	a, b, d, f, k
Project completion review	6–12 December 2020	4	24	q

a = senior project officer, b = deputy country director, c = associate project officer (urban development), d = senior safeguard officer (resettlement), e = social development officer, f = senior environment officer, g = project analyst, h = senior procurement officer, i = transport specialist, j = senior financial control officer, k = assistant project analyst, l = urban development specialist, m = unit head, portfolio management, n = principal urban development specialist, o = lead professional (counsel), p = program and regional cooperation officer, q = consultant.

I. PROJECT DESCRIPTION

1. The Guangxi Southwestern Cities Development Project is located in three cities (Baise, Chongzuo, and Fangchenggang) of the Guangxi Zhuang Autonomous Region (GZAR), the People's Republic of China (PRC). The GZAR is one of the 12 less-developed provinces and autonomous regions targeted by the PRC's Great Western Development Strategy.¹ The project cities are at the center of several regional cooperation endeavors, including the Greater Mekong Subregion (GMS) economic cooperation promoted by the Asian Development Bank (ADB) and the PRC–Association of Southeast Asian Nations (ASEAN) Free Trade Area. Development of the urban economy in these cities, which are at strategic positions on the GMS's regional transport corridors, was the driving force in converting the transport corridors into economic corridors, enhancing regional economic cooperation. The government proposed the project as part of the support for accelerated urbanization of the region and balanced economic development to alleviate regional poverty.

2. At appraisal, the impact of the project was better living conditions in the three project cities, and stronger ability of these cities to participate in and benefit from regional economic cooperation and integration. The project's expected outcome was upgraded and integrated urban infrastructure and environment to help the project cities meet their long-term urban development needs. The project outputs included (i) construction of a road network and related municipal infrastructure, and coastal protection and upgrading in Fangchenggang; (ii) construction of a road network and related municipal infrastructure, and Shuikou Lake environmental improvement in Chongzuo; (iii) construction of a road network, bridge, and related municipal infrastructure in Baise; and (iv) capacity development.

II. DESIGN AND IMPLEMENTATION

A. Project Design and Formulation

3. The project was consistent with ADB's PRC country partnership strategies (CPS) of 2008–2010² and 2011–2015,³ which emphasized ADB's operational focuses on support of urban infrastructure, balanced regional development, urban environmental improvement, and regional integration. The project also conformed to ADB's Urban Sector Strategy⁴ and Urban Operational Plan⁵ by promoting competitive, inclusive, and environmentally sustainable city transformation in a poor region. It also contributed directly to the GMS economic cooperation framework, which ADB is supporting. The project adopted a holistic approach, providing essential infrastructure in a coherent and integrated manner supported with capacity development and environmental improvement components, including activities to strengthen climate change resilience of coastal and inland urban areas.

4. The project was fully aligned with the government's Great Western Development Strategy

¹ Initiated in 1999, the Great Western Development Strategy is a national strategy to promote regional development of the western region through a balanced approach with the support of developed provinces in the east. The geographic coverage includes six provinces (Gansu, Guizhou, Qinghai, Shaanxi, Sichuan, and Yunnan), five autonomous regions (Guangxi, Inner Mongolia, Ningxia, Tibet, and Xinjiang), and one municipality (Chongqing). The main components of the strategy include development of infrastructure (transport, hydropower plants, energy, and telecommunications), enticement of foreign investment, increased efforts on ecological protection (e.g., reforestation), promotion of education, and retention of talent flowing to richer provinces.

² ADB. 2008. *Country Partnership Strategy: People's Republic of China, 2008–2010*. Manila.

³ ADB. 2012. *Country Partnership Strategy: People's Republic of China, 2011–2015*. Manila.

⁴ ADB. 1999. *Urban Sector Strategy*. Manila.

⁵ ADB. 2013. *Urban Operational Plan, 2012–2020*. Manila.

and consistent with its long-term goal of building a harmonious and prosperous society through livelihood improvement, and regionally balanced and environmentally sustainable growth. It is part of the national poverty reduction strategy to promote inclusive growth in the less-developed western PRC. The project was proposed as part of the initiative for support for accelerated urbanization and economic development in poverty-stricken southwestern Guangxi. It complied with the government's development objective of environmental-friendly urbanization in the PRC's Twelfth Five-Year Plan, 2011–2015.⁶ The three project cities were included as urban development priorities in Guangxi's Twelfth Five-Year Plan, 2011–2015.⁷

5. The project outcome envisioned at appraisal remained unchanged at completion. The quality of the project preparatory technical assistance (TA) was satisfactory and involved adequate stakeholder consultation.⁸ The project design was sound. The project loan financing modality selected at the project design was appropriate to deliver the original project outputs. The project design adopted holistic approaches to address the development demands in the project area, which incorporated building urban roads and underground municipal infrastructure in a coherent and integrated manner. Construction of infrastructure was supported with capacity development and environmental improvement components, including activities to strengthen climate change resilience of coastal and inland urban areas.

6. No significant changes were made in the project design, and it is deemed relevant, both at appraisal and completion. At completion, the project was still aligned with ADB's CPS (footnote 3) and the government's Thirteenth Five-Year Plan, 2016–2020,⁹ with sustainable urbanization and urban–rural integration as one of the strategic priorities in the project area.

7. During implementation, ADB approved three minor changes in the project scope and/or implementation arrangements: (i) (approved in March 2014) adjustment of ADB's financing percentage and the loan reallocation of savings from interest during construction (\$10.0 million) and capacity building (\$0.5 million); (ii) (approved in May 2015) a scope change in Fangchenggang's and Chongzuo's urban roads¹⁰ and associated reallocation of the loan proceeds (\$12.7 million), and adjustment of ADB's financing percentage; and (iii) (approved in July 2018) a scope change in Fangchenggang's coastal protection¹¹ and associated reallocation of the loan proceeds (\$15.0 million), and modification of ADB's financing percentage. The first change was made to use anticipated loan savings from interest, which was unforeseen during appraisal, while the other two changes were made to reflect updates of the local governments' urban plans during implementation. These changes did not materially alter the project outcome.

⁶ Government of the PRC. 2011. *National Economic and Social Development Twelfth Five-Year Plan, 2011–2015*. Beijing.

⁷ Guangxi Zhuang Autonomous Region Government. 2011. *Guangxi Economic and Social Development Twelfth Five-Year Plan, 2011–2015*. Nanning.

⁸ ADB. 2008. *Technical Assistance to the People's Republic of China for Preparing the Guangxi Border Cities Development Project*. Manila. (The project was renamed Guangxi Southwestern Cities Development Project in September 2009).

⁹ Government of the PRC. 2016. *National Economic and Social Development Thirteenth Five-Year Plan, 2016–2020*. Beijing.

¹⁰ The planned urban roads in Fangchenggang decreased from 27.6 kilometers (km) to 20.6 km because of the cancellation of Yuzhouping branch roads. The planned urban roads in Chongzuo decreased from 13.0 km to 11.1 km because of the shortening of Beiweier Road while Shijinglin Road was widened from 15.5 meters (m) to 54.0 m.

¹¹ A 5.3 km section of the planned coastal dikes was removed from the project scope. The loan savings were used to finance the upgrading of 12.5 km of urban roads in Qisha Town.

B. Project Outputs

8. In general, the project has delivered its planned outputs as per the project design and monitoring framework (DMF, Appendix 1).

9. **Output 1: Road network and related municipal infrastructure, coastal protection and upgrading in Fangchenggang.** At appraisal, the planned indicators included: (i) construction of 27.6 kilometers (km) of urban roads (including a 210 meters [m] bridge) and related infrastructure; (ii) updating of 9.2 km of coastline (revised to 3.9 km, para. 7); and (iii) construction of facilities for public education on mangrove protection. At completion, the project constructed 16.5 km—including the 210 m Anhujiang Bridge—and updated 12.8 km of urban roads (88.5% of the revised target of 33.1 km) as well as building municipal infrastructure, including water supply pipelines, drainage and sewerage systems, lighting and traffic control facilities, and landscaping. It built and/or upgraded 3.9 km of coastal dikes (100% of the target). The public education facilities built for mangrove protection included a 2.5 hectare (ha) square and a 2,100-square-meter (m²) public education center (100% of the target).

10. **Output 2: Road network and related municipal infrastructure, and lake environmental improvement in Chongzuo.** At appraisal, the planned outputs were (i) construction of 13.0 km (12.8 km in the final government approval) of urban roads and related infrastructure, (ii) environmental improvement of Shuikou Lake to enable its opening for public use, and (iii) installation of public awareness signage and distribution of outreach materials. At completion, the project constructed 10.7 km of urban roads and related infrastructure (96% of the revised target, footnote 10), including water supply pipelines, drainage and sewerage systems, lighting and traffic control facilities, and landscaping. Shuikou Lake, which serves as an artificial urban wetland for Chongzuo with adequate ecological functions and good water quality (Class II), was reopened to the public in 2018. Public awareness signage was installed as designed. The wetland park operator distributed outreach materials as planned.

11. **Output 3: Road network, bridge, and related infrastructure in Baise.** At appraisal, the planned outputs covered (i) construction of 3.7 km of urban roads, (ii) construction of Longwang Bridge (563 m), and (iii) associated municipal infrastructure. At completion, the project built 3.7 km (99%) of urban roads (Chengnan Ring Road) and the Longwang Bridge (551 m—98% of the target length), which were all opened to the public in 2015. The project also constructed related municipal infrastructure as planned, including water supply pipelines, drainage systems, sewerage pipelines, lighting and traffic control facilities.

12. **Output 4: Capacity development.** At appraisal, the project was expected to provide (i) technical assistance, including international experiences and best practices, to design and conduct a demand-based capacity development program for the GZAR Government (GZARG) and the project cities in the field of planning and implementation of an integrated and sustainable urban transport system; and (ii) technical support, including training to the GZARG and the project cities, to ensure the project implementation complied fully with ADB policy and operational requirements. During implementation, the project engaged two consultant teams, one for project management support and the other for the study on sustainable integrated urban transportation systems. At completion, 85 decision makers and technical staff from the GZARG and the project cities (appraisal target: 20) were trained through capacity building programs, including 10 training workshops and domestic study tours, 2 seminars on mangrove conservation, and 3 seminars and 5 overseas study tours on integrated urban transport systems, with 38.5% women participation (appraisal target: 30%). In general, the project strengthened the institutional capacity of the project cities to plan and implement an integrated and sustainable urban transport system as expected.

C. Project Costs and Financing

13. The project cost estimate at appraisal was \$299.03 million, including an ADB loan of \$150 million (50.2%), counterpart funding of \$73.48 million (24.6%) by the three project municipal governments, and domestic banks borrowing of \$75.55 million (25.2%). At completion, the total project cost was \$263.57 million, 11.9% lower than the appraisal estimate. The ADB loan utilization totaled \$138.25 million (92.2% of the approved amount), and the loan cancellation was \$11.75 million at closing. The actual domestic counterpart funds were \$125.32 million, including \$120.73 million from the three project governments (164.3%) and \$4.59 million of borrowings from domestic banks (6.1%).¹² ADB's contribution to the final project cost was 52.5%, slightly higher than the appraisal estimation (50.2%). The reduced project cost was mainly attributed to cancellation of project activities involved in the scope changes (para. 7) and lower prices from competitive bidding. Appendix 2 presents details of the project cost and financing.

D. Disbursements

14. Loan disbursements were made from 8 March 2012 to 21 August 2018. Final liquidation of the loan advance account was in accordance with the provisions stipulated in the Loan Agreement and ADB's *Loan Disbursement Handbook* (2007, as amended from time to time). The loan account was financially closed on 19 August 2019. The initial payment to the advance account was made 10 months after loan effectiveness. The liquidation and refund of unutilized loan funds took about 8 months from the loan closing date because of the delay in verifying the ADB loan financing eligibility of the expenditures related to the construction of coastal dikes in Fangchenggang and Shuikou Lake facilities in Chongzuo.

15. During implementation, the Guangxi Finance Department established the advance account in good time and managed it effectively. The advance account allowed the executing agency and project implementing agencies (PIAs) adequate flexibility and strong ownership to make payments to the contractors timely and effectively. The executing agency also used direct payment for disbursement to the consultants in a total amount of \$570,560.40. The advance fund and direct payment proved useful for disbursement. No major issues on the use of loan proceeds were reported in annual audit reports. Although no institutional or capacity problems for disbursements were found, disbursements were relatively slow compared to the projections made at appraisal because of prolonged project implementation (paras. 7 and 16). Appendix 3 compares the disbursement projections and actual achievements.

E. Project Schedule

16. ADB approved the project loan on 26 July 2010. The loan and project agreements were signed on 24 January 2011. The loan became effective on 19 May 2011. ADB conducted the inception mission in December 2011 and the midterm review in May 2014. Physical constructions were completed largely by 31 December 2018. The loan closing date was extended three times with an accumulated extension of 36 months. The actual loan closing date was 31 December 2018 while the original closing date was 31 December 2015. The loan was financially closed on 19 August 2019. The project completion was delayed by 3 years mainly because of (i) the transfer of key personnel from the Guangxi Project Management Office (GPMO) during the early stage of

¹² During appraisal, indicative cofinanciers included China Development Bank, China Agriculture Development Bank, and Industrial and Commercial Bank of China, which would provide lending to the three project cities. During implementation, only Fangchenggang City applied a loan from China Development Bank. The other two cities did not apply for loans from the indicative commercial banks as they had adequate counterpart funds from government funds or resources.

project implementation, (ii) prolonged government review and approval process for engineering designs, (iii) delay in land acquisition and resettlement (LAR) in Fangchenggang and Chongzuo, and (iv) delay in review and approval of additional project activities using loan savings. The executing agency submitted its project completion report in January 2020. But ADB's project completion report mission was delayed to December 2020 because of the coronavirus disease (COVID-19) pandemic. Appendix 4 includes a chronology of the project's major events.

F. Implementation Arrangements

17. The project was implemented in line with the implementation arrangements as set at appraisal. The GZARG was the executing agency, acting through the Guangxi Development and Reform Commission, under which the GPMO was established. The GPMO coordinated the overall project management, including communication with ADB, supervision of consultants, and organization of capacity development activities such as training and study tours. The PIAs included Baise, Chongzuo, and Fangchenggang municipal governments. The PIAs coordinated implementation of their respective project components. The project implementation companies (PICs) carried out daily administration of their respective investment components on behalf of the PIAs, including procurement and contract management.

18. The implementation arrangements were compatible with other ADB financed urban development projects in the GZAR and made best use of existing capacity for construction and operation phases of the project without creating new institutions for the project implementation and operation. Overall, the project's implementation arrangements were sufficient and effective.

G. Technical Assistance

19. Project preparatory TA totaling \$800,000 was approved in November 2008 to support the loan project preparation (para. 5). The project preparatory TA conducted a comprehensive review of the rationale, technical feasibility, and economic and financial viability of the project. It supported assessment and documentation for environment, resettlement, and indigenous peoples safeguards, and social and gender aspects. Specifically, the project preparatory TA carried out a thorough sector analysis for urban development, urban transportation, regional cooperation, and climate change for the three project cities, which provided a good foundation to justify the project interventions. The project preparatory TA was delivered by a consultant firm, comprising 28 person-months of international and 50 person-months of national experts' inputs. It was financially closed in March 2011.

H. Consultant Recruitment and Procurement

20. **Consultant.** At appraisal, three consulting packages were planned: (i) a firm to support the project implementation and capacity strengthening for an integrated and sustainable urban transportation system, comprising 26 person-months of international and 111 person-months of national consulting services to be selected using a quality- and cost-based selection (QCBS) method; (ii) national consulting services for external resettlement monitoring to be selected using a consultants' qualifications selection (CQS) method; and (iii) two individual national consultants (2 person-months for project management and procurement; 2 person-months for resettlement) to support the project start-up.

21. During implementation, the QCBS package was split into four sub-packages with ADB's approval: (i) a QCBS contract for project implementation support that included actual inputs of 15.84 person-months of international and 55.24 person-months of national consulting services;

(ii) a CQS contract for a study on integrated and sustainable urban transportation that included actual inputs of 8 person-months of international and 86 person-months of national consultants; (iii) three individual national consultants with actual inputs of 9.5 person-months (7 person-months for project management, 1.5 person-months for resettlement and social safeguards, and 1 person-month for environmental safeguards); and (iv) an international training and study tour. The GPMO engaged an external monitor using CQS as planned (lump sum contract). For the planned consulting services for the implementation start-up, the GPMO engaged the consultant for project management and procurement (2 person-months). The consultant for resettlement was not engaged as few resettlement activities occurred at the beginning of implementation and another individual consultant split from the package was engaged for the same purpose. All consultants engaged provided adequate support to the GPMO and PIAs, including institutional capacity building and delivered consulting services as per their terms of reference.

22. **Procurement.** In general, the GPMO and PIAs managed procurement and contracts well. During implementation, the GPMO engaged a tendering agency to assist in procurement. ADB awarded 22 contracts (17 for civil works and 5 for materials and equipment) totaling \$135.81 million. All packages were procured in accordance with ADB's Procurement Guidelines (2007, as amended from time to time) and there were no major noncompliance and mis-procurement cases. Procurement methods included national competitive bidding (12 contracts) and international competitive bidding (10 contracts). General consistency between actual contract awards with projections suggested that the projections were realistic (Appendix 5).

23. In bidding documents and contracts, relevant sections of ADB's Anticorruption Policy (1998, as amended to date) were incorporated and implemented. No individuals and entities on ADB's anticorruption debarment list were awarded for any contracts. In addition, domestically prevailing anticorruption practices were widely applied in civil works construction during implementation. Overall performance of contractors, consultants, and suppliers was *satisfactory*.

I. Gender Equity

24. The project was categorized *effective gender mainstreaming* and it has successfully achieved its gender targets at exit. A gender action plan (GAP) was prepared to (i) promote women's participation and representation in decision-making and consultations, (ii) prioritize women for employment opportunities, and (iii) promote the effective inclusion of women in all project activities. The GPMO coordinated the overall GAP implementation and PIAs were responsible for carrying out their respective activities as planned under the GAP. The implementation of the GAP addressed the needs of women in the project areas by promoting women's participation in decision-making and consultations, employment opportunities, and effective project participation through training and capacity building activities. The project achieved the gender targets as specified in the project DMF: (i) women filled 2,209 jobs (31% of the total) during construction (target: 20%); (ii) the GPMO and municipal project management offices each appointed one gender focal point to manage and coordinate work for the GAP, with the support of at least one gender focal point from the main contractors; and (iii) 85 decision makers and technical staff in provincial and municipal government agencies were trained through specially designed training programs, with 38.5% women professional participation (target: 30%). Overall, the project fully implemented and completed 13 out of 15 GAP activities (87%) and achieved five of the six quantitative targets (83%). The strategic benefits for women achieved are (i) longer-term livelihood security, (ii) a better living environment, and (iii) increased decision-making capacity. The efforts made by the project to empower women's decision-making and representation through participation in consultation meetings and training activities have contributed to changing the traditional way infrastructure projects were carried out in the project

cities, promoting an explicit gender equality focus. The GAP implementation and achievements are described in Appendix 6.

J. Safeguards

25. **Environment.** At appraisal, ADB classified the project category A for environmental safeguard in accordance with the bank's Environment Policy (2002) and Environmental Assessment Guidelines (2003).¹³ The PIAs prepared domestic environmental impact assessment (EIA) reports for their respective components in 2009. The summary EIA report—based on the approved domestic EIA reports and including an environmental management plan (EMP) stipulating environmental mitigation and monitoring programs—was circulated to ADB in February 2010. With the scope change (para. 7), the GPMO prepared one environment due diligence report (approved in 2014) and one subproject addendum to the summary EIA (approved in 2018). During implementation, each PIA established its own environmental management unit to coordinate and supervise EMP implementation. The GPMO, PIAs, PICs, and contractors assigned adequate qualified staff to undertake environmental management activities. The GPMO engaged an environment consultant to assist in overseeing the EMP implementation. PIAs contracted three municipal environmental monitoring stations for regular environmental monitoring. During 2013–2019, the PIAs produced and submitted 11 environmental monitoring reports to ADB. These reports confirmed that civil works under the project were conducted in strict conformity to applicable national, provincial, and local government environmental laws, regulations, and procedures, ADB's Environment Policy and Environmental Assessment Guidelines, and the measures set out in the EMP. The PICs conducted public consultations to address public concerns regarding potential impacts (i.e., noise, air quality) during construction. No complaints on environmental impacts were received during project implementation. Minor environmental safeguard issues recorded in monitoring reports during project implementation across each subcomponent have been adequately addressed. Appendix 7 presents details on environmental safeguards.

