Project Administration Manual

Project Number: 46062
November 2014

People's Republic of China: Gansu Baiyin Integrated Urban Development Project

Contents

Project Administration Manual Purpose and Process

The project administration manual (PAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with Government and Asian Development Bank (ADB) policies and procedures. The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.

The Baiyin Municipal Government (BMG), the executing agency; the Liuchuan Industrial Park management committee (LMC), Jingyuan County Bureau of Human Resources and Social Security (JHRSS), Baiyin Municipal Public Security Bureau Traffic Police Detachment (TPD), and Baiyin Public Transportation Company (BPT), the implementing agencies; are wholly responsible for the implementation of the ADB-financed project, as agreed jointly between the borrower and ADB, and in accordance with Government and ADB's policies and procedures. ADB staff is responsible to support implementation including compliance by BMG, LMC, JHRSS, TPD, and BPT of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At Loan Negotiations the borrower and ADB shall agree to the PAM and ensure consistency with the Loan agreement. Such agreement shall be reflected in the minutes of the Loan Negotiations. In the event of any discrepancy or contradiction between the PAM and the Loan Agreement, the provisions of the Loan Agreement shall prevail.

After ADB Board approval of the project's report and recommendation of the President (RRP) changes in implementation arrangements are subject to agreement and approval pursuant to relevant Government and ADB administrative procedures (including the Project Administration Instructions) and upon such approval they will be subsequently incorporated in the PAM.

Abbreviations

ADB	-	Asian Development Bank
BHRSS	-	Bureau of Human Resources and Social Security
BMG	-	Baiyin Municipal Government
BPT	-	Baiyin Public Transportation Company
CQS	-	consultants' qualifications selection
CSC		construction supervision company
DMF	-	design and monitoring framework
EIA	-	environment impact assessment
EIP	-	eco-industrial park
EMC	-	environmental monitoring center
EMP	-	environment management plan
EMS		environment management system
EPB	-	environment protection bureau
EPR	-	emergency preparedness and response
GAP	-	gender action plan
GFD	-	Gansu Provincial Finance Department
GPEPD	-	Gansu Provincial Environment Protection Department
GPG	-	Gansu Provincial Government
GPWRD	-	Gansu Provincial Water Resources Department
GRM	-	grievance redress mechanism
ICB	-	international competitive bidding
ICS	-	individual consultant selection
IEE	-	initial environmental examination
JCG	-	Jingyuan County Government
JHRSS	-	Jingyuan County Bureau of Human Resources and Social Security
LAR	-	land acquisition and resettlement
LIBOR	-	London interbank offered rate
LIEC	-	loan implementation environment consultant
LIP	-	Liuchuan Industrial Park
LMC	-	Liuchuan Industrial Park management committee
M&E	-	monitoring and evaluation
MOF	-	Ministry of Finance
NCB	-	national competitive bidding
NDRC	-	National Development and Reform Commission
O&M	-	operation and maintenance
PAM	-	project administration manual
PMC	-	project management consulting service
PPCU	-	project public complaints unit
PPMS	-	project performance management system
PRC	-	People's Republic of China
QCBS	-	quality- and cost-based selection
RRP	-	report and recommendation of the President
SDAP	-	social development action plan
SOE	-	statement of expenditures
TPD	-	Baiyin Municipal Public Security Bureau Traffic Police Detachment
TVET	-	technical and vocational education and training
WTP	-	water treatment plant
WWTP	-	wastewater treatment plant

I. PROJECT DESCRIPTION

A. Background and Rationale

1. The PRC is rapidly becoming urbanized. During 1992–2012, the urban population grew from 322 million to 712 million, representing a rise from 27% to 53% of the total population.[1] About two-thirds of the urban population growth came from rural–urban migration.[2] Until the 1980s, many provinces and autonomous regions in the west had the advantage of serving as national mineral-based resource centers. A number of mining and resource-intensive heavy industries were deployed in the region. In the 1990s, the national opening-up policy and coordinated development strategy focused on the eastern region, which led to large flows of foreign capital into the coastal cities. Meanwhile, reduced production and depletion of mineral resources slowed socioeconomic development of some western inland provinces. To reduce the consequential regional imbalance, the National Strategy for Development of the West, launched in 1999, included direct support to the western inland region. However, slow development of cities in the western inland region, continuous outflow of migrant workers to cities in the eastern coastal region, and widening urban–rural income disparities continue to be urban development challenges in the PRC.[3]

