



# Report and Recommendation of the President to the Board of Directors

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Project Number: 47009-002  
November 2014

## Proposed Loan People's Republic of China: Guangxi Baise Vocational Education Development Project

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Asian Development Bank

## CURRENCY EQUIVALENTS

(as of 20 October 2014)

Currency unit – yuan (CNY)

CNY1.00 = \$0.1632

\$1.00 = CNY6.1246

## ABBREVIATIONS

ADB	–	Asian Development Bank
BMG	–	Baise municipal government
BVC	–	Baise vocational college
GZAR	–	Guangxi Zhuang Autonomous Region
kwh	–	kilowatt-hour
MLT	–	multilevel technical and vocational education
PAM	–	project administration manual
PMO	–	project management office
PRC	–	People's Republic of China
SVS	–	secondary vocational school
TVET	–	technical and vocational education and training

## NOTE

In this report, "\$" refers to US dollars.

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## PROJECT AT A GLANCE

<b>1. Basic Data</b>		<b>Project Number:</b> 47009-002	
<b>Project Name</b>	Guangxi Baise Vocational Education Development Project	<b>Department /Division</b>	EARD/EASS
<b>Country Borrower</b>	China, People's Republic of	<b>Executing Agency</b>	Baise Municipal Government
<b>2. Sector</b>		<b>ADB Financing (\$ million)</b>	
✓ <b>Education</b>	Technical and vocational education and training		50.00
		<b>Total</b>	<b>50.00</b>
<b>3. Strategic Agenda</b>		<b>Climate Change Information</b>	
<b>Inclusive economic growth (IEG)</b>	Pillar 2: Access to economic opportunities, including jobs, made more inclusive Pillar 3: Extreme deprivation prevented and effects of shocks reduced (Social Protection)	Climate Change impact on the Project	Low
<b>Regional integration (RCI)</b>	Pillar 4: Other regional public goods		
<b>4. Drivers of Change</b>		<b>Gender Equity and Mainstreaming</b>	
<b>Governance and capacity development (GCD)</b>	Organizational development	Effective gender mainstreaming (EGM)	✓
<b>Knowledge solutions (KNS)</b>	Knowledge sharing activities		
<b>Partnerships (PAR)</b>	Implementation Private Sector		
<b>5. Poverty Targeting</b>		<b>Location Impact</b>	
Project directly targets poverty	No	Rural	Medium
		Urban	Medium
<b>6. Risk Categorization:</b>		Low	
<b>7. Safeguard Categorization</b>		Environment: B Involuntary Resettlement: C Indigenous Peoples: B	
<b>8. Financing</b>			
<b>Modality and Sources</b>		<b>Amount (\$ million)</b>	
<b>ADB</b>		<b>50.00</b>	
Sovereign Project loan: Ordinary capital resources		50.00	
<b>Cofinancing</b>		<b>0.00</b>	
None		0.00	
<b>Counterpart</b>		<b>53.54</b>	
Government		53.54	
<b>Total</b>		<b>103.54</b>	
<b>9. Effective Development Cooperation</b>			
Use of country procurement systems		No	
Use of country public financial management systems		No	

## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to the People's Republic of China (PRC) for the Guangxi Baise Vocational Education Development Project.<sup>1</sup>

2. The proposed project will improve the supply of skilled workers in Baise municipality in Guangxi Zhuang Autonomous Region (GZAR) to support the transformation of the local economy, meet the demands of industry, and promote inclusive growth. The project will play a demonstration role for the sector and provinces in creating multilevel technical and vocational education (MLT) systems.<sup>2</sup>

## II. THE PROJECT

### A. Rationale

3. Baise municipality is in one of the 14 national poverty areas in the People's Republic of China (PRC).<sup>3</sup> The population of 4 million includes six main ethnic minority groups, which make up 86% of the population.<sup>4</sup> Baise is being developed by the government as a new economic base in the GZAR, focused on expanding and moving to higher-value-chain production in four priority industries: (i) aluminum processing, (ii) agriculture, (iii) tourism, and (iv) regional trade and logistics. As it is close to the border with Viet Nam, the municipality is well-placed to develop as an important logistical link to countries of the Association of Southeast Asian Nations and Greater Mekong Subregion. The strategic development of Baise supports the national Twelfth Five-Year Plan agenda on rebalancing the economy, and the national urbanization plan.<sup>5</sup>

4. Increased investment in Baise has led to year-on-year growth of 25.2% but future economic development is constrained by lack of a skilled workforce. Baise municipal government (BMG) has calculated a shortage of more than 80,000 skilled workers, particularly in the rapidly expanding priority industries, many of which are employing new technologies. A major issue for the BMG and Baise industries and services is the number of people who leave the province to obtain low-skilled work in other provinces and cities.<sup>6</sup> Baise has trouble attracting skilled labor because of the salary differential and comparatively undeveloped key industries, and is therefore left with little choice other than to develop its local human resources.