26. **Involuntary Resettlement.** At appraisal, ADB classified the project category A for involuntary resettlement. Five construction components involved LAR, for which the concerned PIAs prepared three full resettlement plans, one full resettlement plan with due diligence, and one short resettlement plan for the respective component.¹⁴ To reflect the detailed design and measurement survey, resettlement plans for the Baise and Fangchenggang road components and Chongzuo's Shuikou Lake were updated in May 2012 and approved by ADB in October 2012. All resettlement plans were disclosed on ADB's website.

27. LAR commenced in 2012 and was completed by the end of 2019. At completion, the project demolished 34,769.1 m² of residential structures (28.4% more than the resettlement plan) and 22,165.2 m² of business and/or institution buildings (4.4% less than the resettlement plan), and acquired permanently 3,204.7 *mu* of land (3.8% more than the resettlement plan).¹⁵ Accordingly, the project construction affected (i) 733 households and 4,002 persons because of permanent land acquisition, (ii) 151 households and 485 persons as a result of residential structure demolition, and (iii) 3 enterprises with 1,109 employees or students through business and/or institutions structure demolition. The project acquired more land than originally planned because, following the collective land acquisition, the villagers requested that some scattered

¹³ ADB. 2002. *Environment Policy of the Asian Development Bank 2002*. Manila; and ADB. 2003. *Environmental Assessment Guidelines 2003*. Manila.

¹⁴ The resettlement plan with due diligence was for the Chongzuo road component while the short resettlement plan was for the Fangchenggang coastal protection component.

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

pockets of land unsuitable for farming also be acquired. The project scope changes during implementation, such as cancellation or realignment of roads, also led to resettlement impact changes, in particular the reduction in house demolition.

28. The PICs reached the LAR agreements with the affected villages and affected persons through intensive consultations. All affected villages were aware of the compensation rates and were paid as per the agreement. Compensation rates of houses were based on the (then) current replacement value and took factors such as house structure, area, usage purpose, and location into consideration. Generally, the actual compensation rate was higher than that in the resettlement plans, and in some cases significantly higher. The actual total resettlement cost was CNY388.3 million, 133.9% greater than the estimation in resettlement plans. The changes resulted mainly from higher compensation rates and increased land acquisition impacts during implementation.

29. Livelihood restoration measures included (i) developing lands for the third industry as a commercial area, (ii) offering shareholding dividends to employees of the affected state-owned enterprises, (iii) providing pension insurance to all retired employees, and (iv) providing training in agricultural technology and domestic services. The project provided both cash compensation and cash plus a plot of land on which to (self) build a house for people whose homes were demolished. According to the monitoring results, the per capita income of affected people in Baise increased by 48.9%, in Chongzuo by 48.8%, and in Fangchenggang by 44.5%.

30. The GPMO and PIAs conducted internal monitoring of resettlement-related issues adequately and reported the monitoring results to ADB through the project progress reports. Meanwhile, the GPMO also engaged a consultant firm for external monitoring and evaluation (M&E) of the resettlement plan implementation. The external resettlement M&E was conducted regularly from 2012. ADB received eight M&E reports, all uploaded on the bank's website. Appendix 8 summarizes the details for the LAR safeguards and resettlement plan implementation.

31. **Indigenous peoples.** ADB classified the project category B for indigenous peoples. Ethnic minorities made up 72.6% of the beneficiary population under the project. The project included measures to benefit ethnic minorities in the overall project design in lieu of preparing a separate ethnic minority development plan. It provided minorities the opportunity to participate fully in all phases of the project cycle through information disclosure, community consultations and meetings, and created a large number of employment opportunities for ethnic minorities during implementation. During the poverty and social assessment, the project preparation team analyzed the potential impacts and risks to ethnic minorities and conducted consultations with affected ethnic minorities and other stakeholders, such as the Ethnic Minority Affairs Bureau, and recommended actions were integrated into the project design. The poverty and social analysis concluded that the project would not have adverse impacts on ethnic minorities, except for impacts related to resettlement. The resettlement plans thus included specific actions to ensure the interests and benefits of the ethnic minorities and that adverse impacts were adequately addressed.

K. Monitoring and Reporting

32. The loan covenants were considered adequate, and all major covenants were complied with (Appendix 9). During implementation, the GZAR and the three project municipal governments each had an appropriate institutional setup, including a leading group and a project management office staffed adequately with necessary expertise for project administration, financial management, and safeguards. The finance department of each government also contributed to

project implementation by processing disbursements and making payments on time.

33. The GPMO and PIAs fulfilled monitoring and reporting requirements adequately as per the Project Agreement. With assistance from the consultant, the GPMO established a project performance monitoring system, which—together with a quarterly project progress report—was used for reporting output performance and progress throughout the implementation period. Monitors engaged by the GPMO and/or PIAs carried out safeguard monitoring of the environment, LAR and ethnic minorities, the results of which were reported to ADB periodically. The GPMO submitted ADB 11 environmental monitoring reports, 8 resettlement M&E reports, and the project completion report.

34. The GPMO, PIAs, and PICs maintained the project accounts satisfactorily. The consolidated project accounts and financial statements were audited annually from 2013 to 2020 and the audited reports were submitted to ADB on time. All audit reports were impartial. The final audit report, covering loan effectiveness through to loan closing date, was submitted to ADB in June 2020, confirming that there were no unresolved issues related to the ADB loan. The timeliness and quality of audited project financial statements have been satisfactory.

III. EVALUATION OF PERFORMANCE

A. Relevance

35. The project is rated *relevant*, as it was relevant both at appraisal and at completion. At appraisal, the project fit well into the government development plans (para. 4). At completion, infrastructure built under the project directly contributed to the urban development of the project cities. Meanwhile, improved road networks link effectively to the regional transportation corridors of the GMS and PRC–ASEAN Free Trade Area. The project was highly aligned with ADB’s CPS at appraisal and remained relevant at completion (para. 3). Despite a 3-year delay in completion, the project has attained its intended outcome and delivered outputs effectively. The project design and modality were appropriate despite three minor changes in scope (para. 7). The project has accelerated urban development of the project cities not only through creating non-agriculture jobs for the poor farmers from the surrounding counties, but also as part of the national development strategy to integrate the less-developed southwestern PRC with the international market through the transport networks in the GZAR.

B. Effectiveness

36. The project is rated *effective* in achieving the expected outcome and outputs. The project has substantially achieved its outcome of expanded and upgraded urban infrastructure and environment, with some indicators overachieved. Traffic speed increased by 14% in Fangchenggang, 42% in Chongzuo, and 65% in Baise—the target increase was 5%. The protection of Fangchenggang from coastal flooding reached once in 30-years protection level under the adverse climate scenarios (target: once in 20 years). The project also created more jobs than expected at appraisal, particularly for women (33% against the targeted 20%) and ethnic groups (65% against the targeted 20%). Other indicators were all realized. Overall, the project has improved urban road and related infrastructure, which contributed to the overall urban development of the project cities.

37. The project met and delivered the expected outputs effectively and substantially achieved targets. The targets of urban roads in the two cities were achieved less than 90% that 5.9 km of urban road was uncompleted because of LAR difficulties (3.8 km in Fangchenggang and 2.1 km in Chongzuo). However, these variations had no substantial impacts on the project outcome.

Other indicators for urban infrastructures were fully achieved while indicators for capacity development were overachieved. The project interventions contributed directly to the improvement of urban roads and related infrastructure of the project cities.

38. The project included comprehensive gender and safeguards measures. The GAP was implemented appropriately with major gender targets achieved or overachieved (para. 24). The implementation of the GAP addressed the needs of women in the project areas by facilitating women's effective project participation and access to employment opportunities through training and capacity building activities, which have contributed to changing the traditional way infrastructure projects were carried out in the project cities, with an explicit gender equality focus. The planned measures for safeguards were also implemented effectively as set out in the EMP and resettlement plans, including updates during implementation (paras. 25–31). No major harm was caused and/or reported during implementation.

C. Efficiency

39. The project is rated *efficient*. The reevaluated economic internal rate of return (EIRR) of the whole project is 17.3%, slightly lower than the appraisal estimate (17.7%). Compared to the threshold EIRR of 12%, the result indicated economic viability of the project. All subprojects are viable except the Fangchenggang road subproject, which registered an EIRR (11.2%) slightly lower than the threshold. Of the road components, the EIRR results are close to or higher than the appraisal estimates despite the lower traffic mainly because of the greater benefits from the time savings and fuel consumption. For example, the construction of the Longwang Bridge as part of the Baise road component reduced the trip distance by 30 km. The results of the environmental upgrading and improvement components are lower than the appraisal estimates mainly because of the optimistic assumptions applied at appraisal. But the less-than-efficient process partly offsets this satisfactory performance. There was no cost overrun, although the project completion was delayed for about 3 years (para. 16). Appendix 10 presents details of the economic reevaluation.

D. Sustainability

40. The project is rated *likely sustainable*. Given that the project does not generate revenues, the financial reevaluation focused on assessing the fiscal capacity of the three project cities in meeting the debt service obligation and operation and maintenance (O&M) costs over the operational period (Appendix 11). During the operational period, the funds needed for debt servicing and O&M accounts were less than 0.5% of the fiscal revenues of respective municipal governments, indicating the project's minimal fiscal impact. All three cities were able to meet the project's debt service and O&M requirements without placing undue pressure on its other expenditures.

41. Meanwhile, all road and related infrastructure facilities as well as other project facilities (Shuikou Lake in Chongzuo and the mangroves public education center in Fangchenggang) have been opened to the public and are operated by the designated government operational entities. The project facilities were constructed in accordance with the required engineering standards and specifications and are considered to have sufficient quality to meet the design service life and ensure realization of the project's benefits in the long-term.¹⁶ Given the essential nature of the infrastructure constructed by the project, the demands for service are expected to continue. The

¹⁶ The audit report for the fiscal year 2018 reported a lack of timely repair and replacement of damaged traffic facilities in Chongzuo, which were remediated in 2019.

designated O&M units were actively involved in the project preparation and construction, making the transfer from construction to operation smooth. They also took an active part in capacity building activities during implementation, which strengthened their institutional capacity. Therefore, the project is also likely to be sustainable institutionally.

E. Development Impact

42. The project is rated *highly satisfactory* for development impact. It generated significant social and economic benefits during implementation and since completion, has continued to contribute to the social and economic development of the project cities. The project did not cause major negative environmental impacts during construction, but rather it improved the environmental functions of Shuikou Lake in Chongzuo and the mangroves along the Fangchenggang coast. The capacity development interventions also improved the project cities' institutional capacity, particularly regarding transportation planning and traffic management.

43. The project helped to improve local people's living standards and create a convenient transportation environment. It also contributed to sustainable socioeconomic growth and regional integration development in the three project cities. The three designated impact indicators were all fully realized. By project completion in 2019, Baise's per capita gross domestic product increased to \$11,213, Chongzuo's to \$8,246, and Fangchenggang's to \$13,784.¹⁷ The urbanization rate increased to 63.3% for Baise, 50.2% for Chongzuo, and 64.4% for Fangchenggang. All these indicators greatly exceeded the DMF targets. The increase in the three project cities' economic activities with ASEAN countries also exceeded the appraisal target of 10%.

44. **Social impacts.** The project directly benefits about 4.4 million residents, of which 43.2% are ethnic minorities, because it (i) helped construct essential roads and bridges, (ii) upgraded and integrated urban infrastructure, and (iii) improved the coastal environment. It created 22,348 jobs in the three cities, including 14,449 (65%) taken up by ethnic minorities, 7,362 (33%) by women, and 3,898 (17%) by poor people. The project gave minorities the opportunity to participate fully in all phases of the project cycle through information disclosure, and community consultations and meetings. In three cities, 1,364 ethnic minorities (76.9% of the total) participated in public consultation meetings, ensuring their voices were heard and their participation solidified in the implementation of the project.

45. **Environmental impact.** The project generated significant environmental benefits in project areas. The coastal dike provides once-in-30-years flood protection for 520 ha of land and has formed a barrier protecting the mangrove forest from urban development and providing recreation places for the residents. The Shuikou Lake environmental improvement component significantly reduced pollution to the lake and the water quality improved from Class III at appraisal to Class II of Ambient Surface Water Quality (GB 3838-2002) in 2020. The average total nitrogen reduced from 7.68 milligrams per liter at the start of construction in 2013 to 0.43 milligrams per liter in 2020.

46. **Contribution to the ADB results framework.** The project has achieved the targets of the results framework indicators as originally set out: (i) 43.8 km of district roads (target: 44.3 km; 99%); (ii) 43.8 km of water supply pipes (target: 44.3 km; 99%); and (iii) land improved through flood control of 885 ha (100% of the target).

¹⁷ Guangxi Statistics Bureau. 2019. *Guangxi Statistics Yearbook of 2019*. Nanning.

F. Performance of the Borrower and the Executing Agency

47. The performance of the borrower and executing agencies were *satisfactory*. The borrower, represented by the Ministry of Finance, fulfilled its responsibilities, including the submission of official requests to ADB for loan reallocation and the extensions of the loan closing date. The executing agency, acting through the GPMO played a key role in ensuring the quality of project preparation and implementation. The GZARG and three municipal governments demonstrated a strong commitment to the project. The GPMO coordinated capacity building activities effectively and organized adequate training for the project staff of PIAs and PICs in project management, procurement, construction management, disbursement, auditing, financial management, and safeguards compliance. Despite implementation delays and some changes in the project scope, all the project’s intended outcomes were fully achieved. The GPMO and PIAs closely monitored and reported the construction schedule, quality, and costs during implementation. All major variations were dealt with strictly in accordance with government procedures and were reported to ADB for prior approval. Internal controls were in place to promote the effective use of funds. The three municipal governments provided adequate counterpart funds on time. The PIAs paid contractors and suppliers on time. The borrower and the executing agencies performed their responsibilities and obligations effectively and adequately.

G. Performance of the Asian Development Bank

48. The performance of ADB in managing and administering the project was *satisfactory*. The routine and serious project site inspections demonstrated ADB’s efforts in monitoring the project progress. ADB fielded timely and adequate missions to review the project progress and to support the GPMO and PIAs in addressing implementation issues or difficulties, including inception, midterm, and regular and special administration reviews. The review missions and regular office supervision, including comments on various monitoring reports, provided timely guidance and suggestions to the GZARG, PMOs and PIAs, and the loan implementation consultants. ADB was responsive to the government’s requests on scope changes, contract variations, and the extensions of the loan closing. The full-fledged safeguards team was actively involved in addressing various due diligence requirements, which ensured compliance. Apart from project administration, ADB staff also provided specific and/or onsite training on procurement, financial management, and disbursement for the GPMO and PIAs.

H. Overall Assessment

49. The project is rated *successful*. It was *relevant* to the government development plans and ADB’s country strategies (paras. 3, 4, and 35); *effective* in achieving its outcome and outputs (paras. 36–37); *efficient* in achieving its outcome and outputs (para. 39); and *likely sustainable* (paras. 40 and 41). The project was implemented successfully and delivered its planned outputs effectively. It achieved its outcome of expanded and upgraded urban infrastructure and environment, which will help the project cities meet their expansion needs up to 2020, and exceeded its planned indicators of the impacts.

Overall Ratings

Criteria	Rating
Relevance	Relevant
Effectiveness	Effective
Efficiency	Efficient

Criteria	Rating
Sustainability	Likely sustainable
Overall Assessment	Successful
Development impact	Highly satisfactory
Borrower and executing agency	Satisfactory
Performance of Asian Development Bank	Satisfactory

Source: Asian Development Bank

IV. ISSUES, LESSONS, AND RECOMMENDATIONS

A. Issues and Lessons

50. The project experienced significant delays with an accumulated extension of 36 months, though it was eventually able to achieve the intended impact, outcome, and outputs. One of major reasons was the frequent changes in the project scope and/or implementation arrangements (para. 7). These changes involved a loan reallocation of \$38.2 million, or 25.5% of the approved loan amount. The changes also triggered due diligence for safeguards, including updates of the resettlement plans and EIAs. It took a great deal of time to get the domestic clearance and endorsement as well as ADB's approval. The changes resulted partially from difficulties in implementing the resettlement plans (in the case of Chongzuo urban roads) or from changes in the government's urban development (in the case of Fangchenggang roads and coastal protection). Nevertheless, such situations could have been avoided or minimized if the PIC had planned and managed the project more effectively.

51. In terms of gender mainstreaming in project design and implementation, the application of a GAP was critical to successfully mainstream gender across outputs and to raise awareness on the benefits of focusing on gender equality issues in projects that address urban and coastal infrastructure and environmental improvements. The project demonstrated that a GAP can have positive impacts on women's participation in consultations and decision-making, and on their access to jobs resulting from set targets.

B. Recommendations

52. **Project readiness.** Unanticipated difficulties in implementing LAR caused significant delay in construction of both Chongzuo's and Fangchenggang's roads, which further delayed the overall project implementation. To avoid such situations, it is recommended that future projects pay close attention to project readiness regarding LAR matters, particularly for those projects with category A LAR impacts. Implementable resettlement plans acceptable to ADB should be made by loan approval based on a detailed final design completed prior to Board circulation.

53. **Further action or follow-up.** The project supported a study on integrated urban transportation (paras. 12 and 21) that included policy recommendations, some of which the city governments have considered. Continuous policy dialogues with the municipal governments are recommended to follow-up the effectiveness and/or adoption of these recommendations through other ongoing ADB urban projects in these cities. In addition, the mangrove protection public education center (para. 9) in Fangchenggang was completed in 2018. However, the interior presentation and contents, which rely on government funds, have yet to be finalized. Follow-up reporting is required to ensure that the education center is fully completed.