2. Gansu province is one of the poor provinces targeted under the National Strategy for Development of the West. Its per capita gross domestic product in 2013 was CNY24,438, the second lowest in the PRC after Guizhou province. Gansu also suffers from high poverty incidence: 8.4% for urban households and 68.6% for rural households, much higher than the national averages of 2.8% for urban households and 13.1% for rural households. Gansu's mineral resources production has gradually declined, and its economic transition from primary and secondary industries to high value-adding manufacturing and service-based tertiary industries has been slow. Baiyin, a medium-sized city close to the provincial capital of Lanzhou, is a typical case. In the 1950s, the city was originally established as a national copper mining base. The city's development was fueled by strong growth of mining and metallurgical industries. However, since 1985, its socioeconomic development has suffered major setbacks after continuous copper exploitation and depletion, and associated environmental degradation. In 2008, Baiyin was officially listed as one of the first resource-exhausted cities in transition and became a recipient of special funding support from the Government of the PRC.[4] Baiyin was also designated as a resource-exhausted city transformation demonstration area in 2011. Further, Gansu launched the Lanzhou–Baiyin Economic Zone in 2011 to boost its regional economic development by integrating cities and industrial bases.[5]

3. Although Baiyin's industrial output grew by 13.5% annually in 2008–2013, its per capita gross domestic product is only 64% of the national average. The city continues to struggle to diversify its economy and transform its industrial base. In 2012, Baiyin still relied on nonferrous metal, chemical, and coal-based energy industries, similar to the situation in 1985.[6] Baiyin also

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[1] National Bureau of Statistics. 2013. *China Statistical Yearbook 2013*. Beijing: Government of the PRC.

[2] According to the National Bureau of Statistics, there were 253 million migrant workers in 2011 (footnote 1).

[3] In 2012, average gross domestic product per capita of the 12 western inland municipality, provinces, and autonomous regions was 75% of the national average, and only 58% for the eastern coastal region.

[4] In 2008, Baiyin was listed as one of 18 national resource-exhausted cities which received special support for economic transformation under the Eleventh Five-Year Plan.

[5] In 2012, the zone has 21% of the provincial population and produces 35% of provincial gross regional product.

[6] The composition of sector industries has been unchanged in 2000–2012: primary 11%–16%, secondary 52%–57%, and tertiary 31%–33%. Output shares of different industries in the secondary sector remain almost the same, except for a slight decline in the nonferrous metal industry and some increases in the coal-based energy industry and chemical industry during 1985–2012.

has difficulty attracting more people. The total population increased by 0.1% per annum during 2000–2012, while the urban population grew by 2.4%. Urban unemployment rates remained high. For Baiyin to demonstrate a successful transformation model for other resource-exhausted cities, the city needs to (i) accelerate its industrial transformation and build a resilient foundation for economic development, (ii) reverse the trend of layoffs and stop talent outflow by strengthening the provision of human resource development for local and emerging industries, (iii) demonstrate its commitment to environmentally sound and green industrial city development, and (iv) raise the city's livability and quality of life to attract people from surrounding areas to support its industrial transformation.

4. The project will accelerate transformation of the resource-exhausted mining city of Baiyin into an inclusive and green city. Project preparation identified that the transformation cannot be achieved through infrastructure development alone. The value addition of the Asian Development Bank (ADB) is its comprehensive approach covering infrastructure, human resources, and environmental capacity development. The project also incorporates lessons from a previous ADB project in Baiyin and other urban, education, and transport sector projects in the PRC.[7] These include (i) setting aspirational but realistic targets with measurable performance indicators, (ii) comprehensive due diligence on land acquisition and resettlement including past resettlement activities, (iii) strong start-up procurement support by an experienced tendering agency, and (iv) advance engagement of key consulting services and preparation of equipment contracts for early disbursement. The project is in line with ADB's country partnership strategy, 2011–2015 for the PRC for inclusive and environmentally sustainable growth.[8] The project is aligned with ADB's urban operational plan as it demonstrates competitive, inclusive, and environmentally sustainable city transformation in a poor region.[9] The project also supports the PRC's Twelfth Five-Year Plan, 2011–2015 by supporting the rebalancing of its regional development, which is expected to continue during the Thirteenth Five-Year Plan period.

B. Impact and Outcome

5. The impact will be inclusive and environmentally sustainable development in Baiyin. The outcome will be accelerated industrial transformation and economic diversification of Baiyin.