5. To address the skilled labor shortage, Baise's Twelfth Five-Year Plan includes a human resources development strategy, centered on creating an MLT system which will link academic education and technical and vocational education (TVET) to help create higher-skilled graduates. The government's National Plan for Medium and Long-term Education Reform and Development, 2010–2020 identified TVET as a critical element in developing a high-skilled multilevel workforce to meet the demands of industry and services in the country.<sup>7</sup> The strategy

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<sup>1</sup> The design and monitoring framework is in Appendix 1.

<sup>2</sup> The Asian Development Bank (ADB) provided project preparatory technical assistance for the Guangxi Baise Vocational Education Development Project (TA 8448-PRC, for \$500,000, approved on 4 September 2013).

<sup>3</sup> Nine out of the 12 counties in Baise municipality are national poverty counties.

<sup>4</sup> The main ethnic minority groups are Zhuang, Yao, Miao, Yi, Gilao, and Hui.

<sup>5</sup> National People's Congress. 2011. *Twelfth Five-Year Plan for National Economic and Social Development, 2010–2015*. Beijing.

<sup>6</sup> It is estimated that 600,000 people left the municipality in 2012 seeking work in other provinces.

<sup>7</sup> Ministry of Education. 2010. *National Plan for Medium and Long-term Education Reform and Development, 2010–2020*. Beijing: Government of the People's Republic of China.

in Baise aligns with two national education reforms which are changing the shape of education institutions and rebalancing the roles of academic and vocational education. These are (i) development of MLT systems, which create links between education levels, promote lifelong learning, and provide learning pathways and career development for students; and (ii) transitioning some universities into TVET-applicable institutions, which promote cooperation and development of pathways between TVET, higher education, adult education programs, and industry.

6. Development of MLT in Baise will help to address critical bottlenecks in the quality and supply of human resources and is an important strategy for the BMG to support inclusive growth. MLT will build opportunities for rural and ethnic minority students to better access and progress in education and enter into the rapidly changing economy. MLT in Baise will integrate the education and training systems to create pathways for initial training and entry to and progress within the workforce by linking the human resources and skills supply from universities, vocational colleges, secondary vocational schools (SVSs), and short-term migrant courses. Baise University, with its current three-level programs (SVS, vocational college, and university), and its role as the only higher education facility in the municipality,<sup>8</sup> is well-positioned to take the lead in developing MLT provision locally and eventually playing a demonstration role at provincial and national levels. Baise University has been selected<sup>9</sup> to be one of 19 demonstration universities in the GZAR to transition into a TVET-applicable institution with a focus on developing majors that link more closely to industry needs.

7. Implementing the reforms for MLT and the transition of Baise University from an academic to a TVET-applicable university will require significant capacity building; upgrades in TVET infrastructure, equipment, and systems; and the participation of industry. The attractiveness of TVET as an option for students has been a challenge for the BMG with low student engagement, retention, and continuation in the mid-level technician and technologist levels (i.e., in the vocational college and undergraduate TVET-oriented courses), which are priorities for industry. The need for courses to provide industry-related TVET skills requires that current curricula, instruction, and assessment are competency based, and are more flexible and responsive. Most staff members do not have relevant industry experience and standards to apply in the classroom or workshop. Building better partnerships with industry, involving them in curriculum development and training, will ensure relevance of the TVET programs and employability of students. The project focus on improving quality in curriculum and teacher training, and strengthening school–industry partnerships, will address these issues.<sup>10</sup>

8. Specialized facilities, workshops, and learning spaces will be needed to support the emphasis on science and technology courses and a competency-based curriculum. The new Baise University campus supported by the project will accommodate a multilevel system, with teaching and learning spaces beyond what is currently available. The new campus facilities and equipment will allow the MLT system to function and be responsive to industry. Features, such as the low-carbon photovoltaic system and Green Sustainability Center<sup>11</sup> will serve as models of green and sustainable development for other campuses across the PRC.

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<sup>8</sup> Baise University receives students from the 22 SVSs in the municipality as well as from GZAR and other provinces.

<sup>9</sup> Baise University was selected by the GZAR Education Bureau to participate in the Ministry of Education national program.

<sup>10</sup> The TVET Training Center under the project will disseminate good practices in curriculum, staff development, and creation of industry partnerships with other TVET schools in the municipality and, eventually, regionally.

<sup>11</sup> The Green Sustainability Center will develop green campus management programs; curricula and research in environment sustainability-related areas and outreach to students, staff, and local communities.

9. The plans for Baise to assume a regional role require innovative responses from the education sector. Baise University is involved in several regional cooperation arrangements with other universities in Association of Southeast Asian Nations and Greater Mekong Subregion countries. The project will build on these initiatives by (i) training a leadership team to support regional cooperation planning and activities; (ii) developing curriculum for majors, such as logistics and tourism; and (iii) conducting research on the impacts of regional cooperation and industry expansion on human resources and skills needs in Baise.