54. **Timing of the project performance evaluation report.** Given that all the project facilities have been put into use and are already integrated with the overall urban infrastructure systems in the project cities, the project performance evaluation report can be undertaken after the circulation of this project completion report.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Indicators and Targets	Project Achievements
<p>Impact</p> <p>Better living conditions in the project cities and stronger ability of these cities to participate in and benefit from regional cooperation</p>	<p>By 2017</p> <p>The three project cities maintain a continued per capita gross domestic product growth from their 2008 baseline: from \$3,680 to \$5,520 for Fangchenggang; from \$1,620 to \$2,430 for Chongzuo; and from \$1,580 to \$2,370 for Baise.</p> <p>The urbanization rate of the project cities increases from their 2008 baseline: from 44.5% to 60.0% for Fangchenggang; from 31.5% to 40.0% for Chongzuo; and from 31.0% to 40.0% for Baise.</p> <p>Each project city enjoys a 10% increase in economic activities with ASEAN countries from their 2008 baseline: \$797 million for Fangchenggang, \$1,300 million for Chongzuo, and \$489 million for Baise.</p>	<p>By 2019</p> <p>The three project cities' per capita gross domestic product grew from their 2008 baseline to: \$13,784 for Fangchenggang; \$8,246 for Chongzuo; and \$11,213 for Baise.</p> <p>The project cities' urbanization rate increased from 2008 baseline to: 64.4% for Fangchenggang; 50.2% for Chongzuo; and 63.6% for Baise.</p> <p>The project cities increased economic activities with ASEAN countries: \$5,947 million for Fangchenggang (20%), \$22,020 million for Chongzuo (29.3%), and \$3,719 million for Baise (20.3%)</p>
<p>Outcome</p> <p>Expanded and upgraded urban infrastructure and urban environment that will help the project cities meet their expansion needs up to 2020</p>	<p>By 2015</p> <p>Traffic speed increases by 5% in the three project cities, compared with the "without-project" scenario based on their 2008 road network baseline.</p> <p>Coverage of primary underground municipal infrastructure in the direct project areas increases from zero in 2008 to 100%.</p> <p>Stronger protection of Fangchenggang City from coastal flooding, from the currently unprotected status to once in 20-year protection level under the adverse climate change scenarios.</p> <p>A rehabilitated Shuikou Lake in Chongzuo City, which serves as an artificial urban wetland, will perform its ecological function and retain its water quality at class II.</p> <p>Urban transport master plans for the project cities have been updated according to stronger planning capacity, with an aim to build an integrated and sustainable urban transport system.</p> <p>Employment opportunities of about 10,030 person-years will be created over the construction phase, with a target for 20% of the employment opportunities to be filled by the poor, women, and ethnic minorities, respectively.</p>	<p>By 2019</p> <p>Traffic speed increased by 14% in Fangchenggang (from 35 km/h to 40km/h), 42% in Chongzuo (from 35 km/h to 50 km/h), and 63% in Baise (from 33 km/h to 54 km/h).</p> <p>Coverage of primary underground municipal infrastructure in the direct project areas increased to 100% in 2019.</p> <p>Protection of Fangchenggang City from coastal flooding, from the unprotected status before the project to once in 30-year protection level under the adverse climate change scenarios.</p> <p>Shuikou Lake was rehabilitated as an urban wetland with ecological functions and stable water quality at class II and was opened to the public in 2019.</p> <p>Specific recommendations of sustainable transportation were made for project cities, such as evenly developed traffic mode in Fangchenggang, slow traffic dominated system in Chongzuo, and public transportation dominated mode in Baise, which have been incorporated initially in the new traffic systems.</p> <p>The project created 22,348 jobs in the three cities, 33% by women, 65% by ethnic minorities, and 17% by poor.</p>

Design Summary	Performance Indicators and Targets	Project Achievements
<p>Outputs</p> <p>1.Fangchenggang City</p> <p>Urban roads and related basic municipal infrastructure built in accordance with the city development master plan</p> <p>Upgraded coastal area free from tidal wave and coastal erosion; with a public education square for mangrove protection</p> <p>2. Chongzuo City</p> <p>Urban roads and related municipal infrastructure built in accordance with the city development master plan</p> <p>Improved environmental system of Shuikou Lake as an artificial urban wetland for the city, with public signage for protection of urban wetland ecosystem</p> <p>3. Baise City</p> <p>Urban roads and related municipal infrastructure built in accordance with the city development master plan</p> <p>Longwang bridge across Youjiang River built</p> <p>4. Capacity Development</p> <p>Stronger GPMO and municipal project management offices that are able to meet ADB requirements</p>	<p>By 2015</p> <p>27.6 km of urban roads and related basic municipal infrastructure have been constructed and opened for traffic or operation (original)</p> <p>33.1 km of urban roads and related basic municipal infrastructure have been constructed and opened for traffic or operation, by 2018 (revised)^a</p> <p>9.2 km of coastline has been upgraded and completed for public use (original)</p> <p>3.6 km of coastline has been upgraded and completed for public use, by 2018 (revised)^b</p> <p>The public education facility for protection of mangroves is open for public use.</p> <p>13.0 km of urban roads and related basic municipal infrastructure have been constructed and opened for traffic or operation.</p> <p>Shuikou Lake is open for public use in accordance with environmental design standards.</p> <p>The public awareness signage is installed, and outreach materials are distributed.</p> <p>3.7 km of urban roads and related basic municipal infrastructures have been constructed and are open for traffic or operation.</p> <p>Longwang Bridge has been construction and is open for traffic.</p> <p>Smooth implementation of the project in compliance with ADB requirements.</p> <p>GPMO and municipal project management offices each appoint one gender focal point to manage and coordinate work for the gender action plan</p>	<p>By 2019</p> <p>Total of 29.3 km of urban roads and basic municipal infrastructure were constructed or updated, including 16.5 km constructed and 12.8 km upgraded with pavement of road surface. The Anhujiang bridge with a length of 210 meters completed and opened to the public traffic in 2017 (89% achieved).</p> <p>3.6 km of coastline was upgraded and completed for public use (100% achieved). The northeast section of 5.3 km was upgraded using government funds.</p> <p>The public education facility for protection of mangroves was open for public use in 2018, including an open square and a public education center.</p> <p>10.9 km of urban roads and related basic municipal infrastructure were constructed and opened for traffic or operation (84% achieved).</p> <p>Shuikou Lake was rehabilitated following environmental design standards and was opened to the public since 2017.</p> <p>The public awareness signage is installed, and outreach materials are distributed.</p> <p>3.7 km of urban roads and related basic municipal infrastructures were constructed and were open for traffic or operation in 2015 (99% achieved).</p> <p>Longwang Bridge (551m long) was built and open for traffic in 2015 (100% achieved).</p> <p>The project was implemented effectively with adequate compliance with ADB requirements.</p> <p>GPMO and municipal project management offices each appointed one gender focal point to manage and coordinate work for the gender action plan.</p>

Design Summary	Performance Indicators and Targets	Project Achievements
Project cities have more capacity to plan and implement an integrated and sustainable urban transport system.	About 20 decision makers and concerned technical staff in GZARG and the project cities have been trained through specially designed training programs, with a target for 30% women professional participation.	85 decision makers and concerned technical staff in GZARG and the project cities have been trained through specially designed training programs, 38.5% of them are women professional staff.

ADB = Asian Development Bank, ASEAN = Association of Southeast Asian Nations, GPMO = Guangxi Project Management Office, GZARG = Guangxi Zhuang Autonomous Region Government, km = kilometer, km/h = kilometer per hour.

^a The scope change involving this indicator was approved in May 2015.

^b The scope change involving this indicator was approved in July 2018.

Sources: Asian Development Bank and project completion report by the executing agency.

PROJECT COSTS

Table A2.1: Project Cost at Appraisal and Actual
(\$ million)

Item	Appraisal			Actual		
	Foreign Exchange	Local Currency	Total	Foreign Exchange	Local Currency	Total
A. Base Cost						
1. Civil Works	122.64	40.84	163.48	122.55	70.70	193.25
2. Goods and Equipment	5.71	0.0	5.71	11.60	0.0	11.60
3. Survey and Design	0.0	24.22	24.22	0.0	19.45	19.45
4. Land Acquisition and Resettlement	0.0	36.29	36.29	0.0	23.88	23.88
5. Consultants	2.65	0.0	2.65	1.66	0.0	1.66
6. Taxes and Duties	6.56	4.73	11.29			
Subtotal (A)	137.56	106.08	243.64	135.81	114.03	249.84
B. Contingencies						
1. Physical	13.76	10.60	24.36	0.00	0.00	0.00
2. Price	3.92	2.80	6.72	0.00	0.00	0.00
Subtotal (B)	17.68	13.40	31.08	0.00	0.00	0.00
C. Financing Charges During Construction						
1. Interest During Construction	11.86	11.87	23.74	2.23	11.29	13.52
2. Commitment Charges	0.58	0.00	0.58	0.21	0.00	0.21
Subtotal (C)	12.44	11.87	24.32	2.44	11.29	13.73
Total (A+B+C)	167.68	131.35	299.03	138.25	125.32	263.57

Note: Numbers may not sum precisely because of rounding.

Sources: Asian Development Bank and Guangxi Project Management Office.

Table A2.2: Project Cost at Appraisal by Financier
(\$ million)

Item	Asian Development Bank		Cofinancier ^a		Municipal Government		Total Cost
	Amount	%	Amount	%	Amount	%	Amount
A. Investment Costs							
1. Civil Works	126.93	75.0	32.98	19.5	9.29	5.5	169.20
2. Goods and Equipment	7.83	100	-	-	-	-	7.83
3. Survey and Design	-	-	8.22	32.1	17.39	67.9	25.61
4. Land Acquisition and Resettlement	-	-	22.48	58.8	15.72	41.2	38.20
5. Consultants	2.80	100	-	-	-	-	2.80
Subtotal (A)	137.56	56.5	63.68	26.1	42.40	17.4	243.64
B. Contingencies	-	-	-	-	31.08	100.0	31.08
C. Financial Charges During Construction	12.44	51.2	11.87	48.8	0	0	24.32
Total Project Cost (A+B+C)	150.0		75.55		73.48		299.03
%		50.2		25.3		24.6	100

Notes:

1. Numbers may not sum precisely because of rounding.

2. Taxes and duties are allocated to other items of Investment Cost.

^a During appraisal, indicative cofinanciers included China Development Bank, China Agriculture Development Bank, and Industrial and Commercial Bank of China.

Sources: Asian Development Bank and Guangxi Project Management Office.

Table A2.3: Project Cost at Completion by Financier
(\$ million)

Item	Asian Development Bank		Cofinancier ^a		Municipal Government		Total Cost
	Amount	%	Amount	%	Amount	%	Amount
A. Investment Costs							
1. Civil Works	122.55	63.4	4.59	2.4	66.11	34.2	193.25
2. Goods and Equipment	11.60	100	-	-	-	-	11.60
3. Survey and Design	-	-	0	0	19.45	100.0	19.45
4. Land Acquisition and Resettlement	-	-	0	0	23.88	100.0	23.88
5. Consultants	1.66	100	-	-	-	-	1.66
Subtotal (A)	135.81	54.4	4.59	1.8	109.44	43.8	249.84
B. Contingencies	-	-	-	-	-	-	-
C. Financial Charges During Construction	2.44	17.8	0	0	11.29	82.2	13.73
Total Project Cost (A+B+C)	138.25		4.59		120.73		263.57
%		52.5		1.7		45.8	100

Notes:

1. Numbers may not sum precisely because of rounding.

2. Taxes and duties were allocated to other items of Investment Cost.

^a During implementation, only China Development Bank provided a loan.

Sources: Asian Development Bank and Guangxi Project Management Office.

DISBURSEMENT OF ADB LOAN PROCEEDS

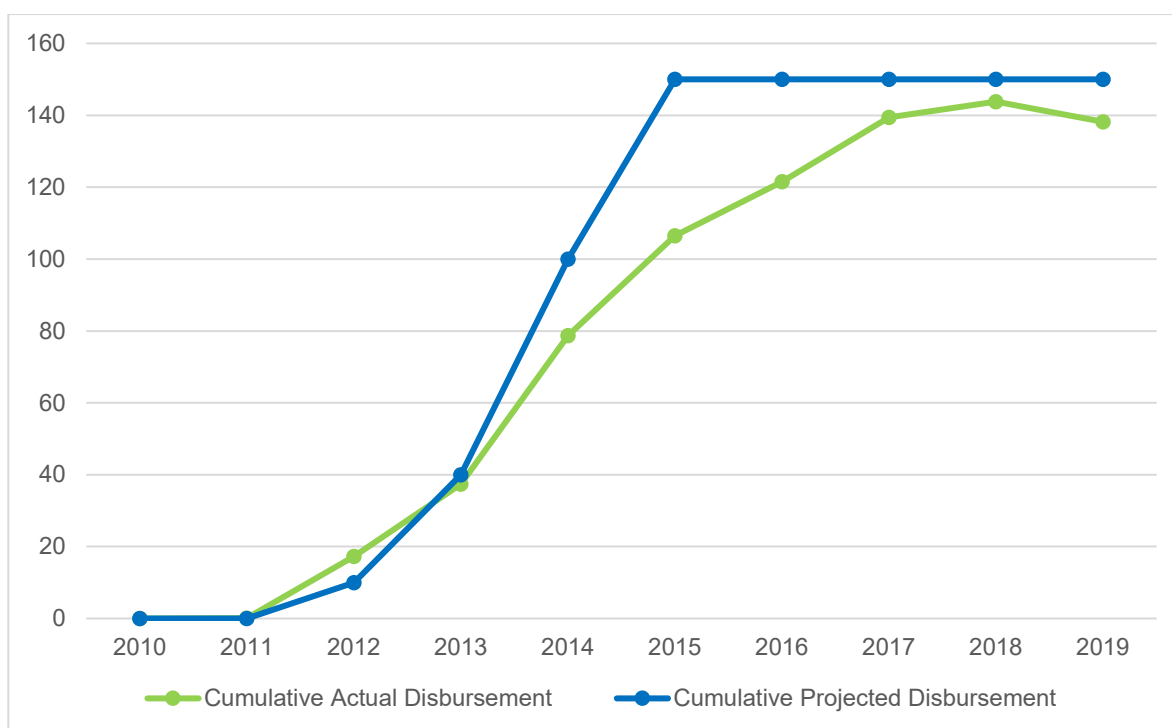
Table A3: Annual and Cumulative Disbursement^a
(\$ million)

Year	Annual Disbursement		Cumulative Disbursement	
	Amount	% of Total	Amount	% of Total
2011	0.1	0.1	0.1	0.1
2012	17.2	12.4	17.3	12.5
2013	20.1	14.6	37.4	27.1
2014	41.3	29.9	78.7	56.9
2015	27.8	20.1	106.5	77.1
2016	15.0	10.8	121.5	87.9
2017	17.9	13.0	139.4	100.9
2018	4.4	3.2	143.8	104.1
2019	-5.7	-4.1	138.2	100.0
Total	138.2	100.0	138.2	100.0

^a Includes disbursement to the advance account.

Source: Asian Development Bank.

Figure A3: Projection and Cumulative Disbursement of ADB Loan Proceeds
(\$ million)



CHRONOLOGY OF MAIN EVENTS

Date	Events
23 November 2009	Concept paper approved
8 January 2010	Management Review Meeting
11–12 June 2010	Loan negotiations held
26 July 2010	Loan approved
30 November–6 December 2010	Loan inception mission
19 May 2011	Loan effectiveness declared
8 March 2012	First disbursement processed
19 March 2012	Loan administration delegated to PRCM
28 August 2012	First NCB civil works contract signed
8 December 2012	First ICB civil works contract signed
10 February 2014	Project implementation consulting service contract signed
7 March 2014	1st minor change of project scope approved
10 April 2014	1st amendment of the loan and project agreements
19–27 May 2014	Loan midterm review mission
19 August 2014	2nd amendment of the loan and project agreements
5 May 2015	2nd minor change of project scope approved
4 September 2015	Extension of loan closing date to 31 Dec 2016 approved
8 December 2016	Extension of loan closing date to 31 Dec 2017 approved
21 December 2017	Extension of loan closing date to 31 Dec 2018 approved
11 July 2018	3rd minor change of project scope approved
16 October 2018	3rd amendment of the loan and project agreements
December 2018	Physical completion of the project
31 December 2018	Loan closing
25 February–1 March 2019	Project completion review mission
19 August 2019	Financial closing of the loan and partial cancellation of loan proceeds
6–12 December 2020	Project completion review mission by consultants

ICB = international competitive bidding, NCB = national competitive bidding, PRCM = People's Republic of China Resident Mission.

Sources: Asian Development Bank and Guangxi Project Management Office.

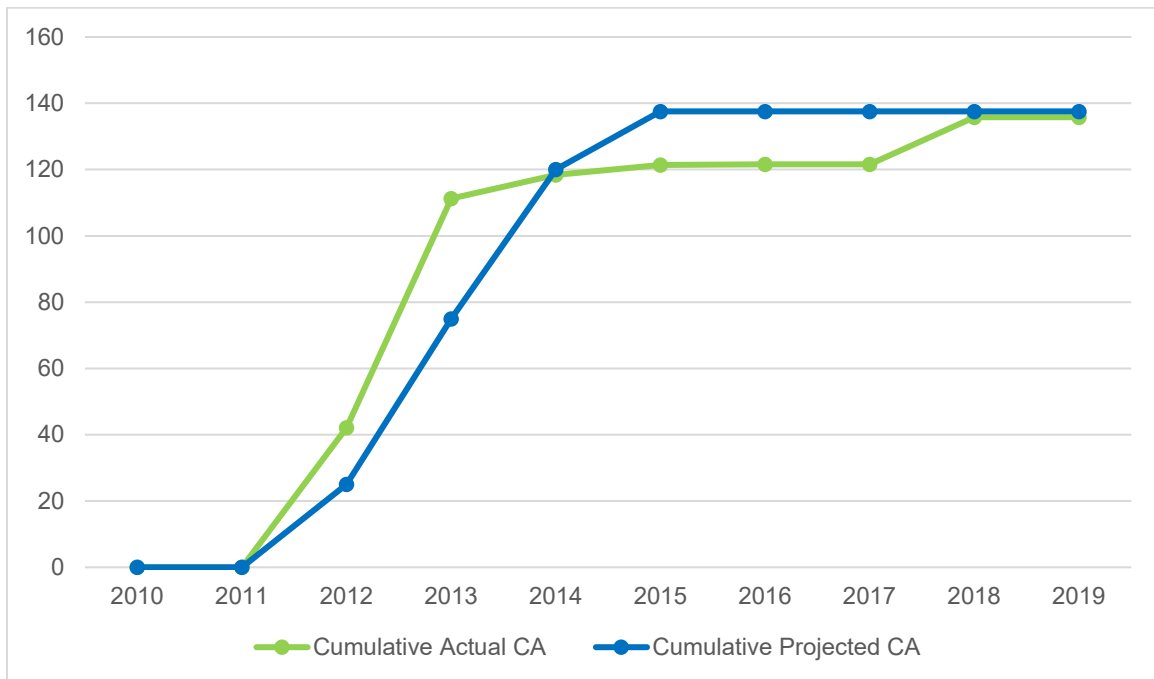
CONTRACT AWARDS OF ADB LOAN PROCEEDS

Table A5: Annual and Cumulative Contract Awards
(\$ million)

Year	Annual Contract Awards		Cumulative Contract Awards	
	Amount	%	Amount	%
2011	0.0	0.0	0.0	0.0
2012	42.1	31.0	42.1	31.0
2013	69.2	50.9	111.3	81.9
2014	7.1	5.2	118.4	87.1
2015	3.0	2.2	121.4	89.3
2016	0.2	0.1	121.6	89.5
2017	0.0	0.0	121.6	89.5
2018	14.3	10.6	135.8	100.0
2019	0.0	0.0	135.8	100.0
Total	135.8	100.0	135.8	100.0

Source: Asian Development Bank.

Figure A5: Projection and Cumulative Contract Award of ADB Loan Proceeds
(\$ million)



GENDER ACTION PLAN EVALUATION AND ACHIEVEMENTS

A. Introduction

1. The Guangxi Southwestern Cities Development Project was designed to provide support for urban development of three medium-sized cities (Fangchenggang, Chongzuo, and Baise) located in the southwestern part of the Guangxi Zhuang Autonomous Region (GZAR), which are strategically located at the important intersections of the transport corridors in Guangxi of the People's Republic of China (PRC). The objective of the project is to support the sustainable development of the three project cities by providing strategic transport infrastructure and establishing and strengthening the support system for urban transport planning and management. The impact of the project is to improve the living standards of the project cities and enhance their capacity to participate in the integration of regional economic cooperation. The outcome of the project is to improve and rehabilitate the urban infrastructure and urban ecosystems of these project cities to meet the long-term development needs of their respective cities.

B. Gender Issues

2. GZAR is one of five autonomous regions in the PRC. Ethnic minorities represent majority of the total population (approximately 83.34%) in Guangxi, which comprises over 21 different ethnic groups. Ethnic minorities make up 72.58% of the beneficiary population under the Project. During project preparation, extensive social assessment including focus group discussions was held. No detailed gender analysis was conducted during the project preparation stage. The project gender classification was effective gender mainstreaming for gender equality. A gender action plan (GAP) was prepared by the Guangxi Southern Western Development Project Management Office (GPMO) to ensure promotion of women's benefits and participation in the project. The key elements of this GAP are: (i) women's participation and representation in decision-making and consultations at different levels; (ii) job creation for women, ethnic minority and poor people affected by the project (iii) effective project participation through training and capacity building activities; (iv) sex disaggregated data collection before and during the project implementation; and (v) capacity building and institutional building with a gender focus.