C. Outputs

6. **Output 1: Liuchuan Industrial Park infrastructure development**. The project will build basic infrastructure of the Liuchuan Industrial Park including:

(i) a new water supply facility with treatment capacity of 60,000 cubic meters per day, a 14.4-kilometer (km) water transmission pipeline, and a 14.0-km water distribution pipeline network and other related facilities for water supply;
(ii) a new wastewater treatment facility with treatment capacity of 35,000 cubic meters per day, sludge treatment facilities and other auxiliary systems, and a 46.0-km wastewater collection pipelines network and related facilities; and
(iii) a 6.0-km road with related facilities including energy-saving streetlight, one bridge and one box culvert passing under the Beijing–Tibet expressway.

7. **Output 2: Technical and vocational education and training enhancement**. The project will strengthen capacity of TVET through following sub-outputs:

[7] ADB. 2008. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of China for the Gansu Baiyin Urban Development Project*. Manila.
[8] ADB. 2012. *Country Partnership Strategy: People's Republic of China, 2011–2015*. Manila.
[9] ADB. 2012. *Urban Operational Plan, 2012–2020*. Manila.

(i) development of long–term and short–term courses [10] in Jingyuan County Secondary Vocational School and Jingyuan employment training centers including (a) upgrade of the training center and school facilities, (b) training courses equipment for logistic industry, ceramic industry, electromechanical industry, mechanical processing, excavator loader, welding, plumbing, mold making, accounting, and restaurant housekeeping services, and (c) textbooks and training materials;

(ii) strengthen the labor market information system including information and communication technology equipment, a computer software and training for public employment services;

(iii) teacher training and workshops for competency-based skill training courses development including (a) development and validation of occupational profile charts, (b) competency-based training modules, (c) evaluation and assessment methods, and (d) course management and teaching quality assurance.

8. **Output 3: Intelligent transportation systems installation**. The project will install two systems of traffic control and public transportation management including:

(i) an intelligent traffic command center, signal control equipment, electronic police/video monitoring and violation recording/traffic guidance equipment and an operational software; and

(ii) an operation center for the intelligent public bus service, public transport onboard equipment, stop and depot equipment, and an operational software.

9. **Output 4: Enhanced environmental management and capacity development**. The project will:

(i) develop an environmental management system (EMS) that will be ISO 14001 certified for the LIP and pursue accreditation of an eco-industrial park under the PRC national standard by 2025; and

(ii) strengthen institutional capacities for the project management and operation by providing expert support and advice on (a) project management including contract management, financial management, safeguard and social monitoring and capacity development activities on ADB regulations; and (b) design and implementation of the TVET subproject. The consulting services will support public awareness activities on subjects including road safety and provide training, seminars, workshops, and study tours on public financial management, industrial park development strategy and its environmental management, and innovative infrastructure financing options including public–private partnership.

[10] The courses developed under the project will include: (i) 5 new-developed courses including 2 long-term courses (logistic and ceramic) and 3 short-term courses (mechanical processing, mold making and plumbing); and (ii) 6 enhanced existing short-term courses including 3 testing courses (housekeeping, restaurant and excavator loader) and 3 existing training courses (welding, electromechanics and accounting).

II. IMPLEMENTATION PLANS

A. Project Readiness Activities

Indicative Activities	2014								2015					Who is responsible
	5	6	7	8	9	10	11	12	1	2	3	4	5	
Establish project implementation arrangements	■	■	■	■	■	■	■	■	■	■	■	■	■	BMG, LMC, JHRSS, TPD, BPT
Advance contracting actions	■	■	■	■	■	■	■	■	■	■	■	■	■	ADB, BMG, LMC, JHRSS, TPD, BPT
Retroactive financing			■	■	■	■	■	■	■	■	■	■	■	ADB, BMG
Prepare FCUP		■	■	■										BMG, GDRC
Prepare PEOR		■	■	■										BMG, GFD
Review and approval of FCUP and PEOR				■	■									MOF, NDRC
State Council approval for loan negotiations					■	■								MOF, State Council
Loan Negotiations						■								ADB, BMG, GFD, MOF
ADB Board approval							■							ADB
Loan signing								■	■	■	■			ADB, MOF
Government legal opinion provided											■	■	■	GDRC, GFD, MOF, MOFA
Loan effectiveness													■	ADB, MOF

ADB = Asian Development Bank, BMG = Baiyin Municipal Government, BPT = Baiyin Public Transportation Company, FCUP = foreign capital utilization report, GDRC = Gansu Province Development and Reform Commission, GFD = Gansu Provincial Finance Department, JHRSS = Jingyuan County Bureau of Human Resources and Social Security, LMC = Liuchuan Industrial Park Management Committee, MOF = Ministry of Finance, MOFA = Ministry of Foreign Affairs, NDRC = National Development and Reform Commission, PEOR = project evaluation opinion report, TPD = Baiyin Municipal Public Security Bureau Traffic Police Detachment.