10. **Strategic fit.** Ensuring that graduates are prepared for the workforce with relevant knowledge and skills is a major challenge for the PRC's structural reform of the economy. The project is consistent with the PRC's Twelfth Five-Year Plan, 2010–2015 which promotes inclusive growth, and environmentally friendly and resource-efficient urban development; developing high-quality human resources; and accelerating education reform. The project is aligned with ADB's Strategy 2020, the recommendations from the midterm review of Strategy 2020 which emphasize promoting TVET to address the human resource agenda, the education sector strategic plan,<sup>12</sup> and with ADB's PRC country partnership strategy, 2011–2015.<sup>13</sup>

11. **Incorporation of lessons learned.** Lessons from TVET programs in the PRC and globally that have been incorporated into the project design include (i) involving industries in curriculum development and training; (ii) developing competency-based curricula, teaching, and assessment approaches; (iii) creating learning pathways; (iv) building a learning culture for innovation and reform; (v) creating an industry demand-led system through the use of labor market and student employment information; and (vi) establishing robust project monitoring and evaluation.

## B. Impact and Outcome

12. The impact of the proposed project will be economic development and industrial transformation of Baise municipality. The outcome will be a high-quality, flexible, and responsive MLT system developed which meets industry needs.

## C. Outputs

13. The proposed project components and associated outputs are as follows: **Output 1: TVET quality improved and capacity developed.** This component will (i) develop an integrated MLT system that provides curricula linking vocational secondary, college, and undergraduate levels of TVET; (ii) implement a competency-based approach to curricula, instruction, and assessment in priority areas across different majors and course levels;<sup>14</sup> (iii) upgrade teacher skills through pre-service and in-service professional development; (iv) upgrade assessment and quality assurance based on industry standards; (v) develop curriculum in entrepreneurship and employability skills; and (vi) develop a TVET teacher training center. The project will develop curriculum and teaching materials including digital content. **Output 2: Chengbi campus constructed and environmental sustainability promoted.** The component will construct phase 2 teaching and residential buildings and facilities in the new Chengbi

<sup>12</sup> ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020*. Manila; ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific*. Manila; and ADB. 2010. *Education by 2020: A Sector Operations Plan*. Manila.

<sup>13</sup> ADB. 2012. *Country Partnership Strategy: People's Republic of China, 2011–2015*. Manila.

<sup>14</sup> Selected priority areas are aluminum processing, preschool education, design, engineering management, and agriculture. These are in line with the priority growth sectors for Baise Municipality. Curriculum for new majors in tourism and logistics will also be developed.

campus. The component includes the construction of 12 buildings with a total of 160,693 square meters.<sup>15</sup> A 3.86 million kilowatt-hour (kwh) photovoltaic power system will be installed, and campus roads, sport facilities, slope protection, and other school facilities will be constructed. Teaching and laboratory equipment for the new campus will be financed by domestic funding. The Green Sustainability Center will ensure development of green principles in campus management, curriculum development, and community outreach. **Output 3: TVET innovation and relevance promoted.** The component will support strengthening school–industry partnerships, expanding regional cooperation activities, and implementing strategic research. It will (i) enhance industry participation in management and delivery of curriculum and assessment; (ii) provide staff opportunities for industry visits, assignments, and training; (iii) promote integration and enhancement of short-term migrant training into MLT; (iv) develop a regional cooperation management team and activities; and (v) conduct research on enterprise–TVET partnerships, emerging priority sectors, and future course and qualifications needs. **Output 4: Project implementation management.** This component will support capacity building for the project management office (PMO) and TVET institutions in project management, monitoring, and evaluation to ensure efficient and effective implementation in compliance with the PRC and ADB requirements.

#### D. Investment and Financing Plans

14. The project is estimated to cost \$103.54 million (Table 1). The base cost (\$87.38 million) comprises 84.4% of the project cost. It will finance civil works (57.96%), equipment (23.65%), capacity development and other activities (17.73%), and project management consultants (0.66%).

**Table 1: Project Investment Plan**  
(\$ million)

Item	Amount
<b>A. Base Cost<sup>a</sup></b>	
1. Improving TVET quality and capacity development	3.65
2. Chengbi campus construction and promoting environmental sustainability	82.38
3. Promoting TVET innovation and relevance	0.77
4. Project implementation management	0.58
<b>Subtotal (A)</b>	<b>87.38</b>
<b>B. Contingencies<sup>b</sup></b>	<b>10.09</b>
<b>C. Financing Charges During Implementation<sup>c</sup></b>	
1. ADB	3.20
2. Domestic Bank	2.72
3. ADB Commitment Charge	0.15
<b>Subtotal (C)</b>	<b>6.07</b>
<b>Total (A+B+C)<sup>d</sup></b>	<b>103.54</b>

ADB = Asian Development Bank, TVET = technical and vocational education and training.

<sup>a</sup> In May 2014 prices.

<sup>b</sup> Physical contingency is computed at 8% of the base costs. Price contingency is computed based on the following price escalators published by ADB: 1.0% (2015) and 1.4% annually for 2016, 2017, 2018, and 2019 on foreign exchange costs and 3.0% annually through 2015–2019 on local currency costs.

<sup>c</sup> Includes interest during construction and commitment charges. Interest during construction has been computed at the 5-year US dollar fixed swap rate plus a spread of 0.5% and maturity premium of 0.1%.