3. The GPMO was responsible for overall coordination of implementation of the GAP and related activities. The municipal PMOs in Fangchenggang, Chongzuo, and Baise Cities, together with relevant implementing agencies were primary responsible for implementing the GAP. The project had positive impact on women through (i) empowered decision-making and representation through participation in consultation meetings and training activities, (ii) increased job creation for women, (iii) increased income and saved time from agricultural work and domestic chores, (iv) effective project participation through training and capacity building activities; (v) sex disaggregated data collection before and during the project implementation; and (vi) capacity building and institutional building with a gender focus.

C. Project Gender Features and Achievements¹

4. The implementation of the GAP empowered decision-making and representation through women's participation in consultation meetings and training activities of the project. A total of 60 public consultation meetings on road and municipal infrastructures interventions were organized in the communities in the three project cities. 559 (32%) women out of 1,772 people participated

¹ Data were prepared based on the executing agency's GAP report, survey results and onsite mission findings (including focus group interviews and individual interviews).

in these sessions to learn about the project and voice their opinions and concerns during the project preparation. Under Fangchenggang Coastal Protection and Upgrading Component, 15 sessions of seminars and meetings were conducted in the communities to consult on land acquisition and environmental protection, 68 (52%) women out of 132 people participated in these sessions. During project implementation, 80 consultation sessions were conducted in the communities on road and infrastructure interventions in the three project cities. A total of 1,549 people participated in these sessions, including 379 (24%) women who were the community representatives. A total of 22 (33%) women out of 67 people participated in 6 sessions of environmental improvement interventions, and wetland protection programs in the communities in Chongzuo City.

5. Urban and rural women leaders, poor women, and households headed by women were included as participating members in coastal protection and mangrove protection groups formed during the project. A total of 9 coastal protection and mangrove protection groups were formed in Fangchenggang, with 69 active members, including 25 (36%) women and 32 (46%) from poor household. These protection groups took part in meetings and seminars related to environmental issues encountered during the construction period, by participating in discussions and deliberation and contributing to copying strategies. In environmental outreach activities, local languages were used to facilitate better communication and understanding. The project has enhanced awareness of and practice in sex disaggregated data collection.

6. The project increased job creation for women in a concrete way. The project created 22,348 jobs in the three cities, including 7,362 (33%) jobs taken up by women, 14,449 (65%) by ethnic minorities, and 3,898 (17%) by poor people, successfully achieving the target of at least 20% jobs created in subprojects for women, ethnic minorities, and the poor. During construction period, the project created 7,148 jobs, including 2,209 (31%) jobs for women. During operation period, 15,200 employment opportunities were created in three cities, of which 5,153 (34%) jobs were offered to women who work as driver, accounting, road maintainer, toll collector, cleaner etc. To protect and promote the health status of construction workers, with support from local centers for disease control, the project delivered 17 HIV/AIDS awareness and prevention sessions onsite in the three project cities. 675 (63%) women out of 1,074 people participated in these sessions. The post training satisfaction rate was 100%. At project completion, 85 decision makers and concerned technical staff of GZARG and the project cities (target: 20) were trained through specially designed capacity building programs. The women's participation was ensured with 38.5% of participation rate (target: 30%). These programs included training workshops and domestic study tours on sustainable urban integrated transport system, seminars on mangrove conservation, which have strengthened the institutional capacity of the staff involved, particularly female professional staff.

7. Women received increased income. The average wage paid for women and men are equal, averaging CNY3,200 to CNY3,400. Women have increased their income working for project created jobs. The improved road and transportation conditions have created income generating opportunities, resulting in increased income for villagers (including women) affected. The interviews with project beneficiaries, in particular female beneficiaries, proved that the road and bridge construction brought about direct benefits for women and their families. As the land transportation became more convenient and faster, women have more time doing small business or finding other jobs. The completion of the subproject has greatly shortened the distance of public transportation on urban roads. Public spaces created through the project have had positive impacts on the living qualities and gender-based lifestyles. The public square and spaces made available by the project enabled the villagers to change their lifestyles, especially women. Their social lives have transformed for better social connection, physical and mental health, as a direct

result of the completion of the coastal protection construction, including the mangrove protection center, part of the coastal upgrading project outputs in Fangchenggang.

8. The project was successful in achieving the gender actions. As shown in GAP implementation achievements matrix attached below, all 13 out of 15 planned activities (87%) were fully implemented and completed, and five (83%) out of six quantitative targets (5 in the GAP and 1 in the DMF) were fully achieved (100%). The strategic benefits for women achieved are longer-term livelihood security, better living environment and increased decision-making capacity. The efforts made by the project to empowered women's decision-making and representation through participation in consultation meetings and training activities of the project have contributed to changing the traditional way infrastructure projects were carried out in the project cities, with a stronger gender equality focus. However, this is a process, and while we cannot claim that gender gaps in decision-making power have been closed at a wider societal level, we can state that the project has made an important strategic contribution to open a path for women to participate in the decision-making processes of environmental protection, including wetland protection, in the project area. It was particularly important to include targets for women's participation at different level, as such consistent messages and performance monitoring requirements on gender equality have had strong impact on the executing and implementing agencies' ethos and organizational practices during ADB project implementation.

D. Lessons Learned and Recommendations

9. The relevance of gender issues to project objectives is apparent, as shown in the above analysis on the GAP implementation. Gender was adequately mainstreamed in project design and implementation. For improvement of future projects, a lesson from this project is that when a project is located in an ethnic minority region, it is important and beneficial to understand women's role in the context of specific ethnic culture and religion, and to design performance targets of GAP through a process of consultation to meet the particularities of the region.

10. Another lesson, is that staff turnover seemed to happen more often at the provincial and municipal PMO level, hence is key to consider mechanisms to ensure staff stability in the PMOs, which would need buy-in and actions from provincial and municipal government counterparts. The GAP was implemented under the guidance of a social and gender development specialist during project implementation. Despite the difficulties, the GPMO, with support from the social and gender development specialist, managed to allocate resources for coordinating and monitoring implementation of the plan. During the project implementation, three municipal project management offices effectively and professionally managed the implementation of the GAP of all subprojects including supervision and collaboration with the social specialist. The implementation arrangements of the GAP were generally effective, and consistent with the design envisaged at project appraisal.

Table A6: Gender Action Plan Achievements Matrix^a

Actions/Activities	Targets/Indicators	Achievements
1. Urban Road Network and Related Municipal Infrastructures Components in Fangchenggang, Chongzuo and Baise Cities		
1. Ensure female representation and participation during public participation and consultations, decision-making, and local decision-making bodies and structures	Records of participants in public meetings on road and municipal infrastructures interventions (sex disaggregated data)	<p>Completed. 50 public meetings on road and municipal infrastructures interventions sessions were conducted in the communities in the three project cities. A total of 1,772 people participated in these sessions, including 559 (32%) women.</p> <p>IAs were responsible for monitoring and collecting reports (sex disaggregated data) from contractors.</p>
2. Promote the creation of job opportunities for women during and after project implementation, and provide appropriate training	QT1. Target at least 20% of jobs created in subprojects for women, ethnic minorities, and the poor, respectively	<p>Achieved. The project created 22,348 jobs in the three cities, including 14,449 (65%) taken up by ethnic minorities, 7,362 (33%) by women and 3,898 (17%) by poor people, successfully achieving the target of at least 20% jobs created in subprojects for women, ethnic minorities, and the poor. During construction period, the project created 7,148 jobs, including 2,209 (31%) jobs for women, 3,372 (47%) jobs for poor people, and 4,013 (56%) jobs for ethnic minorities. During operation period, 15,200 employment opportunities were created in three cities, of which 5,153(34%) jobs were offered to women, 526 (3.5%) jobs were created for the poor, and 10,436 (67%) jobs created for ethnic minorities.</p>
3. Ensure that women leaders and representatives are included as participating members in seminars, workshops, and meetings conducted to discuss road and municipal infrastructures interventions	Records of seminars, workshops, and meetings (sex disaggregated data)	<p>Completed. During project implementation, 80 workshops and meetings to discuss road and municipal infrastructures interventions were conducted in the communities in the three project cities. A total of 1,549 people participated in these sessions, including 379 (24%) women who were the community representatives.^b</p> <p>IAs were responsible for monitoring and collecting reports (sex disaggregated data) from contractors.</p>
4. HIV/AIDS awareness training is provided to women and men construction workers	Training records (to be disaggregated by sex)	<p>Completed. This action was completed. During construction, all construction companies conducted awareness training on the prevention of HIV/AIDS and STIs infections and prevention on site with support from local CDCs. 17 HIV/AIDS awareness and prevention sessions were conducted in the communities in the three project cities. A total of 1,074 people participated in these sessions including 675 (63%) women. The post training satisfaction rate was 100% on average.</p> <p>IAs were responsible for monitoring and collecting reports (sex disaggregated data) from contractors.</p>

Actions/Activities	Targets/Indicators	Achievements
2. Fangchenggang City Coastal Protection and Upgrading Component		
5. Ensure that urban and rural women leaders, poor women, and households headed by women are included as participating members in coastal protection and mangrove protection groups formed in subproject area	Number of group members for coastal protection and mangrove protection and environmental awareness raising group (sex disaggregated data)	Completed. This action was completed. A total of 9 coastal protection and mangrove protection groups were formed, with 69 active members, including 25 (36%) women and 32 (46%) from poor household. These protection groups took part in meetings and seminars related to environmental issues encountered during the construction period, by participating in discussions and deliberation and contributing to copying strategies.
6. Ensure there is female representation & participation during public participation and consultations, in decision-making, and in local decision-making bodies and structures	Records of participants in public meetings on road and municipal infrastructures interventions (sex disaggregated data)	Completed. During construction, all construction companies conducted seminars, workshops, and meetings to consult on land acquisition and demolition, environmental protection, and social security. 15 sessions were conducted in the communities in Fangchenggang City. A total of 132 people participated in these sessions, including 68 (52%) women. These women were community and village representatives and presented their views on land acquisition and project construction interventions, stating their preferences and worries, which were taken into decision-making consideration. IAs were responsible for monitoring and collecting reports (sex disaggregated data) from contractors.
7. Promote the creation of job opportunities for women	QT2. Target at least 20% of jobs created in subprojects for women, ethnic minorities and the poor, respectively	Not achieved. During the project implementation, the project created 1,318 jobs in the coastal protection and upgrading component in Fangchenggang City, including 419 (32%) taken up by women, 238 (18%) by ethnic minorities, and 43 (3%) by poor people, partially achieving the target of at least 20% jobs created in subprojects for women, while the job creation target for the ethnic minorities and poor was not achieved.
Ensure the collection of gender disaggregated baseline and end-line information monitor trends	Gender disaggregated baseline and end-line information in coastal protection and upgrading subproject area is available	Not completed. During the project preparation, 600 questionnaires were distributed to people living in the project areas to learn their views of the living environment including flood control, lack water quality. At completion, 100 copies of questionnaires were distributed in Fangchenggang, among which 32% were female responders, about 100% of which were satisfied with the coastal flooding control. The protection of Fangchenggang City from coastal flooding reached once in 30-year protection level under the adverse climate scenarios benefiting around 9,576 women in the area.

Actions/Activities	Targets/Indicators	Achievements
8. Ensure that women leaders and representatives are included as participating members in seminars, workshops, and meetings conducted to discuss coastal and mangrove protection and environmental awareness programs of the project area	Records of seminars, workshops, and meetings (sex disaggregated data)	<p>Completed. During construction, all construction companies conducted seminars, workshops, and meetings to discuss road and municipal infrastructures interventions on site, and to consult on environmental protection and environmental awareness raising. 57 sessions were conducted in the communities in Fangchenggang City. A total of 1,006 people participated in these sessions, including 243 (24%) women.</p> <p>IAs were responsible for collecting sex disaggregated data from contractors including list of people from different communities/villages and meeting records.</p>
9. HIV/AIDS awareness training is provided to construction workers	Training records (sex disaggregated data)	<p>Completed. This action was completed. During construction, all construction companies conducted awareness training on the prevention of HIV/AIDS and STIs infections and prevention on site with support from local CDCs. Three HIV/AIDS awareness and prevention sessions were conducted in the communities in Fangchenggang City. A total of 393 people participated in these sessions including 126 (32%) women. The post training satisfaction rate was 100% on average.</p>
Ensure the use of gender sensitive awareness materials and use of local languages in environmental outreach activities	Awareness training records, materials	<p>Completed. During the project implementation, gender sensitive awareness materials were produced and disseminated, in environmental outreach activities, including the use of local languages to facilitate better communication and understanding with women in project areas.</p> <p>IAs were responsible for monitoring and collecting reports from contractors.</p>
3. Chongzuo City Shuikou Lake Environmental Improvement Component		
10. Ensure that urban and rural women leaders, poor women, and households headed by women are included as participating members in environmental improvement interventions and wetland protection and environmental awareness raising in subproject area	Number of group members for wetland protection and environmental awareness raising group (sex disaggregated data)	<p>Completed. An Environment Protection Group was set up in January 2015 to ensure the environmental protection of the project, comprising 9 active members, (4 or 44% female members). The group carried out quarterly activities to monitor environmental issues in the project affected areas and raise public awareness on environmental protection issues. Key themes of the group's activities include clearing of litters alongside the lake, putting up signage on environment protection, community communication activities on importance of environment protection, all in line with the municipal government's vision to build a "beautiful and clean countryside" and achieve "harmonious relationships between human and nature."</p>
Ensure women's representation & participation during public participation and consultations,	Records of participants in public meetings on the lake environmental improvement	<p>Completed. During construction, all construction companies conducted seminars, workshops, and meetings to consult on land acquisition and demolition, environmental protection, and social security. Nine sessions were</p>

Actions/Activities	Targets/Indicators	Achievements
in decision-making, and in local decision-making bodies and structures	interventions (sex disaggregated data)	<p>conducted in the communities in Chongzuo City. A total of 115 community representatives participated in these sessions, including 38 (33%) women. These women were community and village representatives and presented their views on the lake environmental improvement interventions, stating their preferences and concerns, which were taken into decision-making consideration.</p> <p>IAs were responsible for monitoring and collecting reports (sex disaggregated data) from contractors.</p>
11. Promote the creation of job opportunities for women	QT3. Target at least 20% of jobs created in subprojects for women, ethnic minorities, and the poor, respectively	Achieved. During the project implementation, the project created 860 jobs in the Chongzuo City Shuikou Lake Environmental Improvement Component in Chongzuo City, including 315 (37%) taken up by women, 614 (71%) by ethnic minorities, and 537 (62%) by poor people, successfully achieving the target of at least 20% jobs created in subprojects for women, ethnic minorities, and the poor, respectively.
Ensure the collection of gender disaggregated baseline and end-line information monitor trends	Gender disaggregated baseline and end-line information in lake environmental improvement subproject area is available	Not completed. During the project preparation, 600 questionnaires were distributed to people living in the project areas to learn their views of the living environment including flood control, lack water quality etc. No sex disaggregated data were collected. At completion, 200 questionnaires were distributed in Chongzuo, among which 36% were female responders, 90% who were satisfied with the lack rehabilitation and environmental improvement. The Chongzuo Shuikou Lake environmental improvement component had direct beneficial impacts on around 5,813 women in the project area.
12. Ensure that women leaders and representatives are included as participating members in seminars, workshops, and meetings conducted to discuss environmental improvement interventions, and wetland protection programs of the project area	Records of seminars, workshops, and meetings (sex disaggregated data)	<p>Completed. During project implementation, all construction companies conducted seminars, workshops, and meetings to discuss environmental improvement interventions, and wetland protection programs on site. 6 sessions were held with 67 community representatives, including 22 (33%) women.</p> <p>IAs were responsible for monitoring and collecting reports (sex disaggregated data) from contractors.</p>
13. HIV/AIDS awareness training is provided to construction workers	Training records (sex disaggregated data)	Completed. This action was completed. During construction, all construction companies conducted awareness training on the prevention of HIV/AIDS and STIs infections and prevention on site with support from local CDCs. Eleven

Actions/Activities	Targets/Indicators	Achievements
		<p>HIV/AIDS awareness and prevention sessions were conducted in Chongzuo City. A total of 421 people participated in these sessions including 137 (33%) women. The post training satisfaction rate was 90% on average. In Baise City, a total of 260 people participated in 3 awareness sessions including 106 (40.8%) women. The post training satisfaction rate was 100% on average. The awareness and understanding of gender related issues has increased as a result of training and technical support during the project implementation.</p> <p>IAs were responsible for monitoring and collecting reports from contractors.</p>
Ensure the use of gender sensitive awareness materials and use of local languages in environmental outreach activities	Awareness training records, materials	<p>Completed. During the project implementation, gender sensitive awareness materials were produced and disseminated, in environmental outreach activities, including through the use of local languages that facilitated better communication and understanding with women in the project area.</p> <p>IAs were responsible for monitoring and collecting reports from contractors.</p>
4. Capacity Development		
14. EA and IAs assign one gender focal point (GFP) to manage and coordinate GAP. The GFP will be trained on safeguard and gender impacts by the Consultant	QT4. One GFP from EA and IAs, respectively, for managing and coordinating GAP's work	Achieved. Four (31%) gender focal point staff (female) out of 30 staff was assigned in the GPMO which undertook the role of overall coordination, implementation, and supervision of GAP component of the project. Three (female) gender focal persons were assigned to be responsible for gender/social issues in the three MPMOs. Each MPMO has one GFP staff from their IAs to counterpart on managing and coordinating GAP's work.
15. EA and IAs recruit consultants to monitoring the GAP's implementation	QT5. One international and one domestic social development specialists to be responsible for the GAP monitoring to ensure social safeguards and gender mainstreaming are properly done.	Achieved. One international and one national social development specialists were recruited to ensure social safeguards and project gender mainstreaming to advise and assist PMOs with GAP implementation and monitoring.
Project cities have more capacity to plan and implement an integrated and sustainable urban transport system.	QT6. About 20 decision makers and concerned technical staff in GZARG and the project cities have been trained through specially designed training programs,	Achieved. At project completion, 85 decision makers and concerned technical staff of GZARG and the project cities (appraisal target: 20) were trained through specially designed capacity building programs. The women's participation was ensured with 38.5% of participation rate (target: 30%). These programs included training workshops and domestic study tours on sustainable urban integrated transport system, seminars on mangrove

Actions/Activities	Targets/Indicators	Achievements
	with a target for 30% women professional participation.	conservation, which have strengthened the institutional capacity of the staffs involved, particularly female professional staff.

CAB = Civil Affairs Bureau, CDC = center for disease control, EA = executing agency, GAD = gender and development, GAP = gender action plan, GFP = gender focal point, GPMO = Guangxi Project Management Office, GZAR = Guangxi Zhuang Autonomous Region, IA = implementing agency, MPMO = municipal project management office, PMO = project management office, Q = quarter.

^a This matrix was prepared based on the executing agency's project completion report and field mission survey and interviews

^b Community representatives were selected from the community residential of the project areas with balanced gender representation.

ENVIRONMENTAL IMPACT ANALYSIS

A. Introduction

1. By completion, the Guangxi Southwestern Cities Development Project delivered six physical outputs, which caused environmental impacts:

- (i) **Fangchenggang road network and related municipal infrastructure:** (a) construction of 16.507 kilometers (km) urban roads, including 210 meters (m) bridge and 12.76 km concrete roads renovated to asphalt pavement; and (b) municipal infrastructures, including water supply pipeline, drainage system, sewage pipeline, lighting, traffic control facilities and landscaping.
- (ii) **Fangchenggang coastal protection and upgrading:** (a) 3.6 km of coastal dikes were constructed; (b) a 2.5 hectare (ha) public education square for mangrove protection, and (c) auxiliary facilities.
- (iii) **Chongzuo road network and related municipal infrastructure.** (a) construction of 7.9 km urban roads; and (b) municipal infrastructures, such as water supply and sewage pipelines, drainage, lighting and traffic control facilities, and landscaping.
- (iv) **Chongzuo Shuikou Lake environmental improvement:** (a) clearance of garbage, fish, and duck farms from the lake; (b) dredge of 74.1 ha; (c) removal of 3.24 km coffer weirs from waterways; (d) rehabilitation of 0.88 km lake banks; (e) construction of 0.15 km lakeside pedestrian paths; and (f) establishment of 2 pollution monitoring sites.
- (v) **Baise road network and related municipal infrastructure:** (a) construction of 3.65 km urban roads; and (b) municipal infrastructures including water supply pipeline, drainage system, sewage pipeline, lighting, traffic control facilities, and landscaping.
- (vi) **Baise Longwang bridge:** (a) bridge construction of 511.74 m; and (b) municipal infrastructures including water supply pipeline, drainage system, sewage pipeline, lighting, traffic control facilities, and landscaping.

2. At appraisal, the project was classified as environment category A according to ADB Environmental Policy (2002) and Environmental Assessment Guidelines (2003). The domestic environmental impact assessment (EIA) was prepared by Guangxi Transportation Research Institute for each of the six investment components as per relevant laws and regulations of the PRC and were approved by respective municipal environment protection bureaus in 2009. A summary EIA (SEIA) was prepared including an environmental management plan (EMP) based on the approved domestic EIAs. The SEIA concluded that the project would generate significant socioeconomic benefits by promoting sustainable urban development and regional cooperation. The expected negative impacts on air, water, and acoustic environment especially during construction would be temporary and localized and could be mitigated by implementing mitigation measures. The SEIA was circulated to the Board in February 2010.¹

3. In line with domestic regulations for environmental management, the two Baise components have passed the environmental completion acceptance inspection in 2014. The environmental completion acceptance inspection of the remaining components is ongoing and expected to be completed in 2021 regarding the delay caused by the coronavirus disease (COVID-19). All safeguard issues have been resolved or addressed.

¹ An environmental due diligence report was prepared and approved by ADB in 2018 to reflect the scope change involved in loan savings allocation.

B. Institutional Arrangement

4. Guangxi Zhuang Autonomous Region Government (GZARG) was the executing agency, acting through the project management office (PMO) established under Guangxi Development and Reform Commission. The PMO coordinated the project overall compliance of the environmental safeguards while the project implementing agencies (PIAs) oversaw the EMP implementation for their respective components. Contractors implemented mitigation measures effectively during construction. The environmental management responsibilities were transferred to the project operation companies (POCs) during operation.

5. The PMO engaged an environment consultant to assist in the environmental management from August 2013 until the engagement of the consulting firm in March 2014. From then on, the environmental expert in the consulting team supported supervising EMP, verifying implementation of mitigation measures, and preparing semiannual environmental monitoring reports (EMRs).

6. The total cost for implementation of EMP was CNY9.62 million, including CNY9.14 million for the implementation of environmental mitigation measures during construction and CNY0.48 million for external environmental monitoring.

7. In addition to environmental safeguards trainings to project personnel and construction workforce, workshops on sustainable transportation and mangrove forest protection were organized for the PIAs and POCs and other stakeholders during the project implementation.

C. Monitoring

8. Impact monitoring was conducted since 2013 by local environmental monitoring stations which the PIAs engaged (Guangxi Nanning Xiwan Monitoring Company replaced the local monitor for Fangchenggang component from 2014). The monitoring results showed the compliance with relevant national standards during construction and effectiveness of mitigation measures implemented. PMO submitted 11 EMRs to ADB covering the period from 2013 to 2018, which were all disclosed on the ADB website. No major environmental impacts were recorded within the monitoring reports.

D. Environmental Impacts and Mitigation Measures

9. The adverse impacts resulted from construction activities in all component sites were effectively mitigated through good construction management practices as per the EMP. During the operation period, traffic noise and exhaust gas are generated by passing vehicles.

10. **Ambient Air Quality.** At construction stage, measures taken included: (i) setting up the construction material yards and mixing stations at open place away from residential areas; (ii) covering the material transportation vehicles with cloth and clean the access roads regularly; (iii) using sealed heating asphalt paving device; (iv) regularly spraying water on the surface of the road bed to prevent dust; and (v) maintaining vehicles and diesel equipment properly and avoiding unnecessary running of vehicle and equipment engines. At operation stage, measures include spraying water regularly and maintain the greenbelt along the road alignment.

11. **Noise.** At construction stage, mitigation measures included: (i) maintaining the machinery to minimize noise; (ii) monitoring construction sites near sensitive areas by environmental monitoring agencies contracted by the PIAs; (iii) prohibiting machineries with high noise levels at noon and nighttime; (iv) locating material yards and mixing stations 200 m away from residences;

and (v) arranging working hours properly to allow workers who operated construction machineries sufficient time to recover hearing and providing personal protective measures to the machinery operators. The environmental completion acceptance report for Baise components showed traffic noise increase but still within limits of national standards.

12. **Water.** Measures taken during construction included: (i) stacking the construction materials far away from the river and covering the construction materials with tarp; (ii) treating wastewater from construction sites and worker camps using sedimentation and/or septic tanks; (iii) cleaning up domestic garbage to avoid throwing into rivers; (iv) during the construction of the cast-in-place pile, using sedimentation pool for mud storage to avoid direct discharge into the river; and (v) regularly maintaining construction machineries to prevent oil leakage into the river.²

13. **Solid waste.** During construction, solid wastes from the construction camps were collected and transported to the nearest solid waste transfer stations and municipal sanitary landfill. The spoils were transported to the sites designated by local administrative authorities and re-vegetated. At operation stage, the POCs are responsible for organizing timely road cleaning. Total of 188, 200 cubic meters of sediments were dredged. The contents of heavy metals, sulfide, and volatile phenol of dredged sediments from Shuikou Lake were tested in 2016. All the tested indicators were below the detection limits so that the dredged sediments were reused for landscaping in the Chongzuo Garden Expo.

14. **Soil erosion.** Measures taken during construction included: (i) intercepting ditches and chutes built to prevent outside runoff from entering disposal sites, and to divert runoff from sites to existing drainage or ponds; (ii) topsoil striped and stockpiled with retaining walls where necessary before dumping; (iii) minimizing excavation activities during heavy rainy days; and (iv) re-vegetating with trees and grass once refilling and land leveling were completed.

15. **Ecological environment.** Guardrails were installed to protect the old trees near construction sites of Longwang Bridge and Chengnan Ring Road. Three big trees within the redline of Chengnan Ring Roads were re-planted in Longjing Park. For the Fangchenggang coastal protection component, during project implementation, the project sites are less than 5 m away from the mangrove border. ADB required very strict mitigation measures to protect mangrove forest. After construction, revegetation of mangroves were conducted to expand the area. Based on the final evaluation, the area of mangrove forest has been expanded. Slope protection works were constructed with grass and tree plantings.

16. **Physical and Cultural Resources.** A local Fengshui Temple about 30 m away from the redline of Chengnan Ring Road in Baise was identified. Warning signs were posted to prevent construction vehicles approaching.

17. **Community and Occupational Health and Safety.** All safety mitigation measures have been implemented adequately during project construction and operation stage. Non-compliance by workers at some sites were noted during implementation, which were rectified immediately. No safety incidents recorded during construction.

18. **Environmental Benefits.** The coastal dike constructed (3.6 km) provides 1 in 30 years

² Take Youjiang River as an example, which is an important river in Baise City, to mitigate the risk of hazardous chemical leakage into the river, four emergency tanks (3m*3m*2m each) with valves were designed and built at the entrance of Longwang Bridge to prevent runoff into the river directly. The PIA also formulated an emergency response plan for hazardous chemical leakage in October 2014 as per the EIA.

flood protection covering 520 ha. The dike formed a barrier protecting the mangrove forest from urban development and providing recreation places for the residents. The mangrove education center has been open to the public since September 2019. The Shuikou Lake environment improvement component reduced pollution to the lake significantly and the water quality increased from Class III at appraisal to Class II of Ambient Surface Water Quality (GB 3838-2002) in 2020. The average total nitrogen reduced from 7.68 milligram per liter at start of construction in 2013 to 0.43 mg/L in 2020.

E. Grievance Redress Mechanism, Public Consultation, and Information Disclosure

19. During the preparation of the domestic EIA, 600 questionnaires were distributed to people living in the project areas. The EIA institutes conducted informal interviews with residents, totaling more than 60 for each component. Wider stakeholder meetings were held in May, June, and September 2009, drawing over 300 participants from municipal government agencies and local communities. The comments from the consultation were reflected in the project EMP and the corresponding mitigation measures were well implemented during construction.

20. During construction, consultations were undertaken by contractors and construction supervision companies informally. For Baise components, 100 questionnaires were distributed to the residents near the sites in 2014 during the environmental completion acceptance inspection. At project completion stage, total of 400 questionnaires, including 200 copies for Chongzuo, 100 copies for Baise and 100 copies for Fangchenggang, were conducted in April 2019. The questionnaire results showed the respondents were generally satisfied with the mitigation measures implemented.

21. In accordance with the EMP, the Grievance Redress Mechanism had been established from project commencement, such as a Project Public Complaints Unit in each project city PMO, responsible officer in GPMO. As of June 2021, only one case related on environment has been recorded. In conclusion, the issues complained do not conform with the records in the project documentation or the observation during site visits. A compliant closure report was submitted to Compliance Review Panel and Complaint Receiving Officers of the Accountability Mechanism in line with the Accountability Mechanism Policy 2012. This case has been disclosed due to unreachable false contact information in the complaint to further clarify the issues remaining.

F. Conclusion and Recommendation

22. The EMP implementation is satisfactory in general. During construction, the contractors complied with the relevant provisions for environmental management. The environmental monitoring plan was properly executed in accordance with the EMP. Institutional establishment and arrangements were appropriate and functional. In general, the environmental benefits setting at appraisal were achieved. It is recommended the PIAs/POCs of Chongzuo and Fangchenggang continue to monitor the noise and air quality until the environmental completion is accepted to determine whether additional noise and air pollution prevention measures, such as noise barriers, increasing the water spraying frequency are needed.

LAND ACQUISITION AND RESETTLEMENT

A. Background

1. Five construction components involved land acquisition and resettlement (LAR), including Baise Road and Bridges, Fangchenggang Road Network, Fangchenggang Coastal Protection and Upgrading, Chongzuo Shuikou Lake Improvement and Chongzuo Road Network. Three full resettlement plans (RPs), 1 full RP with due diligence, and 1 short RP were prepared for each of the five components during project preparation. Based on the detailed design and survey, three RPs of Baise and Fangchenggang Road components and Chongzuo Shuikou Lake were updated and approved by ADB in May and October 2012, respectively. According to the updated RPs, the project would permanently acquire 3,088.1 *mu* of collectively-owned land.¹ The building demolition would be 27,084.1 square meters (m²) of residential, 23,197.4 m² of business and institutions, and 17,513.0 m² of breeding facilities (Chongzuo Shuikou Lake component). As a result, the project construction would affect 587 households or 3,483 persons by permanent acquisition, 169 households or 716 persons and 3 enterprises/institutions with 1,131 employees/students by house demolition, and 89 households or 725 persons by removal of breeding facilities under Chongzuo Shuikou Lake component.

B. Impacts

2. The LAR began in 2012 and was completed in 2019. At completion, the project acquired 3,204.7 *mu* of land permanently (an increase of 3.8% per RP estimates), demolished 34,769.1 m² of residential structures (an increase of 28.4%) and 22,165.2 m² of business/institution buildings (a decrease of 4.4%). Totally, 733 households and 4,002 persons were affected by permanent land acquisition, 151 households and 485 persons by residential structure demolition, and 3 enterprises with 1,109 employees/students by business/institutions structure demolition. The detailed LAR impacts of the project are provided in Table A8.1. The increase in land acquisition was a result of acquiring scattered lands which was not suitable for farming after the collective land acquisition as the villagers requested. The scope changes during the implementation, such as road cancellation or realignment, also led to resettlement impact changes, in particular the reduction in house demolition as indicated in Table A8.2.

¹ A *mu* is a Chinese unit of measurement for area or coverage (1 *mu* = 666.67 m²).

Table A8.1: Resettlement Impacts

Item	Unit	Baise Road and Bridge		Fangchenggang Road		Fangchenggang Coastal		Chongzuo Shuikou Lake		Chongzuo Road		Total	
		Actual (RP)	Variation (%)	Actual (RP)	Variation (%)	Actual (RP)	Variation (%)	Actual (RP)	Variation (%)	Actual (RP)	Variation (%)	Actual (RP)	Variation (%)
1. Permanent land acquisition	<i>mu</i>	649.2 (493.9)	31.4	1,306.2 (1,531)	-14.7	334.2 (276.4)	20.9	474.8 (474.8)	0	440.3 (311.9)	41.2	3,204.7 (3,088.1)	3.8
2. Building Demolition	m ²	25,798.8 (32,115.8)	-19.7	23,599.2 (3,821)	517.6	2,307.6 (3,129)	-26.3	18,124.6 (17,513)	3.5	5,228.6 (11,215.7)	-53.4	75,058.8 (67,794.4)	10.7
Residential houses	m ²	4,485.3 (9,770)	-54.1	23,599.2 (3,821)	517.6	2,307.6 (3,129)	-26.3	0 (0)	0	4,377 (10,364.1)	-57.8	34,769.1 (27,084.1)	28.4
Business and Institutions	m ²	21,313.6 (22,345.8)	-4.6	0 (0)	0	0 (0)	0	0 (0)	0	851.6 (851.6)	0	22,165.2 (23,197.4)	-4.4
Breeding Facilities	m ²	0 (0)	0	0 (0)	0	0 (0)	0	18124.6 (17,513)	3.5	0 (0)	0	18,124.6 (17,513)	3.5
3. Number of AH	HH	380 (339)	12.1	249 (202)	23.3	68 (81)	-16	120 (119)	0.8	157 (104)	51	974 (845)	15.3
land acquisition	HH	345 (301)	14.6	182 (182)	0	40 (36)	11.1	30 (30)	0	136 (38)	257.9	733 (587)	24.9
Household relocation	HH	35 (38)	-7.9	67 (20)	235	28 (45)	-37.8	0 (0)	0	21 (66)	-68.2	151 (169)	-10.7
Breeding Facilities	HH	0 (0)	0	0 (0)	0	0 (0)	0	90 (89)	1.1	0 (0)	0	90 (89)	1.1
4. Number of Business or Institutions	Unit	2 (2)	0	0 (0)	0	0 (0)	0	0 (0)	0	1 (1)	0	3 (3)	0
5. Number of AP	Person	3,323 (3,551)	-6.4	937 (825)	13.6	260 (258)	0.8	568 (875)	-35.1	926 (546)	69.6	6,014 (6,055)	-0.7
land acquisition	Person	2,198 (2,320)	-5.3	748 (748)	0	197 (112)	75.9	150 (150)	0	709 (153)	363.4	4,002 (3,483)	14.9
Household Relocation	Person	142 (226)	-37.2	189 (77)	145.5	63 (146)	-56.8	0 (0)	0	91 (267)	-65.9	485 (716)	-32.3
Business or Institutions	Person	983 (1,005)	-2.2	0 (0)	0	0 (0)	0	0 (0)	0	126 (126)	0	1,109 (1,131)	-1.9
Breeding Facilities	Person	0 (0)	0	0 (0)	0	0 (0)	0	418 (725)	-42.3	0 (0)	0	418 (725)	-42.3

AH = affected household, AP = affected people, m² = square meter, *mu* = Chinese unit of measurement (1 *mu* = 666.67 m²), RP = resettlement plan.

Sources: Executing agency's project completion report.

Table A8.2: Resettlement Impacts Variation due to Project Scope Change

Project City	Project Component	Scope Change	Updated Impacts
Baise City	Urban Road Network	The Ramp A under this component was canceled.	House demolition of 16 AHs in Dawan Village was avoided.
Chongzuo City	Shuikou Lake Environmental Improvement	Construction contents were updated to fit with the overall landscape design of World Garden Exhibition in Chongzuo. Widening the Shijinglin Road to 54 m.	No change of resettlement impacts. 6 households in Yanshan Community and Wuwei Cement Plant were affected.
	Urban Road Network	Beiweier Road is shortened by 1.9 km.	House demolition of 57 AHs in Ma'an Village was avoided.
Fangchenggang City	Urban Road Network	Minor adjustment is made under No.1 Road. In Yuzhouping Road Network, all roads were canceled except for Jianzheng Road. Realignment of Jianzheng Road	Acquisition and demolition of a temple and more than 10 temporary houses were avoided. Impacts on young crops and ground attachments were avoided. House demolition of 7 AHs and relocation of <i>Heritiera littoralis</i> were avoided.
	Coastal improvement	Cancel the coastal works affected by the Iron and Steel Dock	No change in land acquisition.

AH = affected household.

Sources: Asian Development Bank and the executing agency's project completion report.

C. Resettlement Policies and Compensation Standards

3. The project LAR was implemented according to the RPs, ADB's Safeguard Policy Statement (2009), the Land Administration Law of the People's Republic of China, and regulations of Baise, Chongzuo, and Fangchenggang City governments. Land compensation rates in three project cities were formulated based on land administration regulations by Guangxi Zhuang Autonomous Region Government. In Baise City, the land compensation standard was 6 to 20 times of the integrated average annual output value (AAOV) issued in 2010, which varied from CNY30,000 to CNY120,000 based on different land classifications. In Chongzuo City, the land compensation was applied as 4 to 30 times of integrated AAOV issued in 2013, which ranged from CNY5,800 to CNY53,850. In Fangchenggang City, the land compensation was CNY25,000/*mu* for all land types in different areas. Compensation rates of houses were house assessment prices based on the replacement value of that year with consideration of the house structure, area, usage purpose and location as well. Qualified assessment agencies were engaged, and the assessment prices were submitted to the municipal assessment center for review and approval. In addition, the actual rates of subsidies during the transitional period, indoor facilities compensation and urban infrastructure compensation were all consistent with the standards defined in the updated RPs. Generally, the actual land acquisition and house compensation rates were higher than those in RPs, and in some cases significantly higher.

D. Livelihood Restoration and Resettlement

4. Main measures to restore the livelihood in this project included: (i) land development for the third industry as a commercial area through land leasing, establishing facilities such as financial center, food court, agricultural market, hotel, etc. Farmers receive a dividend by way of land leasing; (ii) The employees of the affected state-owned enterprises were paid a dividend by

way of shareholding each year according to their working years. The average monthly wage was compensated economically, and all retired employees were entitled to pension insurance; and (iii) The government sent professional technicians to guide the affected farmers in agricultural technology and the women's union organized training for farmers in domestic services, which were welcomed by farmers.

5. For residential houses demolished, both cash compensation and cash plus provision of reconstruction house plot for self-construction were available to APs. The basic infrastructure and facilities (including water supply, power supply, road and land leveling) in resettlement sites were provided by the local governments. For the affected enterprises, compensation for structures and relocation allowance were provided to the owners of the demolished non-residential structures, and allowance for the loss of working days has been paid to the affected employees as well.

6. According to the monitoring results, the income, expenditure and net income of the affected people in the project area have increased significantly. The increase of productive expenditure indicated the improvement of production capacity. The production capacity of residents was reduced because of the impact of the project. The project provided a guarantee for the improvement of living standards of residents. At the same time, the income of the affected residents in the project area increased significantly. The per capita income of affected people in Baise, Chongzuo and Fangchenggang increased by 48.90%, 48.75% and 44.48%, respectively. The results showed that the production and living standards of the households affected were not reduced by the impact of the project, on the contrary, they have greatly improved. Meanwhile, the implementation of project compensation and resettlement measures played a promoting role in improving the living standards of the affected people.