<sup>d</sup> Includes taxes and duties of \$5.38 million to be financed from the government and ADB loan. The ADB loan will cover taxes and duties on items financed by ADB. Financing of taxes and duties is proposed because the due diligence showed that (i) the amount of taxes and duties is within the reasonable threshold identified in the country partnership strategy, (ii) the amount does not represent an excessive share of the investment plan, (iii) taxes and

<sup>15</sup> An overview of the campus construction, equipment, and special features is in Appendix 5 of the project administration manual.

duties apply only in respect to ADB-financed expenditures, and (iv) financing of the taxes and duties is relevant for the success of the project.

Source: Asian Development Bank estimates.

15. The Government of the PRC has requested a loan of \$50 million from ADB's ordinary capital resources to help finance the project. The loan will have a 25-year term, including a grace period of 6 years,<sup>16</sup> straight line repayment option, an annual interest rate determined in accordance with ADB's London Interbank offered rate (LIBOR)-based lending facility, a commitment charge of 0.15% per year, and such other terms and conditions set forth in the draft loan and project agreements. Based on this, the average loan maturity is 15.75 years and the maturity premium payable to ADB is 0.1% per annum. The ADB loan will cover taxes and duties on items financed by ADB.

16. The financing plan is in Table 2 and is further detailed in the project administration manual (PAM).<sup>17</sup> The BMG will finance 39.25% of the project and the remaining counterpart funding of \$12.90 million will be provided by Baise University through a domestic bank loan for which the university has received a commitment letter. The government and executing agency have given an assurance that they will provide counterpart funding for the project in a timely manner, and will provide any additional counterpart funding needed to cover any shortfall of funds or cost overruns.

**Table 2: Financing Plan**  
(\$ million)

Source	Amount	Share of Total (%)
Asian Development Bank (OCR)	50.00	48.29
Baise Municipal Government	40.64	39.25
Domestic Bank	12.90	12.46
<b>Total</b>	<b>103.54</b>	<b>100.00</b>

OCR = ordinary capital resources.

Source: Asian Development Bank estimates.

17. The borrower of the loan is the PRC. The loan proceeds will be made entirely available to the GZAR government under its relending arrangements, upon terms and conditions satisfactory to ADB. The GZAR government will make the loan proceeds entirely available to the BMG as indicated in the PAM. The onlending terms and conditions of the loan proceeds will be the same as those of the ADB loan. The BMG will bear the foreign exchange and interest rate variation risks in proportion to the loan amount it receives. The indicative flow of funds and the relending and onlending arrangements are in the PAM.

## E. Implementation Arrangements

18. The implementation arrangements are summarized in Table 3 and detailed in the PAM.

**Table 3: Implementation Arrangements**

Aspects	Arrangement
Implementation period	January 2015–December 2019
Estimated completion date	31 December 2019 (estimated loan closing date: 30 June 2020)
Management	
(i) Oversight body	BPLG, under the leadership of the standing vice-mayor of BMG, with representatives

<sup>16</sup> The reason for a grace period of 6 years is to better align with the loan from the domestic commercial bank, which has a maturity of 7 years, starting withdrawal by 2015 and straight line repayment period from 2016 to 2021.

<sup>17</sup> Project Administration Manual (accessible from the list of linked documents in Appendix 2).

Aspects	Arrangement		
(ii) Executing agency	<p>from BDRC, BFB, BHUCB, and other departments.</p> <p>BMG will be the executing agency for the project, and will establish project management arrangements and assume overall accountability for ensuring project success. The BPLG will exercise oversight on behalf of the BMG and will</p> <ul style="list-style-type: none"> <li>(i) provide overall project direction and any required policy guidance,</li> <li>(ii) oversee the preparation and implementation of the project,</li> <li>(iii) provide overall strategic guidance to the project,</li> <li>(iv) support cross-agency policy dialogue,</li> <li>(v) review project progress to support effective implementation, and</li> <li>(vi) ensure counterpart contributions are provided for project implementation on time.</li> </ul> <p>The BPLG has assigned the overall responsibility for coordinating project management and implementation to the BDRC, which has established a PMO for this purpose.</p>		
(iii) Implementing agency	<p>Baise University, the implementing agency, has set up a PLG, chaired by the Baise University Party secretary general and president, and a PIU. The PIU will be responsible for day-to-day operations and coordination. Three departments of Baise University are members of the PIU and will be responsible for management, operations and monitoring—the construction management department, teaching affairs department, and financial department.</p>		
Procurement	ICB	4 contracts	\$42,743,888
Consulting services	NCB	5 contracts	\$21,798,714
	QCBS	2 contracts	\$ 3,970,000
	CQS	2 contracts	\$250,000
	ICS	1 contract	\$30,000
Retroactive financing and/or advanced contracting	<p>Advanced contracting has been requested to engage two consulting service contracts and one civil works contract. Retroactive financing has been requested for one civil works contract and one consulting services contract.</p>		
Disbursement	<p>The loan proceeds will be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2012, as amended from time to time) and detailed arrangements agreed upon between the government and ADB.</p>		

ADB = Asian Development Bank, BDRC = Baise Development and Reform Commission, BFB = Baise Finance Bureau, BHUCB = Baise Housing and Urban–Rural Construction Bureau, BMG = Baise municipal government, BPLG = Baise Project Leading Group, CQS = consultant's qualifications selection, ICB = international competitive bidding, ICS = individual consultant selection, NCB = national competitive bidding, PIU = project implementation unit, PLG = project leading group, PMO = project management office, QCBS = quality- and cost-based selection.  
Source: Asian Development Bank.

19. The project includes funding for international and national consulting services to support the executing agency and implementing agency to implement the project and carry out capacity building activities. The project design also includes a start-up consultant to assist the PMO with project readiness activities. The terms of reference for the consulting services are in the PAM.

### III. DUE DILIGENCE

#### A. Technical

20. The project's technical design is appropriate to achieve project objectives. The project will assist Baise University to construct phase 2 of its new campus at Chengbi in the north of Baise. Civil works involve the construction of site work and site utilities, teaching, and living buildings and facilities; and equipment procurement and installation. All buildings, with a total building area of 160,693 square meters, will be designed and constructed in accordance with relevant PRC and GZAR design standards and codes. Campus design incorporates slope stabilization requirements, fire truck routing, and emergency evacuation plans (including temporary shelter, emergency evacuation routes, and emergency exits), campus traffic, and parking plans promoting pedestrian and bicycle traffic. Low-carbon and resource-efficient campus management features will be introduced, including a photovoltaic power generation

system, high-efficiency heat pumps for air-conditioning and hot water systems, and on-site wastewater treatment and water reuse for campus landscaping (2,000 cubic meter per day). The project will include the installation of teaching and training equipment, which will be procured using a special fund from the Ministry of Education. The TVET capacity building components have been designed to incorporate international best practices in MLT competency-based curricula and teaching, and school–industry partnerships.

## B. Economic and Financial

21. **Economic analysis.** Developing an MLT system will improve the competitiveness of Baise industries and support inclusive growth. The direct economic benefits include an increase in the number of graduates finding employment and better remuneration. Indirect benefits include improved responsiveness of TVET to industry needs and improved quality of TVET provision that will filter to other schools in the municipality. The economic analysis confirmed economic viability of the project. The sector wage levels and demand in Baise were projected and applied for the project economic benefit quantification. The cost–benefit analysis reveals the project’s overall economic internal rate of return at 16.7%, exceeding the economic opportunity cost of capital of 12.0%, and the overall economic net present value at CNY249.6 million. Sensitivity analysis indicates that the economic internal rate of return is robust against all negative impacts.<sup>18</sup>

22. **Financial sustainability.** A financial sustainability analysis was undertaken during project preparation based on fiscal impact. It indicates that the proposed project entails manageable fiscal risk regarding the BMG’s ability to provide counterpart funds for capital investment, finance operation and maintenance cost, and service project debts. The total fiscal contributions to the project will be 0.13%–1.08% of the BMG’s projected fiscal revenue during project implementation, and at most 0.65% of fiscal revenue for debt service and operation and maintenance during the operation period. The project is therefore considered both financially sustainable and has controllable risks for the BMG.<sup>19</sup>

## C. Governance

23. **Financial management and procurement capacity assessment.** The project will be ADB’s third loan to the BMG, which is successfully managing other projects. The financial management and procurement capacity assessments conclude that, although Baise University has financial management capacity and project management experience, it lacks experience in managing ADB projects, and thus capacity building to implement the project in line with ADB policies and procedures is necessary. The GZAR Finance Department, which will operate and administer the imprest account, has sufficient experience in administering projects financed by multilateral agencies including ADB. The financial management assessment concluded that the overall risk rating is *medium* and recommends capacity development measures to ensure that the PMO and the implementing agency are able to meet the project’s financial management requirements. With mitigation, the PMO and the implementing agency will have adequate capacity for financial management and procurement. A procurement agent will be hired as per normal PRC procedures, and provision has been made for training and advice to the PMO and implementing agency in ADB procedures, including procurement, disbursement, project management, and accounting systems. The financial management assessment is documented in the full project financial analysis. A summary is included in the PAM and recommended improvements have been incorporated into the project design. ADB’s Anticorruption Policy

<sup>18</sup> Economic Analysis (accessible from the list of linked documents in Appendix 2).

<sup>19</sup> Financial Analysis (accessible from the list of linked documents in Appendix 2).

(1998, as amended to date) was explained to and discussed with the BMG, the PMO, and implementing agency. The specific policy requirements and supplementary measures are described in the PAM.

#### **D. Poverty and Social**

24. A social, poverty, and gender analysis was undertaken in accordance with ADB guidelines. Baise municipality is one of the 14 national intensively poverty stricken areas in the PRC. Nine of its 12 counties are national poverty counties and two are regional poverty counties. The per capita disposable income of urban and rural households in Baise is lower than both the provincial and national averages.<sup>20</sup> The majority of students at Baise vocational school (93%) and Baise vocational college (BVC) (78%) are from rural areas in the municipality, while the majority of students at Baise University come from across the GZAR but are also largely rural (65%). Employment rates of graduates are 92.5% for Baise University and 93.7% for the BVC. Since 2012, SVS tuition has been free, and Baise University and BVC students receive a wide range of financial assistance from national, regional, and local sources.