E. Resettlement Cost

7. According to the RPs, the total resettlement cost would be CNY166.0 million, including land compensation, compensation for ground attachments, demolition of residential house, enterprises/institutions and shops. The cash compensation for land acquisition under Baise Urban Road Component included all the costs under both Longwang Bridge Component and Urban Road Component. At completion, the actual total resettlement cost was CNY388.3 million, 133.9% higher than the RP estimations. The cost increase was mainly due to the higher compensation rates and increased land acquisition impacts during implementation. Table A8.3 summarizes the resettlement costs.

Table A8.3: Resettlement Cost
(CNY million)

Project City	Project Component	Land Acquisition		Ground Attachment		House Demolition		Subtotal		
		Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Variation (%)
Baise	Urban Road & Bridge	59.2	175.3	0.7	0.8	8.7	5.9	68.6	182.0	165.3
Chongzuo	Urban Road Network	/	/	/	/	/	/	12.5	31.2	149.6
	Shuikou Lake	/	/	/	/	/	/	46.0	52.6	14.3
Fangcheng-gang	Urban Road Network	24.5	73.2	0.4	10.2	2.1	18.3	27.0	101.7	276.7
	Coastal Protection and Upgrading	10.0	18.7	0.3	0.3	1.6	1.8	11.9	20.8	74.8
Total		83.6	267.2	1.4	11.3	12.4	26.0	166.0	388.3	133.9

Sources: Asian Development Bank and the executing agency's project completion report.

F. Public Consultation, Information Disclosure and Grievance Redressing

8. During implementation of the LAR, pre-announcements of land acquisition were issued and publicized, mobilization meetings were held, and affected people participated in the detailed measurement survey and agreement signing. Meetings and discussions were held regarding the selection of relocation site, distribution of house plots, and preparation of development plan for the lands for tertiary industry. Affected people were fully informed of resettlement and compensation policies for land acquisition and house demolition. Questionnaires survey to affected villages and people was conducted during project implementation by external monitoring agency. The surveys were provided with far-range representativeness reflecting wishes of the affected people.

9. The project established an open complaint channel and informed the affected population through collective meetings, resettlement information brochures and other media. If the affected person has any questions or complaints, he/she may appeal to the village committee, the municipal project management office, the municipal land Resources Bureau and the municipal demolition and relocation office until he submits them to the court for decision. If the two sides cannot reach a consensus, village committees, street offices, land acquisition and demolition departments would be involved for negotiation and problem resolution. Three cases were handled during LAR implementation; 2 in Chongzuo and 1 in Fangchenggang City. The main complaints received by various subprojects include reward funds for demolition subsidy and homestead and industrial land allocation. The government departments have actively responded to these complaints, and all complaints have been properly resolved through consultation within project period.

G. Institutional Establishment

10. To ensure the successful project implementation, a project management office at the provincial level was established under the instructions of the Guangxi Zhuang Autonomous Region. Guangxi Project Management Office (GPMO) provides guidance and coordination for the implementation of the project. Each project city government has established a local project management office with inclusion of related institution participation. The staff from each subcomponent resettlement unit took the lead in coordinating the planning, implementation, financing, and monitoring of land acquisition and resettlement. They worked closely with village and street officials, land administration bureaus, and house demolition offices, and were responsible for supervising and monitoring resettlement (e.g., delivery of entitlements, selection of new housing sites, and restoration of incomes, among other economic measures). The institutional arrangements for LAR were well organized and efficient, and the staff responsible for implementation were well trained.

H. Monitoring and Evaluation

11. The implementation of the resettlement plan was monitored internally and externally. The project office was responsible for internal supervision. The internal monitoring report was an important part of the project progress report. By the end of December 2018, GPMO submitted 26 progress reports. The Beijing Mott MacDonald Company was engaged for the external monitoring and evaluation (M&E) of the project. The external resettlement M&E was conducted regularly since 2012. ADB received eight M&E reports, all uploaded to website.

I. Conclusions and Lessons

12. Generally, the project LAR was implemented successfully in compliance with national and local regulations, RPs, loan covenants, and ADB's Safeguard Policy Statement (2009). LAR impact was minimized through the optimization of construction design. Active involvement of APs through the extensive participatory program and consultation procedures were conducted. Most APs now enjoy higher incomes, easy access to public services, and more employment opportunities. The M&E completion report concluded that the incomes of the affected people had been restored.

13. However, the project scope had to be adjusted during implementation due to difficulty in resettlement, in particular for Fangchenggang and Chongzuo road components. In addition, counterpart funds difficulties associated with increased compensation caused slow LAR progress, which in turn exerted great risks of civil works delay in Fangchenggang City. The PIAs and local governments made great efforts and active consultation with APs, which helped to ensure smooth and successful implementation of LAR. A valuable lesson was to maintain the effective and practical links between LAR and civil works in terms of implementation schedule.

STATUS OF COMPLIANCE WITH LOAN COVENANTS

Covenant	Reference	Compliance Status
The Borrower shall cause GZARG to carry out the project with due diligence and efficiency and in conformity with sound administrative, financial, engineering, environmental and urban development practices.	LA, Article IV, Section 4.01(a)	Complied with. The project was implemented in accordance with the applicable laws, regulations, and standards/norms of PRC.
The Borrower shall cause GZARG to make available to FMG, CMG and BMG, promptly as needed, the funds, facilities, services, land and other resources which are required, in addition to the proceeds of the Loan, for the carrying out of the project.	LA, Article IV, Section 4.02	Complied with. All resources required for the project implementation have been provided in time.
The Borrower shall ensure that the activities of its departments and agencies with respect to the carrying out of the Project and operation of the Project facilities are conducted and coordinated in accordance with sound administrative policies and procedures.	LA, Article IV, Section 4.03	Complied with. GZARG and three municipal governments set up the project leading group to provide the policies and coordination for the project implementation.
The Borrower shall take all action which shall be necessary on its part to enable GZARG, through GZARG enable FMG, CMG and BMG, to perform their respective obligations under the Project Agreement, and shall not take or permit any action which would interfere with the performance of such obligations.	LA, Article IV, Section 4.04	Complied with. The EA and PIAs adequately performed their obligations.
<u>Executing Agency and Guangxi Project Management Office</u>		Complied with.
The EA for the Project shall be GZARG, with a vice governor having been designated to provide overall guidance and support for the preparation and implementation of the Project. GPMO, the inter-departmental project management office at the regional government level established by GZARG, shall carry out the day-to-day activities of the Project and provide coordination support for preparation and implementation of the Project across the Project Cities.	LA, Schedule 5, para. 1	GPMO established under Guangxi Development and Reform Commission coordinated the overall administration and communication with ADB; and implemented capacity development activities.
<u>Project Implementation Agency and Municipal PMO</u>		
FMG, CMG and BMG shall be the IAs of the Project responsible for implementation of the concerned Components in the three Project Cities. Three inter-agency MPMOs set up respectively in FMG, CMG and BMG shall be responsible for undertaking day-to-day activities of the concerned Components of the Project and providing coordination support for preparation and implementation of the concerned Components of the Project within the concerned Project Cities.	LA, Schedule 5, para. 2	Complied with. Three project cities had set up project management offices as required to undertake the daily project management activities.
<u>Project Implementation Company and Project Implementation Arrangement</u>		
The following three PICs shall be engaged under Project Implementation Agreements for directly implementing the Project Components in the three Project Cities: (i) FPDUCIC for the Fangchenggang Road Network and Related Municipal Infrastructure Component and the Fangchenggang Coastal Protection and Upgrading Component. (ii) CUCIC for the Chongzuo Road Network and Related Municipal Infrastructure Component and the Chongzuo Shuikou Lake Environmental Improvement Component; and (iii) BCDIC for the Baise Road Network and Related Municipal Infrastructure Component and the Baise Longwang Bridge Component;	LA, Schedule 5, para. 3 PA, Schedule, para. 3	Complied with. The three project components were implemented by the designated PICs as per the LA.

Covenant	Reference	Compliance Status
<p>GZARG, FMG, CMG and BMG shall and shall cause the PICs to ensure that all the project implementation procedures agreed upon with ADB be followed, including environmental and social safeguard requirements.</p>	<p>LA, Schedule 5, para. 4</p>	<p>Complied with. PICs implemented the project activities in line with all safeguards requirements of ADB.</p>
<p>GPMO shall be responsible for implementation of the capacity development component of the Project.</p>	<p>LA, Schedule 5, para. 5</p>	<p>Complied with. GPMO properly implemented all the designated capacity development activities.</p>
<p><u>Provision of Counterpart Funding</u></p>		
<p>The Borrower shall cause GZARG, and through GZARG cause FMG, CMG and BMG, to ensure (a) timely provision of counterpart financing necessary for the project and provision of additional counterpart funding for any shortfall of funds or cost overrun, and (b) adequate funding for operation and maintenance of the project facilities.</p>	<p>LA, Schedule 5, para. 6</p>	<p>Complied with. The three project municipal governments timely provided sufficient counterpart funds for the project construction and O&M.</p>
<p><u>Change of Ownership, Organizational Structure and Assets</u></p>		
<p>The Borrower shall cause GZARG, FMG, CMG or BMG to ensure that in the event that (a) any change in ownership of relevant PIC, or (b) any sale, transfer, or assignment of the responsibilities of a relevant PIC under the Project is anticipated, ADB be informed and consulted at least six (6) months prior to the anticipated change, or sale, transfer, or assignment.</p>	<p>LA, Schedule 5, para. 7</p>	<p>Complied with. No changes happened.</p>
<p>The Borrower shall through GZARG ensure that FMG, CMG, and BMG shall ensure and shall cause through FMG, CMG and BMG the PICs to ensure, that no material organizational changes (either financial, operational, or structural) to, nor material asset transfers to or from PICs be formally approved or implemented without the prior approval of GZARG and ADB, if such changes would affect a PIC's ability to perform its obligations under the concerned Project Implementation Agreement. The Borrower shall ensure through GAZRG that FMG, CMG, BMG, and PICs ensure that any such change shall be made in a lawful and transparent manner.</p>	<p>LA, Schedule 5, para. 8</p>	<p>Complied with. No changes happened.</p>
<p>GZARG, FMG, CMG and BMG shall carry out the Project with due diligence and efficiency, and in conformity with sound administrative, financial, engineering, environmental, urban roads, and urban development practices.</p>	<p>PA, Article II, section 2.01(a)</p>	<p>Complied with. The project was implemented in conformity with all applicable laws/regulations, standards/norms of the PRC.</p>
<p>GZARG, FMG, CMG and BMG shall make available, promptly as needed, the funds, facilities, services, equipment, land and other resources which are required, in addition to the proceeds of the Loan, for the carrying out of the Project.</p>	<p>PA, Article II, Section 2.02</p>	<p>Complied with. All sources required for the project implementation were provided on time.</p>
<p>(a) In the carrying out of the Project, GZARG, FMG, CMG and BMG shall employ competent and qualified consultants and contractors, acceptable to ADB, to an extent and upon terms and conditions satisfactory to ADB.</p>	<p>PA, Article II, Section 2.03</p>	<p>Complied with. The qualified consultants and contractors to support or carry out the implementation were engaged in line with the ADB's Procurement Guidelines and regulations.</p>
<p>(b) Except as ADB may otherwise agree, all Goods, Works and consulting services to be financed out of the proceeds of the Loan shall be procured in accordance with the provisions of Schedule 4 to the Loan Agreement.</p>		
<p>GZARG, FMG, CMG and BMG shall carry out the Project in accordance with plans, design standards, specifications, work schedules and construction methods acceptable to ADB. GZARG, FMG, CMG and BMG shall furnish, or cause to be furnished, to ADB,</p>	<p>PA, Article II, Section 2.04</p>	<p>Complied with. All the relevant documents were</p>

Covenant	Reference	Compliance Status
promptly after their preparation, such plans, design standards, specifications and work schedules, and any material modifications subsequently made therein, in such detail as ADB shall reasonably request.		submitted as requested to the ADB for review.
(a) FMG, CMG and BMG shall take out and maintain with responsible insurers, or make other arrangements satisfactory to ADB for, insurance of the Project facilities to such extent and against such risks and in such amounts as shall be consistent with sound practice.	PA, Article II Section 2.05	Complied with. Required insurances against the risks related to project implementation and operations have been taken by the contractors and implementing units.
(b) Without limiting the generality of the foregoing, each FMG, CMG and BMG undertakes to insure, or cause to be insured, the Goods to be imported and to be financed out of the proceeds of the Loan for the Components of the Project under their respective responsibilities for implementation against hazards incident to the acquisition, transportation and delivery thereof to the place of use or installation, and for such insurance any indemnity shall be payable in a currency freely usable to replace or repair such Goods.		
GZARG, FMG, CMG and BMG shall, and shall cause PICs to, maintain, or cause to be maintained, records and accounts adequate to identify the Goods, Works and consulting services and other items of expenditure financed out of the proceeds of the Loan, to disclose the use thereof in the Project, to record the progress of the Project (including the cost thereof) and to reflect, in accordance with consistently maintained sound accounting principles, its operations and financial condition.	PA, Article II, Section 2.06	Complied with. PICs set up and maintained separate project accounts and records as stipulated.
(a) ADB and GZARG shall cooperate fully to ensure that the purposes of the Loan shall be accomplished	PA, Article II, Section 2.07(a)	Complied with. ADB closely coordinated with GZARG for the project implementation.
(b) GZARG, FMG CMG or BMG shall promptly inform ADB of any condition which interferes with, or threatens to interfere with, the progress of the Project, the performance of its obligations under this Project Agreement or the Project Implementation Agreements, or the accomplishment of the purposes of the Loan.	PA, Article II, Section 2.07(b)	Complied with.
(c) ADB of the one side and GZARG, FMG, CMG or BMG on the other side shall from time to time, at the request of either party, exchange views through their representatives with regard to any matters relating to the Project, GZARG, FMG, CMG, BMG or any PIC and the Loan.	PA, Article II, Section 2.07(c)	Complied with. The regular review missions exchanged views with the GZARG and three municipal governments and PICs.
(a) GZARG, FMG, CMG and BMG shall furnish to ADB all such reports and information as ADB shall reasonably request concerning (i) the Loan and the expenditure of the proceeds thereof; (ii) the Goods, Works and consulting services and other items of expenditure financed out of such proceeds; (iii) the Project; (iv) the administration, operations and financial condition of GZARG to the extent relevant to the Project, and administration, operations and financial conditions of each FMG, CMG and BMG to the extent relevant to the Components of the Project under their respective responsibilities; and (v) any other matters relating to the purposes of the Loan.	PA, Article II, Section 2.08(a)	Complied with. The required reports have been submitted to ADB.
(b) GZARG shall furnish to ADB quarterly reports on the execution of the Project and on the operation and management of the Project facilities.	PA, Article II, Section 2.08(b)	Complied with. 27 quarterly project progress reports were submitted to ADB.
(c) Promptly after physical completion of the Project, but in any event not later than three (3) months thereafter or such later date as ADB may agree for this purpose, GZARG shall prepare and furnish to ADB a report, in such form and in such detail as ADB shall reasonably request, on the execution and initial operation of the Project, including	PA, Article II, Section 2.08(c)	Complied with. The EA's Project Completion Report was submitted to ADB on time as stipulated.

Covenant	Reference	Compliance Status
<p>its cost, the performance by GZARG, as well as FMG, CMG and BMG, of their respective obligations under this Project Agreement and the accomplishment of the purposes of the Loan.</p>		
<p>(a) GZARG, through GPMO, and FMG, CMG and BMG shall, and shall cause PICs to, (i) maintain separate accounts for the Project and for its overall operations; (ii) have such accounts and related financial statements (balance sheet, statement of income and expenses, and related statements) audited annually, in accordance with appropriate auditing standards consistently applied, by external auditors whose qualifications, experience and terms of reference are acceptable to ADB; and (iii) furnish to ADB, promptly after their preparation but in any event not later than six (6) months after the close of the fiscal year to which they relate, certified copies of such audited accounts and financial statements and the report of the auditors relating thereto (including the auditors' opinion on the use of the Loan proceeds and compliance with the covenants of the Loan Agreement as well as a separate opinion on the use of the procedures for imprest account/statement of expenditures), all in the English language.</p>	PA, Article II, Section 2.09(a)	Complied with. Separate accounts and records for the project were maintained. Audit reports were submitted on schedule.
<p>(b) GZARG, FMG CMG and BMG shall, and shall cause PICs to, enable ADB, upon ADB's request, to discuss the Project's financial statements and its financial affairs from time to time with the auditors appointed by GZARG pursuant to Section 2.09(a) here above, and shall authorize and require any representative of such auditors to participate in any such discussions requested by ADB.</p>	PA, Article II, Section 2.09(b)	Complied with.
<p>GZARG, FMG, CMG and BMG shall enable ADB's representatives to inspect the Project, the Goods and Works financed out of the proceeds of the Loan, all other plants, sites, properties and equipment related to the Project and any relevant records and documents.</p>	PA, Article II, Section 2.10	Complied with. The regular review missions inspected the project and relevant records or documents.
<p>(a) FMG, CMG and BMG shall cause the respective concerned PICs to, promptly as required, take all action within its powers to maintain their corporate existence, to carry on their operations, and to acquire, maintain and renew all rights, properties, powers, privileges and franchises which are necessary in the carrying out of the Project or in the conduct of its business.</p>	PA, Article II, Section 2.11	Complied with. PICs implemented their respective project activities effectively and maintained the project facilities properly.
<p>(b) FMG, CMG and BMG shall cause the respective concerned PICs to at all times conduct their business in accordance with sound administrative, financial, environmental, urban roads and urban development practices, and under the supervision of competent and experienced management and personnel.</p>		
<p>(c) FMG, CMG and BMG shall cause the respective concerned PICs to, at all times operate and maintain their plants, equipment and other property, and from time to time, promptly as needed, make all necessary repairs and renewals thereof, all in accordance with sound administrative, financial, engineering, environmental, urban roads, urban development, and maintenance and operational practices.</p>		
<p>Except as ADB may otherwise agree, FMG, CMG and BMG shall ensure that the respective concerned PICs not sell, lease or otherwise dispose of any of their assets which shall be required for the efficient carrying on of their operations or the disposal of which may prejudice its ability to perform satisfactorily any of their obligations under this Project Agreement or the concerned Project Implementation Agreements.</p>	PA, Article II, Section 2.12	Complied with.
<p>Except as ADB may otherwise agree, GZARG, FMG, CMG and BMG shall apply the proceeds of the Loan to the financing of expenditures on the Project in accordance with the provisions of the Loan Agreement and this Project Agreement, and shall ensure that all</p>	PA, Article II, Section 2.13	Complied with. The loan proceeds were allocated for