25. **Gender.** The project is categorized as effective gender mainstreaming. The poverty and social analysis revealed that 90% of the students at the Baise vocational school are female; at the BVC the figure is 75% and at Baise University 55%. There are high levels of female enrollment in the majors of preschool education and tourism, primarily due to gender stereotyping in these occupations and low levels in the priority science, technology, and engineering majors. Given the potential that Baise municipality has to become an industrial hub, improvement of TVET programs will have a substantial impact on creating economic pathways for women, especially those from rural and poor areas. The social and gender action plan ensures social inclusion and gender mainstreaming in all components of the project. Gender actions and targets include (i) 50% female participation in MLT and recruitment outreach programs; (ii) 40% female teacher participation in core teacher training; (iii) gender-sensitive competency-based curriculum development; (iv) the new campus to include separate male and female dormitories and latrines, and improved night safety measures; (v) a 35% female target for civil works operation positions; (vi) a gender recognition award for industry partners; (vii) that female students are paired with mentors for career guidance; and (viii) the introduction of specific measures for prevention and reporting of, and response to, sexual harassment.

#### **E. Safeguards**

26. **Environment.** The project is classified category B for environment. An initial environmental examination, including environmental management plan, was prepared in compliance with ADB's Safeguard Policy Statement (2009) and disclosed to affected people.<sup>21</sup> Environmental impacts are anticipated during the construction of campus facilities, including inadequate waste management, noise, fugitive dust, and construction site safety. These will be localized and short term, and are adequately addressed in the environmental management plan and supported by capacity development and institutional strengthening activities under the project. Meaningful consultation with potentially affected people and project beneficiaries was conducted during project preparation. Environmental complaints will be handled by the grievance redress mechanism developed for the project, coordinated by the Baise PMO.

<sup>20</sup> The urban per capita disposable income average was CNY19,561 in 2012, lower than the national average (CNY24,565) and GZAR average (CNY21,243). The per capita net income of rural households was CNY4,774 in 2012, lower than both the national average (CNY7,917) and the GZAR average (CNY6,008).

<sup>21</sup> Initial Environmental Examination (accessible from the list of linked documents in Appendix 2).

27. No significant impact is anticipated during project operation. The project will support the development of a low-carbon, resource-efficient, and environmentally sustainable campus. All buildings will be designed in compliance with green and energy-efficient building codes and specifications.<sup>22</sup> A photovoltaic power generation system will be installed in the campus and is expected to generate around 3.86 million kwh of electricity per year, or 15% of the total demand of project facilities. High-efficiency heat pumps will be installed for air-conditioning (heating, cooling) of two project buildings, and to supply hot water for the student dormitories.<sup>23</sup> The project will also support Baise University in defining a campus sustainability strategy and establishing a Green Sustainability Center. The strategy will ensure a sustainable environmental path for Baise University through the identification of priority sustainability programs related to low-carbon, energy- and resource-efficient campus management, green curriculum development, and community environment awareness. The center will coordinate the formulation and implementation of these programs.

28. **Resettlement.** The involuntary resettlement category is C. The project activities will not require land acquisition or resettlement. Resettlement due diligence has been undertaken, yielding satisfactory results with no outstanding issues.

29. **Indigenous peoples.** The indigenous peoples category is B. The poverty and social assessment has determined that no project activities will adversely affect indigenous peoples. Ethnic minority students and staff make up a large percentage at each of Baise University's institutions. Baise municipality and its ethnic minority communities will benefit from increased numbers of trained workers for its industries and services. As per para. 17 SR3 of the ADB Safeguard Policy Statement (2009), the project has included measures in the overall project design in lieu of preparing a separate indigenous peoples plan.<sup>24</sup> An analysis of the issues stemming from consultations with staff, students, and other stakeholders (e.g., Baise Ethnic Minority Affairs Bureau) was prepared and recommended actions integrated into the project design.<sup>25</sup> Measures include (i) data disaggregation by ethnicity for an employment information management system, student tracer studies, and industry survey system; (ii) participation of teachers from ethnic minorities in training programs; (iii) development of curricula incorporating ethnic minority culture; (iv) incorporation of ethnic minority culture in regional cooperation activities; (v) provision of social indicators, including ethnicity, in the project performance monitoring system and (vi) inclusion in the project management consultant team of a social development and gender specialist with expertise in ethnic minority issues.

## F. Risks and Mitigating Measures

30. Major risks and mitigating measures are summarized in Table 4 and detailed in the risk

<sup>22</sup> Including GB/T50378-2006 (Evaluation Standard for Green Buildings), GB 50176-1993 (Thermal Design Code for Public Buildings), DB45/T392 (Energy Conservation Design for Public Buildings), GB 50011-2010 (Building Seismic Design Code), GB 50016-2006 (Code of Design on Building Fire Protection and Prevention), Building Energy Saving Design Standards in Guangxi Zhuang Minority Autonomous Region (DB45/221-2007), and other applicable national design codes.

<sup>23</sup> The heat pumps are expected to reduce electricity consumption by 2.34 million kwh per year.

<sup>24</sup> "If Indigenous Peoples are the sole or the overwhelming majority of direct project beneficiaries, and when only positive impacts are identified, the elements of an [indigenous peoples plan] could be included in the overall project design in lieu of preparing a separate [indigenous peoples plan]." ADB. 2009. *Safeguard Policy Statement*. Manila. p. 57.

<sup>25</sup> Indigenous People's Measures (accessible from the list of linked documents in Appendix 2).

assessment and risk management plan.<sup>26</sup> The integrated benefits and impacts are expected to outweigh the costs.

**Table 4: Summary Risks and Mitigating Measures**

<b>Risks</b>	<b>Mitigating Measures</b>
MLT unattractive to the potential student population	Central government is strongly supportive of MLT development. The project design is intended to improve the quality and relevance of TVET courses at all levels and to improve the employability of graduates.
The commitment of Baise University and its TVET institutions to implementing change is not sustained	TVET improvement strategies have been developed through a consultative process that indicated strong recognition of the need to improve. The strategies were reviewed and finalized with the participation of the staff and management.
Insufficient interest by the BMG and GZAR government in integrating the pilot innovations	The BMG will give a loan assurance that it will actively disseminate the project results and seek to make them models of best practice. There will also be ongoing policy dialogue on the activities with relevant departments of the BMG and GZAR government.
Procurement capacity is low, leading to mistakes or delays in procurement.	The project will provide training in project management and planning. Standard bidding documents, advice, and support of a procurement agent and start-up consultant will be utilized.

BMG = Baise municipal government, GZAR = Guangxi Zhuang Autonomous Region, MLT = multilevel technical and vocational education, TVET = technical and vocational education and training.

Source: Asian Development Bank.

#### **IV. ASSURANCES AND CONDITIONS**

31. The government, the GZAR government, and the BMG assured ADB that the implementation of the project will conform to all applicable ADB policies, including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the PAM, and which it is agreed to be incorporated into the loan documents. Furthermore, the government, the GZAR government, and the BMG agreed with ADB on certain covenants for the project, which will be set forth in the loan and project agreements.

#### **V. RECOMMENDATION**

32. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loan of \$50,000,000 to the People's Republic of China for the Guangxi Baise Vocational Education Development Project, from ADB's ordinary capital resources, with interest to be determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; for a term of 25 years, including a grace period of 6 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan and project agreements presented to the Board.

Takehiko Nakao  
President

17 November 2014

<sup>26</sup> Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

## DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p><b>Impact</b> Economic development and industrial transformation of Baise municipality</p>	<p><b>By 2023:</b> At least a 5% increase in employment in priority economic sectors (Baseline: TBD in 2015)</p> <p>At least a 7% increase in average wages (Baseline 2013: CNY36,100)</p>	<p>BMG annual statistics</p> <p>BMG annual statistics</p>	<p><b>Assumption</b> The government sustains its priority for developing a multilevel labor pool</p> <p><b>Risk</b> Economy falters and key industries fail to expand</p>
<p><b>Outcome</b> A high-quality, flexible, and responsive MLT system developed which meets industry needs</p>	<p><b>By 2019:</b> At least six multilevel programs in priority TVET majors established by 2018 (0 in 2014)</p> <p>Percentage increase in graduates (disaggregated by level, sex, major, ethnicity, residence) (Baseline: TBD in 2015)</p> <p>Increased employer satisfaction with knowledge, skills, and competencies of employees graduating from the project TVET institutions (Baseline: TBD in 2015)</p>	<p>Project progress reporting</p> <p>Base University and Baise Education Bureau statistics</p> <p>Tracer studies and industry surveys</p>	<p><b>Assumption</b> Coordination of Baise University institutions, curriculum, and resources continues</p> <p><b>Risk</b> Shift in education policy away from multilevel TVET development</p>
<p><b>Outputs</b> 1. TVET quality improved and capacity developed</p>	<p>At least six competency-based gender-sensitive curricula developed with industry and implemented by 2019</p> <p>TVET student enrollment in priority majors increases by at least 25% with target of 30% female student enrollment by 2018 (disaggregated by sex and further by level and major)</p> <p>30% student graduates increase in Baise University (disaggregated by major and sex)</p> <p>Percentage of graduates receiving employment in areas where they have been trained</p> <p>550 teachers (40% female) trained in CBA pedagogy and industry-relevant skills (disaggregated by sex, major, TVET level)</p>	<p>Project progress reporting</p> <p>Project progress reporting</p> <p>Baise University statistics</p> <p>Baise University statistics</p> <p>Project progress reporting</p>	<p><b>Assumption</b> Industry experts participate fully in developing effective training programs</p> <p><b>Risks</b> Curricula developed do not adequately identify and respond to market demand</p> <p>Poor social perception of TVET limits MLT students</p>