Covenant	Reference	Compliance Status
<p>Goods, Works and consulting services financed out of such proceeds are used exclusively in the carrying out of the Project.</p>		<p>the project activities as planned.</p>
<p>Except as ADB may otherwise agree, FMG, CMG and BMG shall duly perform, and cause the respective concerned PICs to duly perform, all their obligations under the Project Implementation Agreements, and shall not take, or concur in, any action which would have the effect of assigning, amending, abrogating or waiving any rights or obligations of the parties under the Project Implementation Agreements.</p>	<p>PA, Article II, Section 2.14</p>	<p>Complied with. PICs performed their obligations.</p>
<p>Executing Agency and Guangxi Project Management Office</p>		
<p>The EA for the Project shall be GZARG with a vice governor having been designated to provide overall guidance and support for the preparation and implementation of the Project. GPMO, the inter-departmental project management office at the regional government level established by GZARG, shall carry out the day-to-day activities of the Project and provide coordination support for preparation and implementation of the -Project across the Project Cities. GPMO shall comprise Guangxi Development Reform Commission, Guangxi Finance Department, Guangxi Housing and Construction Department, Guangxi Environmental Protection Department, Guangxi State Land Resources Department, and the Project Cities as its members.</p>	<p>PA, Schedule, para. 1</p>	<p>Complied with. The GPMO was hosted by the Guangxi Development and Reform Commission under the guidance from the responsible vice governor.</p>
<p>Project Implementing Agency and Municipal Project Management Office</p>		
<p>FMG, CMG, and BMG shall be the IAs of the Project responsible for implementation of the concerned Components in the three Project Cities: Three inter-agency MPMOs set up respectively in FMG, CMG and BMG shall be responsible for undertaking day-to-day activities of the concerned Components of the Project and providing coordination support for preparation and implementation of the concerned Components of the Project within the concerned Project Cities.</p>	<p>PA, Schedule, para. 2</p>	<p>Complied with. Each PIA had its own PMO to undertake daily administration matters.</p>
<p>GZARG shall cause that a Project Implementation Agreement be entered into between the following parties: (i) between BMG and BCDIC for the Components in Baise City; (ii) between CMG and CUCIC for the Project Components in Chongzuo City; and (iii) between FMG and FPDUCIC for the Project Components in Fangchenggang City. Under the Project Implementation Agreements each PIC shall act as an agent for the concerned municipal governments to carry out day-to-day implementation of the relevant Components under the Project, including conducting procurement of goods and works. The Project Implementation Agreements shall include the requirements and obligations as applicable to IAs and PICs provided in the Loan Agreement and Project Agreement.</p>	<p>PA, Schedule, para. 4</p>	<p>Complied with. Each city government had established implementation arrangement to implement its respective project component as per the PA and in line with government regulations.</p>
<p>GZARG shall ensure that GPMO be responsible for implementation of the capacity development component of the Project.</p>	<p>PA, Schedule, para. 5</p>	<p>Complied with.</p>
<p>GZARG, FMG, CMG, and BMG shall, and shall cause the PICs to, ensure that all the project implementation procedures agreed upon with ADB be followed, including environmental and social safeguard requirements.</p>	<p>PA, Schedule, para. 6</p>	<p>Complied with. The safeguard requirements were generally met.</p>
<p>Provision of Counterpart Funding</p>		
<p>GZARG shall cause FMG, CMG, and BMG to ensure (a) timely provision of counterpart financing necessary for the Project and provision of additional counterpart funding for any shortfall of funds or cost overrun, and (b) adequate funding for operation and maintenance of the Project facilities.</p>	<p>PA, Schedule, para. 7</p>	<p>Complied with. Adequate counterpart funds were secured and ensured</p>

Covenant	Reference	Compliance Status
Change of Ownership, Organizational Structure and Assets		effective implementation of the project.
GZARG, FMG, CMG, and BMG shall ensure that PICs shall be maintained as separate legal entities under the relevant laws of the Borrower and shall be always managed through sound financial management system in compliance with ADB's <i>Guidelines for Governance and Financial Management</i> .	PA, Schedule, para. 8	Complied with.
GZARG, FMG, CMG or BMG shall ensure that in the event that (a) any change in ownership of a relevant PIC, or (b) any sale, transfer, or assignment of the responsibilities of a relevant PIC under the Project is anticipated, ADB be informed and consulted at least six (6) months prior to the anticipated change, or sale, transfer, or assignment.	PA, Schedule, para. 9	Complied with. No such changes occurred during project implementation.
FMG, CMG, and BMG shall, and shall cause PICs to, ensure that no material organizational changes (either financial, operational, or structural) to, nor material asset transfers to or from PICs be formally approved or implemented without prior approval of GZARG and ADB, if such changes would affect a PIC's ability to perform its obligations under the concerned Project Implementation Agreement. GZARG, FMG, CMG, BMG, and PICs shall ensure that any such change shall be made in a lawful and transparent manner.	PA, Schedule, para. 10	Complied with. No such changes occurred during project implementation.
GZARG, FMG, CMG, and BMG shall, and shall cause PICs to, ensure that (a) all the project facilities be designed and constructed in accordance with the national engineering norm and technical standards of the Borrower, (b) construction supervision, quality control, and contract management shall be carried out in compliance the laws and regulations of the Borrower, and (c) all the project facilities shall be operated and maintained in accordance with the national standards and regulations.	PA, Schedule, para. 11	Complied with. All facilities were designed, constructed, and operated following national regulations and technical standards and codes.
Regarding the urban roads to be constructed under the Project, GZARG shall cause FMG, CMG, BMG to ensure (a) installation of energy-saving lights and energy-conservation traffic light system, (b) implementation of a program for the provision of road safety signage, communication, and traffic monitoring and hazard barriers, and (c) implementation of road safety measures in line with the national road transport safety law.	PA, Schedule, para. 12	Complied with. The measures as required were incorporated into construction of the urban roads.
GZARG, FMG, CMG, BMG shall ensure to review, equipped with strengthened urban transport planning capacity, and update their urban transport master plans before the end of June, 2015 with an aim to develop a people-oriented and environment-friendly urban transport system in each Project City that integrates the motorized transport with public transport service and non-motorized transport for bicycle and pedestrians.	PA, Schedule, para. 13	Complied with. The transportation master plan for Fangchenggang, Chongzuo, and Baise was updated in October 2015, October 2017, and October 2017, respectively.
Anticorruption GZARG, FMG, CMG, BMG shall, and shall cause PICs to, comply with ADB's Anticorruption Policy (1998), as amended from time to time. GZARG, FMG, CMG, BMG agree, and shall ensure that the PICs agree: (a) that ADB reserves the right to investigate any alleged corrupt, fraudulent collusive, or coercive practices relating to the Project; and (b) to cooperate fully with, and to cause PICs to cooperate fully with, any such investigation and to extend all necessary assistance, including providing access to all relevant books and records, as may be necessary for the satisfactory completion of any such investigation.	PA, Schedule, para. 14	Complied with.

Covenant	Reference	Compliance Status
<p>GZARG, FMG, CMG, BMG shall, and shall cause PICs to: (a) conduct periodic inspections on the contractors' activities related to fund withdrawals and settlements; and (b) ensure that all contracts financed by ADB in connection with the Project include relevant provisions of ADB's <i>Anticorruption Policy</i> in all bidding documents for the Project specifying the right of ADB to audit and examine the records and accounts of PICs and all the contractors, suppliers, consultants, and other service providers as they relate to the Project.</p>	<p>PA, Schedule, para. 15</p>	<p>Complied with.</p>
<p>GZARG shall, and shall cause FMG, CMG and BMG to, undertake the following anticorruption actions: (a) involve the concerned agencies with oversight responsibility for PICs in bidding and construction to enhance construction quality control and supervise effective work; (b) introduce a dual-signing system, in which the civil works contract winner signs an anticorruption contract with the employer when they execute the civil works contract; (c) periodically inspect the contractor's activities related to fund withdrawals and settlements; (d) engage the project management consultant to support the GPMO, MPMOs, and PICs to ensure good governance, accountability, and transparency in project operation; (e) in consultation with relevant central government ministries update rules and regulations on local and corporate governance and anticorruption and enhance transparency of PICs' operations; and (f) disclose a summary of the project financial statements and project accounts, and tracking of procurement contract awards on the relevant official website of FMG, CMG and BMG.</p>	<p>PA, Schedule, para. 16</p>	<p>Complied with. The GPMO and PIAs conducted adequate anticorruption actions as per the PA.</p>
<p>GZARG, FMG, CMG and BMG shall ensure that (i) all land and right-of-way required by the Project be made available in a timely manner; (ii) each RP be updated based on the final engineering design, including detailed measurement surveys for the respective component of the Project, (iii) such updated RP be submitted to ADB for its concurrence prior to award of the related civil works contracts; (iv) the approved RP be disclosed in Chinese language to the project affected persons in accordance with ADB's applicable information disclosure requirements for resettlement; and (v) the compensation for lost assets and resettlement allowance be paid to the affected persons and the livelihood rehabilitation arrangements be made in accordance with the updated RP prior to commencement of the related civil works.</p>	<p>PA, Schedule, para. 17</p>	<p>Complied with. All land and all rights-of-way required for the project were made available to the contractors in accordance with the schedule agreed under the related contracts and all land acquisition and resettlement activities were implemented. All funds for land acquisition and resettlement were distributed to the affected people.</p>
<p>GZARG, FMG, CMG, BMG shall ensure that (a) provisions of RP be implemented in conformity with all the applicable laws and regulations of the Borrower, and ADB's <i>Policy on Involuntary Resettlement</i> (1995); (b) the approved RPs be implemented promptly and efficiently in accordance with their terms; (c) all project-affected persons be given adequate opportunity to participate in resettlement planning and implementation; (d) timely provision of counterpart funds be made for land acquisition and resettlement activities; and (e) any obligations in excess of the RP budget estimates be met.</p>	<p>PA, Schedule, para. 18</p>	<p>Complied with. The RPs were prepared or updated and implemented in conformity with all the applicable laws and regulations of PRC and ADB's policy.</p>
<p>GZARG, FMG, CMG, BMG shall ensure that (a) adequate staff and resources be committed to supervising and internally monitoring the implementation of RP during project implementation; (b) ADB be provided with quarterly monitoring report, through quarterly project progress report, regarding implementation of RP, followed by a resettlement completion report for each component; (c) an independent agency acceptable to ADB be contracted to carry out external monitoring and evaluation of implementation of RP during project implementation, including data disaggregated by gender and ethnic minorities where applicable, and forward the external monitoring report to ADB semi-annually during resettlement</p>	<p>PA, Schedule, para. 19</p>	<p>Complied with. The external monitor engaged as stipulated conducted the M&E and produced regular monitoring reports on the RPs' implementation. A total of 8 monitoring reports were submitted to ADB and disclosed as required.</p>

Covenant	Reference	Compliance Status
<p>implementation and annually for 2 years after completion of resettlement; (d) ADB be promptly advised of any substantial changes in the resettlement impacts and, if necessary, a revised RP be submitted to ADB for approval; (e) civil works contracts entered into under the Project include requirements to comply with the RPs and entitlements for permanent and temporary impacts to the project affected persons; and (f) the contractors be supervised to ensure compliance with requirements of the RPs, applicable laws and regulations of the Borrower, and ADB's <i>Policy on Involuntary Resettlement</i> (1995).</p>		
<p>GZARG, FMG, CMG and BMG shall, and shall cause PICs to, ensure that all the Project facilities under the Project be constructed, operated, maintained, and monitored in strict conformity with: (a) all applicable environmental laws and regulations, policies, procedures and guidelines of the Borrower, including national and local regulations and standards for environmental protection, health, labor, and occupation safety; (b) ADB <i>Environmental Policy</i> and related operational procedures; and (c) the environmental mitigation and monitoring measures detailed in the approved EIA, SEIA and the related EMP.</p>	PA, Schedule, para. 20	Complied with. The project facilities were constructed, operated and maintained in accordance with the provisions set in the EMP and relevant PRC laws and regulations.
<p>GZARG, FMG, CMG and BMG shall, and shall cause PICs to, ensure that (a) any adverse environmental impacts arising from the Project be minimized by implementing the mitigations measures recommended in the EIA, SEIA, and EMP; (b) justifications be provided for any proposed major changes to such mitigation measures required during the detailed design, construction, and operation and maintenance of the project facilities; and (c) the civil work contracts entered into with contractors under the Project include obligations of the contractors for environmental protection, including relevant mitigation and monitoring measures specified in the EIA, SEIA, and EMP.</p>	PA, Schedule, para. 21	Complied with. The mitigation measures specified in the EMP were carried out properly.
<p>GZARG, FMG, CMG and BMG shall, and shall cause PICs to, ensure that all the sludge, dredged materials, and solid waste generated in the course of implementation of the Project be disposed of in accordance with the national and local laws and regulations, and that such disposal shall create no significant risk of secondary pollution.</p>	PA, Schedule, para. 22	Complied with. All disposal wastes generated from the project construction were properly treated.
<p>GZARG, FMG, CMG and BMG shall, and shall cause PICs to, ensure (a) timely elaborating and updating of the mitigation measures included in the EIA, SEIA and the related EMP during engineering design, (b) designate an environmental focal point to ensure effective implementation of the EMP, (c) timely implementation of the mitigation measures specified in EIA, SEIA and EMP, and (d) regular environmental monitoring of implementation of EMP, be conducted by an independent agency acceptable to ADB, which shall prepare and submit to ADB the external environmental monitoring report on a semi-annual basis.</p>	PA, Schedule, para. 23	Complied with. The EMP was updated and implemented as required. 11 EMRs were submitted to the ADB.
<p>GZARG, FMG, CMG and BMG shall, and shall cause PICs to, ensure that (a) special measures for ethnic minority peoples included in the RPs and Gender Action Plan be implemented in accordance with ADB <i>Policy on Indigenous Peoples (1998)</i>; (b) civil works contracts will include provisions to provide employment opportunities for ethnic minorities; and (c) the implementation of these special measures will be monitored and reported to ADB through monitoring for the RPs and PPMS.</p>	PA, Schedule, para. 24	Complied with. Eight SMRs including the implementation of RPs including ethnic minority development plan were submitted to ADB.
<p>GZARG, FMG, CMG and BMG shall, and shall cause PICs to, ensure that the contractors shall (a) comply with the applicable labor laws and regulations of the Borrower, including stipulations related to core labor standards for employment, under related health, safety, welfare and</p>	PA, Schedule, para. 25	Complied with. The contractors carried out related health, safety, and workers welfares in strict

Covenant	Reference	Compliance Status
<p>the workers' rights, and anti-trafficking laws; (b) not force the employees to work against their will; (c) provide timely payment of wages and safe working conditions to all workers including male and female workers and ethnic minority workers with such requirements being included in civil works contract and monitored by project implementation consultants; (d) provide women's employment, where appropriate, and pay equal wages to the women employees for the equivalent work; and (e) not employ child labor as required by the relevant laws and regulations of the Borrower.</p>		<p>conformity with relevant PRC's laws/regulations and made the payments on time.</p>
<p>FMG, CMG and BMG shall, and shall cause PICs to, ensure that provisions be stipulated in all works contracts under the Project to require contractors to incorporate occupation safety norms, disseminate information on prevention of socially and sexually transmitted disease including HIV/AIDS, and observe protocols concerning acceptable behavior toward the local population. GZARG, FMG, CMG, BMG shall, and shall cause PICs to, in cooperation with the responsible agencies, (a) ensure that contractors disseminate information on the risks of transmitting and contracting socially and sexually transmitted diseases including HIV/AIDS, to employees during implementation; and (b) ensure that public environmental awareness and education programs on health and hygiene behavior and properly managing wastewater and solid waste disposal.</p>	<p>PA, Schedule, para. 26</p>	<p>Complied with. The relevant provisions were incorporated into the civil works contracts. The contractors trained their workers on health and hygiene behavior to avoid sexually transmitted diseases including HIV/AIDS.</p>
<p>GZARG, FMG, CMG and BMG shall, and shall cause PICs to, ensure that (a) the contractors use local unskilled labor and not differentiate wages based on gender; (b) priority in employment opportunities be given to the vulnerable groups including the poor, women, and ethnic minorities who meet the job requirements for construction and maintenance activities; (c) the contractors provide the workers with adequate on-the-job training, (d) all necessary steps be taken to encourage women and ethnic minorities living in the project area to participate in the planning and implementation of the Project; and (e) contractors' employment data be properly collected in a disaggregated manner by sex, income status, age, and ethnicity for monitoring the Project's effects on women, poverty, and ethnic minorities during Project implementation.</p>	<p>PA, Schedule, para. 27</p>	<p>Complied with. The contractors employed women and ethnic minorities as possible for the suitable positions, practiced equal wages for men and women.</p>
<p>GZARG shall cause FMG, CMG and BMG to (a) ensure that PICs set 20% as the employment target under the Project for each of the women, poor, and ethnic minority people category groups, (b) set 30% as the target for participation of women professional in the training programs for urban transport planning to be provided under the Project, and (c) closely monitor the performance in achieving the above targets under the project performance monitoring system as provided in para. 29 below.</p>	<p>PA, Schedule, para. 28</p>	<p>Complied with.</p>
<p>GZARG, FMG, CMG and BMG shall set a gender focal point at GPMO and MPMOs respectively and shall cause the PICs to implement the Gender Action Plan during Project implementation.</p>	<p>PA, Schedule, para. 29</p>	<p>Complied with. GPMO, MPMOs and PICs assigned staff to handle GAP implementation.</p>
<p>GZARG, FMG, CMG and BMG shall, and shall cause PICs to, ensure that Project performance and impact be monitored and evaluated through PPMS, as agreed to by the Borrower and ADB. At the beginning of the Project implementation, with support of the Project implementation consultant, GPMO and MPMOs shall develop the PPMS procedures to generate data systematically on the inputs and outputs of the Project Components, as well as the agreed performance on outcome and impact of the Project. GPMO and MPMOs shall (i) refine the PPMS framework, (ii) confirm achievable targets, (iii) firm up monitoring and recording arrangement, and (iv)</p>	<p>PA, Schedule, para. 30</p>	<p>Complied with. The data was collected and reported in the regular progress reports with the support of loan consultants.</p>

Covenant	Reference	Compliance Status
<p>establish systems and procedures no later than six (6) months after loan effectiveness. The PPMS shall be designed to permit adequate flexibility to adopt remedial action for project design, schedule, activities, and development impacts.</p> <p>GZARG, FMG, CMG and BMG shall ensure MPMOs and GPMO regularly submit reports on the baseline and progress data under the PPMS framework at the prescribed intervals. GZARG shall ensure that GPMO be responsible for analyzing and consolidating the data through its management system to be established at the time of Project implementation. GZARG shall ensure that GPMO, with assistance of the Project implementation consultants, monitor and assess activities, and report to ADB through quarterly progress reports on Project implementation including physical implementation and financial aspects of the Project from commencement until Project completion, and then through semiannual reports until two years after Project completion, to ensure that Project impacts are monitored and reported in line with ADB requirements.</p> <p>The Borrower and ADB shall, after the second year of Project implementation, jointly undertake a comprehensive mid-term review of the Project. The mid-term review shall include a detailed evaluation of the scope, implementation arrangement, resettlement, achievement of scheduled performance targets, and progress on capacity development measures.</p>	<p>PA, Schedule, para. 31</p> <p>PA, Schedule, para. 32</p>	<p>Complied with. The data was collected and reported in the regular progress reports with the support of implementation consultants.</p> <p>Complied with. The midterm review was conducted in May 2014 by ADB jointly with the government.</p>

ADB = Asian Development Bank, BCDIC = Baise City Development Investment Company Limited, BMG = Baise Municipal Government, CMG = Chongzuo Municipal Government, CUCIC = Chongzuo Urban Construction and Investment Company Limited, EA = executing agency, EIA = environmental impact assessment, EMP = environmental management plan, EMR = environmental monitoring report, FMG = Fangchenggang Municipal Government, FPDUCIC = Fangchenggang Port District Urban Construction and Investment Company Limited, GPMO = Guangxi Southern Western Development Project Management Office, GZARG = Guangxi Zhuang Autonomous Region Government, LA = loan agreement, MPMO = municipal project management office, PA = project agreement, para. = paragraph, PIC = project implementation company, PMO = project management office, PPMS = project performance monitoring system, PRC = People's Republic of China, RP=resettlement plan, SEIA = summary environmental impact assessment, SMR = social monitoring report.

Sources: Asian Development Bank and the executing agency's project completion report.

ECONOMIC REEVALUATION

1. The Guangxi Southwestern Cities Development Project supported the urban development of three medium-sized cities (Fangchenggang, Chongzuo, and Baise) in the southwestern Guangxi Zhuang Autonomous Region. At completion, the project achieved five main physical components which fall under two general categories: (i) urban roads and related municipal infrastructures including water supply pipeline, drainage system, sewerage pipeline, lighting, traffic light system, and landscaping; and (ii) environmental upgrading and improvement. The reevaluation covered these components individually and the whole project as well.