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
	40% increase in dual qualified teachers (2014 baseline: 14% disaggregated by sex, major, level)	Project progress reporting	
2. Chengbi campus constructed and environmental sustainability promoted	<p>12 buildings constructed by 2017 including 19,000 m<sup>2</sup> of classrooms, 26,000 m<sup>2</sup> of training facilities, separate male and female dormitories, separate male and female latrines in campus facilities, safety features at night, and 3.86 megawatt photovoltaic power generation system operational by 2018</p> <p>Campus sustainability strategy defined by 2015 and Green Sustainability Center operational by 2017</p> <p>Share of renewable energy consumption of Baise University increased from 0% in 2014 to 15% by 2019</p> <p>Number of students benefitting from new facilities (Target 18,000 at least 40% female)</p>	<p>Project progress reporting</p> <p>Strategy report and project progress reports</p> <p>Baise University facilities management reporting and project progress reports</p> <p>Project progress reports</p>	<p><b>Assumptions</b> Project financing is provided on time</p> <p>Project design and construction are implemented effectively</p> <p><b>Risks</b> Delay in hiring the procurement agent and project implementation consultants</p> <p>Relevant agencies lack coordination in implementation and monitoring</p>
3. TVET innovation and relevance promoted	<p>Student information and employment data system established with capacity to disaggregate social and gender indicators by 2017</p> <p>At least 10 regional cooperation agreements signed by 2019</p> <p>At least 20 industry partnerships created by 2019 (disaggregated by industry)</p> <p>Career guidance and mentoring sessions link students with role models (100% female students)</p>	<p>Project progress reporting</p> <p>Project progress reporting</p> <p>Project progress reporting</p> <p>SGAP monitoring reports</p>	<p><b>Assumption</b> Regional cooperation partners are ready to engage on TVET</p> <p><b>Risk</b> Industries continue to seek qualified personnel from outside of Baise</p>
4. Project implementation management	<p>Institutional arrangement of project management office strengthened and fully staffed by 2015 (30% female, 50% ethnic minority)</p> <p>PPMS established and operational by 2015</p>	Project progress reporting	<p><b>Assumption</b> Trained staff on project management and coordination remains in respective positions till the end of project implementation and beyond</p>

<b>Activities with Milestones</b>	<b>Inputs</b>
<p><b>1. Improving TVET Quality and Capacity Development</b></p> <p>1.1 Develop core curriculum standards and CBA by Q4 2016.</p> <p>1.2 Develop curriculum framework for MLT that incorporates a competency-based approach to course delivery in pillar industries in collaboration with industries by Q1 2016.</p> <p>1.3 Develop teachers' guides, course materials, assessment tools, and train teachers by Q3 2018.</p> <p>1.4 Upgrade teachers' skills in competency-based approach that is applied to their majors in priority areas by Q1 2018.</p> <p>1.5 Develop teacher training modules, standards, and assessment handbook by Q4 2016.</p> <p>1.6 Policy and guidelines developed for TVET teacher training center by Q2 2016.</p> <p><b>2. Chengbi Campus Construction and Promoting Environmental Sustainability</b></p> <p>2.1 Design facilities and procure the works by Q2 2015.</p> <p>2.2 Construct buildings and facilities by Q3 2016.</p> <p>2.3 Procure and install training equipment by Q3 2017.</p> <p><b>3. Promoting TVET Innovation and Relevance</b></p> <p>3.1 Implement student information and employment data system by Q1 2016.</p> <p>3.2 Identify regional cooperation partners for key majors, strategies, and monitoring indicators by Q3 2017.</p> <p>3.3 Implement regional cooperation agreements by Q1 2018.</p> <p>3.4 Create effective industry partnerships for training, research, and employment by Q3 2016.</p> <p>3.5 Create leading groups at Baise University with industry representation by Q4 2015.</p> <p>3.6 Initiate training and research partnerships by Q4 2018.</p> <p><b>4. Project Implementation Management</b></p> <p>4.1 Complete necessary organizational arrangements for implementation plan (setting up accounting systems and improving financial and administrative policies and procedures) by Q4 2014.</p> <p>4.2 Recruit and mobilize implementation support consultants by Q1 2015.</p> <p>4.3 Undertake training and provide project implementation support to implementing agency by Q2 2015 (including ADB procedures, procurement, disbursement, safeguards monitoring, and financial management).</p> <p>4.4 Implement EMP and SGAP until Q4 2019.</p>	<p><b>Loan</b></p> <p><b>ADB: \$50.0 million</b></p> <p><b>Counterpart funding:</b></p> <p><b>Baise Municipal Government: \$40.64 million</b></p> <p><b>Domestic Bank: \$12.90 million</b></p>

ADB = Asian Development Bank, BMG = Baise municipal government, CBA = competency-based curriculum, EMP = ethnic minority plan, m<sup>2</sup> = square meter, MLT = multilevel technical and vocational education system, PPMS = project performance monitoring system, Q = quarter, SGAP = social and gender action plan, TBD = to be determined, TVET = technical and vocational education and training.

Source: Asian Development Bank.

### **LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/?id=47009-002-3>

1. Loan Agreement
2. Project Agreement
3. Sector Assessment (Summary): Education
4. Project Administration Manual
5. Contribution to the ADB Results Framework
6. Development Coordination
7. Financial Analysis
8. Economic Analysis
9. Country Economic Indicators
10. Summary Poverty Reduction and Social Strategy
11. Social and Gender Action Plan
12. Initial Environmental Examination
13. Indigenous People's Measures
14. Risk Assessment and Risk Management Plan

#### **Supplementary Documents** (available upon request)

15. Full Financial Analysis (including Financial Management Assessment)
16. Full Economic Analysis
17. Full Sector Assessment
18. Procurement Capacity Assessment