A. Methodology and Basic Assumptions

2. The reevaluation was undertaken in accordance with the Asian Development Bank's Guidelines for Economic Analysis of Projects (2017). All incremental costs and benefits are estimated by comparing with-project and without-project scenarios. The reevaluation uses the same methodologies and assumptions as at appraisal. Basic assumptions used in the economic analysis include:

- (i) The project life is assumed 25 years, including an implementation period of 3–8 years and an operating period of 20 years. The residual value at the end of the project life is assumed to be zero;
- (ii) The project capital costs are expressed in the prices of the year that they were actually incurred costs. Revenues after project completion are expressed in constant 2020 prices;
- (iii) Transfer payments such as taxes, duties, and subsidies are excluded from the economic evaluation of the individual components and the project as a whole;
- (iv) Financial costs are converted into economic costs after deducting taxes and duties and by applying a shadow exchange rate factor of 1.023 on tradable components. A shadow wage conversion factor of 0.8 was applied for unskilled labors;
- (v) For road components, a cost-benefit approach is used to identify the cost and benefits of roads and its related municipal infrastructures. For environment upgrading and/or improvement components, a land value approach is used to evaluate the economic benefit; and
- (vi) The opportunity cost of capital employed is assumed at 12% per annum.

B. Macroeconomic and Sector Context

3. With the fast industrialization and urbanization, the People's Republic of China (PRC) has witnessed an overall socioeconomic development during the last decade. From 2012 to 2019, PRC's gross domestic product (GDP) grew at an average annual rate of 9.7%, while the urbanization rate increased from 52.6% in 2012 to 60.6% in 2019. Although the project cities are the relative underdeveloped regions in PRC, their GDP increased at an average annual growth rate of 6.6% at the same period, 3.1% lower than the national level. The project cities' urbanization rate grew from 33.8% in 2012 to 41.5% in 2019, about 18% lower than the national level. Even though high, the project cities' GDP average growth rate was obvious lower than the anticipated at appraisal. The appraisal forecasted that the three cities' GDP as a whole would increase at an average annual growth rate of 11.8% from 2010 to 2020. Contrast to the high GDP growth rate, the permanent residents grew slowly, with an average annual growth rate of 6.6% from 2012 to 2019. However, the population of urban residents exceeded the appraisal estimates by more than three times. The ongoing urbanization and economic development provide strong motivation for

traffic demands. Table A10.1 presents the GDP, urban population, population, urbanization rate of the Project cities from 2012 to 2019.

Table A10.1: GDP, Urban Residents, Permanent Residents, Urbanization Rate

	2012	2013	2014	2015	2016	2017	2018	2019	Average Annual Growth (%)
Fangchenggang									
GDP (CNY: billion)	45.75	52.52	58.89	62.07	67.61	74.16	79.65	70.12	6.3
Urban Residents (10,000)	46.05	47.66	49.09	50.63	52.36	53.94	55.67	57.52	3.2
Permanent Residents (10,000)	88.69	89.9	90.8	91.84	92.9	94.02	95.33	96.36	1.2
Urbanization Rate (%)	51.9	53.0	54.1	55.1	56.4	57.4	58.4	59.7	
Chongzuo									
GDP (CNY: billion)	53.08	58.46	64.97	68.28	76.62	90.762	101.62	76.05	5.3
Urban Residents (10,000)	66.53	68.96	72.1	74.54	77.00	79.88	82.37	84.41	3.5
Permanent Residents (10,000)	201.97	202.81	203.98	205.45	206.92	208.68	209.94	211.03	0.6
Urbanization Rate (%)	32.9	34.0	35.3	36.3	37.2	38.3	39.2	40.0	
Baise									
GDP (CNY: billion)	74.62	82.8	91.79	98.04	111.43	136.18	117.68	125.78	7.7
Urban Residents (10,000)	104.89	110.87	116.85	122.66	127.4	132.35	136.00	138.34	4.0
Permanent Residents (10,000)	351.81	354.35	356.88	359.67	362.02	364.65	366.94	368.74	0.7
Urbanization Rate (%)	29.8	31.3	32.7	34.1	35.2	36.3	37.1	37.5	
As Whole									
GDP (CNY: billion)	173.45	193.78	215.66	228.39	255.66	301.1	298.95	271.95	6.6
Urban Residents (10,000)	217.47	227.49	238.04	247.83	256.76	266.17	274.04	280.27	3.7
Permanent Residents (10,000)	642.47	647.06	651.66	656.96	661.84	667.35	672.21	676.13	0.7
Urbanization Rate (%)	33.8	35.2	36.5	37.7	38.8	39.9	40.8	41.5	

GDP = gross domestic product.

Sources: Annual Statistical Reports of National Economic and Social Development of Fangchenggang, Chongzuo, and Baise cities (2012–2019).

C. Economic Costs

4. Economic costs include (i) capital costs, including land acquisition and resettlement, and environmental mitigation and monitoring costs; (ii) cost for project management and institutional strengthening; (iii) physical contingencies utilized; and (iv) operation and maintenance (O&M) costs, including regular maintenances, medium repairs every 5–8 years, and major repairs every 10–15 years. Unit rates of these O&M cost were provided by respective agencies which are responsible for O&M of the project facilities. All economic costs have been converted from their respective financial costs.

D. Economic Benefits

5. The reevaluation followed the same method for benefit valuation at appraisal.¹ For the urban road components, the economic benefits quantified in the reevaluation include: (i) vehicle operation cost savings as results of better road conditions and shorter travel distances which are

¹ Two different approaches were applied at appraisal: (i) cost–benefit analysis for urban roads and related municipal infrastructure, and (ii) land value approach for environmental upgrading and improvement components.

in the range of CNY1.0–CNY3.0 per vehicle-kilometer (km) depending on the vehicle type; (ii) passenger time savings due to reduced travel distance and higher travel speed which are in the range of 10–30 minutes per trip and applied with a composite salary factor of working and leisure time of CNY6.0 per hour; and (iii) reduction of road accidents due to the roads and bridges built with enhanced safety features which are in the range of 10–13 incidences per year after the project was completed, as compared with the situation of 24–65 incidences per year before the project. Unit values used in the benefit calculation were provided by respective implementing agencies. Traffic counts were conducted on the road components in 2018 and 2019 which were the basis for traffic forecast for the evaluation period. The annual growth rate was assumed to be 1.5% from 2021 to 2025, and 1% from 2025 to 2036 for Baise component in view of the fact that the actual traffic in 2020 was close to its capacity; 7.5% from 2021 to 2025, and 5% from 2025 to 2036 for Chongzuo component which is consistent with the growth prospect of resident population; and 5% from 2020 to 2024, and 3% from 2025 to 2036 for Fangchenggang component considering the development of the industrial zone. As the urban roads and related municipal infrastructure were built to support the concerned cities' expansion into new areas, the actual traffic at the initial years were lower than earlier estimates. The traffic forecast and the actual traffic are provided in Table A10.2.

Table A10.2: Traffic Forecast at Appraisal and Actual Traffic
(passenger car unit per day)

Road Components	Traffic Forecast (Appraisal)	Actual Traffic (2018)	Actual Traffic (2019)	Traffic Forecast (2025)	Traffic Forecast (2030)
Baise	15,014	6,126	6,288	7,334	7,708
Chongzuo	14,693	5,392	5,281	8,227	10,752
Fangchenggang	18,726	6,684	7,412	10,563	12,245

Sources: Feasibility Study Report and updated traffic data in executing agency's project completion report.

6. For the environmental upgrading and improvement components, land value increases attributable to a particular investment component have been counted as the economic benefits.² In the case of the coastal protection and upgrading component in Fangchenggang City, the component protected 10% of the administrative areas that had been subject to coastal tidal flooding before the project. With the project, the value of these lands increased from CNY170,000 per *mu* to CNY500,000 per *mu*, or an annual growth rate of 11.4% over the period from 2011 to 2020, which is much higher than the national growth rate of 7.4% of the same period. It is estimated that the additional growth over the national growth was used as a proxy way to get the proportion attributable to the project, which is applied to 162 *mu* of land affected. For Chongzuo Shuikou Lake environmental improvement component, the price of the nearby land has increased from CNY260,000 per *mu* to CNY941,000 per *mu*, or an annual growth rate of 13.7% over the same period. It is estimated that the incremental land value increase is attributed to this component which is applied to 234 *mu* of land affected.

E. Economic Internal Rate of Return and Sensitive Analysis

7. The reevaluated economic internal rate of return (EIRR) of the whole project is 17.3%, which is slightly lower than the estimate at appraisal. Higher than the threshold EIRR of 12%, the result indicated economic viability of the project. All subprojects are viable except Fangchenggang

² Resource savings or amenities that benefit local communities measured by willingness to pay (WTP) would be a better approach for evaluating the economic benefits of this type of projects. However, this method was not applied due to lack of reliable data on possible flood losses and absence of scientific surveys to substantiate the WTP value.

road subproject which registered an EIRR lower than the threshold. By subproject, the EIRRs of Chongzuo and Baise subprojects exceed the estimates at appraisal, the EIRRs of Fangchenggang subprojects are lower than the estimates at appraisal. Of the road components, the EIRR results are close or higher than the appraisal estimates despite the lower traffic main due to the greater benefits from the time savings and fuel consumptions, for example, in the case of Baise road component which reduced trip distance of 30 km with the bridge constructed. Of the environmental upgrading and improvement components, the results are lower than the estimates at appraisal mainly because of the optimistic assumptions applied at appraisal. Table A10.3 present the economic reevaluation results for each component. Table A10.4 shows the cash flow of the overall project.

Table A10.3: Economic Reevaluation Results for Each Components

Component	At Appraisal (%)	At Completion (%)
Fangchenggang roads	13.1	11.2
Fangchenggang coastal protection	43.1	15.8
Chongzuo roads	16.1	16.4
Chongzuo Shuikou lake	28.6	19.0
Baise roads	13.3	21.5
Project Overall	17.7	17.3

Sources: Asian Development Bank and the executing agency's project completion report.

Table A10.4: EIRR for the Overall Project
(CNY million)

Year	Capital Cost	O&M Cost	Economic Benefit	Net Increment Benefit
2012	58,439.04	-	-	(58,439.04)
2013	16,763.32	-	-	(16,763.32)
2014	28,268.32	-	-	(28,268.32)
2015	19,935.16	97.42	16,328.74	(3,703.83)
2016	11,969.76	96.04	16,899.52	4,833.73
2017	20,554.70	746.84	23,296.82	1,995.28
2018	3,592.44	872.24	37,540.33	33,075.65
2019	22,776.64	854.55	40,251.93	16,620.74
2020	-	936.18	43,624.55	42,688.37
2021	-	1,277.20	37,211.38	35,934.18
2022	-	830.47	39,133.62	38,303.15
2023	-	936.18	40,990.21	40,054.03
2024	-	1,245.05	42,997.04	41,751.99
2025	-	830.47	44,823.84	43,993.37
2026	-	936.18	45,150.00	44,213.82
2027	-	1,277.20	45,485.93	44,208.73
2028	-	830.47	45,831.95	45,001.48
2029	-	936.18	46,188.34	45,252.16
2030	-	830.47	46,555.43	45,724.96
2031	-	1,899.05	46,681.46	44,782.42
2032	-	936.18	46,808.76	45,872.58
2033	-	1,277.20	46,937.32	45,660.12
2034	-	830.47	47,067.17	46,236.70

2035	-	936.18	47,198.33	46,262.15
2036	-	830.47	47,330.79	46,500.32

EIRR = 17.3%

NPV(@12%) = 591.32 million

EIRR = economic internal rate of return, NPV = net present value, O&M = operation and maintenance.
Sources: Asian Development Bank and the executing agency's project completion report.

8. A sensitivity analysis was carried out for each component to test the impacts of (i) 10% increased O&M costs, (ii) 10% decreased benefits, and (iii) a combination of the first two scenarios. The analysis indicates that the whole project remains economically viable in the tested scenarios. The results of the sensitivity analysis are provided in Table A10.5.

Table A10.5: Sensitivity Analysis for Each Component

Components	EIRR (%)			
	Base	O&M (+10%)	Benefits (-10%)	Combined
1. Fangchenggang road, bridge	11.2%	11.2%	10.1%	10.0%
2. Fangchenggang coastal protection	15.8%	15.8%	14.6%	14.6%
3. Chongzuo city road	16.4%	16.3%	14.8%	14.7%
4. Chongzuo city Shuikou lake	19.0%	18.6%	-	16.2%
5. Baise city Longwan bridge, road	21.5%	21.5%	19.7%	19.7%
Project	17.3%	17.3%	-	15.7%

EIRR = economic rate of return, O&M = operation and maintenance.

Sources: Asian Development Bank and the executing agency's project completion report.

FINANCIAL REEVALUATION

A. Introduction

1. A financial reevaluation of the project was conducted to assess the financial sustainability of the Guangxi Southwestern Cities Development Project at completion. As the project does not have a revenue-generating component, the financial reevaluation focused on assessing the fiscal capacity of the three project cities in meeting the debt service obligation and operation and maintenance (O&M) costs over operational period. The financial reevaluation was conducted in accordance with the Asian Development Bank (ADB) *Guidelines for the Financial Management and Analysis of Projects*¹ and *Financial Due Diligence: A Methodology Note*.² The financial projections are based on updated information on the three governments' fiscal situation, the ADB loan debt services requirements, and projected O&M costs.

2. Since completion, all road and related infrastructure facilities have been commissioned to the Municipal Engineering Company of respective municipal governments for O&M. The assets of Fangchenggang Coastal Dike Protection subproject and the Mangrove Forest Education Center and Square are transferred to the Ocean Department of Haigang District, Fangchenggang City. The assets of Chongzuo Shuikou wetland subproject have been assigned to the Chongzuo City Huatou Company for O&M.

3. The project has a mature of 25 years from 2011 to 2035, with grace period of 5 years. From 15 January 2016, the project began to repay the ADB loan. The repayment adopts average capital plus interest. The interest rate of ADB loan is based on LIBOR, plus the contract interest rate differentials of 0.2%. The ADB loan debt service is calculated using interest rate of 1.5%, plus commitment charge of 0.15% in the analysis.

B. Financial Sustainability

4. From 2014 to 2019, the gross domestic product (GDP) the three cities witnessed a steady growth, with an annual average growth rate from 3.2% to 6.5%. The sudden decrease of Fangchenggang's GDP in 2019 was due to the change of statistical coverage. During the same period, the revenue of the three cities increased at an annual average growth rate of about 6%, except for Chongzuo, which endured a sharp decrease in 2016, because the revenues of some counties were directly managed by the Guangxi Zhuang Autonomous Region Government, and were not counted into the revenue of Chongzuo municipality. However, the expenditure of the three cities grew up at a speed higher than GDP and revenue at the same period, with an annual average growth rate between 7.4% and 13.3%, indicating that the three cities received more and more transfer payments from the central government or the Guangxi Zhuang Autonomous Region Government. For poor areas, like Baise and Chongzuo, the transfer payments usually account for 70% to 80% of their total expenditures. Table A11.1 presents the fiscal performance of the three cities from 2014 to 2019.

¹ ADB. 2005. *Financial Management and Analysis of Projects*. Manila.

² ADB. 2009. *Financial Due Diligence: A Methodology Note*. Manila.

Table A11.1: Historical Revenue and Expenditure of the Three Cities (2014–2019)

City	2014	2015	2016	2017	2018	2019	Annual Average Growth Rate (%)
Fangchenggang							
GDP (CNY billion)	58.89	62.07	67.61	74.16	79.65	70.12	3.6
Revenue (CNY billion)	6.53	7.06	7.56	7.45	8.28	8.79	6.1
Expenditure (CNY billion)	9.75	13.17	12.76	12.05	12.73	13.95	7.4
Chongzuo							
GDP (CNY billion)	64.97	68.28	76.62	90.76	101.62	76.05	3.2
Revenue (CNY billion)	7.32	7.52	5.82	5.53	5.76	6.13	-3.5
Expenditure (CNY billion)	15.55	18.51	20.49	22.16	25.81	29.01	13.3
Baise							
GDP (CNY billion)	91.79	98.04	111.43	136.18	117.68	125.78	6.5
Revenue (CNY billion)	10.87	11.45	12.32	13.51	14.59	15.26	7.0
Expenditure (CNY billion)	30.54	31.10	34.03	37.97	39.37	47.87	9.4

GDP = gross domestic product.

Note: Revenue includes taxation revenues, fees charged for municipal services, revenue from state-owned enterprise, and income from selling land, but does not include transfer payment from provincial government or other sources.

Sources: The Annual Statistical Reports for National Economy and Social Development (2014–2019). The Statistical Bureau published an official statistical report every year.

5. Financial forecasts for the three cities have been carried out, according to the assumption that the GDP, revenue and expenditure of the three cities will increase at an annual average growth rate of 5% after 2019. The assumption is based on the past performance as well as the national development plans of the three cities.

Table A11.2: Projection of GDP, Revenue and Expenditure

City	2020	2021	2022	2023	2024	2025	2035
Fangchenggang							
GDP (CNY billion)	73.63	77.31	81.18	85.23	89.50	93.97	153.07
Revenue (CNY billion)	9.23	9.69	10.17	10.68	11.21	11.77	19.18
Expenditure (CNY billion)	14.65	15.38	16.15	16.96	17.81	18.70	30.46
Chongzuo							
GDP (CNY billion)	79.85	83.84	88.03	92.43	97.06	101.91	166.00
Revenue (CNY billion)	6.43	6.75	7.09	7.44	7.82	8.21	13.37
Expenditure (CNY billion)	30.46	31.98	33.58	35.26	37.02	38.87	63.31
Baise							
GDP (CNY billion)	132.07	138.67	145.60	152.88	160.53	168.55	274.56
Revenue (CNY billion)	16.02	16.82	17.66	18.55	19.47	20.45	33.31
Expenditure (CNY billion)	50.27	52.78	55.42	58.19	61.10	64.16	104.50

GDP = gross domestic product.

Source: Executing agency's project completion report.

6. During operational period, the funds need for debt services and O&M accounts for less than 0.5% of the fiscal revenues of respective municipal governments, indicating insignificant fiscal impact of the project. The percentages will be little higher when in the year of medium or overhaul repair for the road subprojects, but still at low levels. All three cities should be able to meet the project's debt service and O&M requirements without placing undue pressure on its

other expenditures. Table A11.3 presents the percentage of O&M and debt services as related to the fiscal revenue and expenditure for the three cities.

Table A11.3: Impact of O&M and Debt Services

City	2021	2022	2023	2024	2025	2035
Fangchenggang						
O&M (CNY million)	2.57	7.43	2.57	2.57	2.57	2.57
Debt Service (CNY million)	20.94	20.66	20.39	20.11	19.83	17.06
Percentage of Revenue (%)	0.24	0.28	0.21	0.20	0.19	0.10
Percentage of Expenditure (%)	0.15	0.17	0.14	0.13	0.12	0.06
Chongzuo						
O&M (CNY million)	5.50	5.50	5.50	9.44	5.50	5.50
Debt Service (CNY million)	15.04	14.85	14.65	14.45	14.25	12.27
Percentage of Revenue (%)	0.30	0.29	0.27	0.31	0.24	0.13
Percentage of Expenditure (%)	0.06	0.06	0.06	0.06	0.05	0.03
Baise						
O&M (CNY million)	0.96	0.96	2.11	0.96	0.96	2.11
Debt Service (CNY million)	17.23	17.00	16.78	16.55	16.33	14.09
Percentage of Revenue (%)	0.11	0.10	0.10	0.09	0.08	0.05
Percentage of Expenditure (%)	0.03	0.03	0.03	0.03	0.03	0.02

O&M = operation and maintenance.

Source: Executing agency's project completion report.