B. Overall Project Implementation Plan

Tasks	2014		2015				2016				2017				2018				2019			
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1. Liuchuan Industrial Park infrastructure development																						
1.1 Detailed design and updated resettlement plan																						
1.2 Land acquisition and resettlement																						
1.3 Bidding and contract award																						
1.4 Water supply facilities and pipelines construction																						
1.5 Wastewater treatment facilities and pipelines construction																						
1.6 Road and bridge construction																						
2. Technical and vocational education and training enhancement																						
2.1 Curricula development for long-term courses																						
2.2 Bidding and contract award																						
2.3 Curricula development for short-term courses																						
2.4 Labor market information database system development																						
2.5 Training and workshop																						
3. Intelligent transport systems installation																						
3.1 Detailed design																						
3.2 Bidding and contract award																						
3.3 Installation of transport security and control system																						
3.4 Installation of public transport monitoring control system																						
4. Enhanced environmental management and capacity development																						
4.1 Engagement and mobilization of startup consultant																						
4.2 Organization arrangement set up																						
4.3 PMC engagement and implementation																						
4.4 TVET consultant engagement and implementation																						
4.5 EMS consultant engagement and implementation																						
4.6 EMP, GAP, resettlement plan, and SDAP implementation																						
4.7 Implementation of capacity development training																						
4.8 Accreditation of the ISO 14001 certification for the LIP																						

EMP = environmental management plan, EMS = environment management system, GAP = gender action plan, ISO = International Organization for Standardization, LIP = Liuchuan Industrial Park, PMC = project management consulting service, Q = quarter, SDAP = social development action plan, TVET = technical and vocational education and training.

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Implementation Organization – Roles and Responsibilities

Project implementation organizations	Management roles and responsibilities
Gansu Provincial Finance Department	Provide overall project guidance and coordination • Establish and manage the project imprest account • Endorse and submit withdrawal applications to ADB
Executing agency	
Baiyin Municipal Government Project Leading Group	Responsible for project coordination with four implementing agencies and liaison with ADB financial management and administration • Headed by the mayor and consists of DRC, EPB, FB, HCB, Jingyuan County Bureau of Human Resources and Social Security, LRB, and TB • Coordinate and oversee project preparation and implementation • Provide policy guidance during implementation • Facilitate interagency coordination
Baiyin Municipal Project Management Office	Responsible for entire project implementation • In-charge of all day-to-day management work during project preparation and implementation period • Coordinate with all involved parties including government agencies and four implementing agencies for the project implementation • Communicate and coordinate with ADB for project management and implementation • Report project implementation progress and EMP compliance monitoring to Baiyin Municipal Government Project Leading Group and ADB • On behalf of the four implementing agencies, submit bidding documents, bid evaluation reports, and other necessary documentations to ADB for necessary approval • Coordinate implementation of land acquisition and resettlement activities with land resources bureau and housing management bureau • Coordinate implementation of environmental monitoring activities with EPB • Coordinate project grievance redress mechanism • Coordinate implementation and monitoring of SDAP and GAP • Submit withdrawal applications through Gansu Provincial Finance Department • Submit required annual audit reports and financial statements of project account to ADB • Engage a design institute to complete preliminary and detailed engineering designs • Engage a procurement agency to handle all procurement activities under the project • Engage a project startup consultant, a project management and capacity development consulting service, an environment management system consulting service, and technical and vocational education and training consulting service • Coordinate with Lichuan Industrial Park Management Committee to engage an external resettlement and social monitor
Implementing agency for Liuchuan Industrial Park infrastructure development	
Liuchuan Industrial Park Management Committee	Responsible for project implementation of Liuchuan Industrial Park infrastructure development subproject, including finance and administration, technical and procurement matters, monitoring and evaluation, and safeguard compliance • In-charge of all day-to-day management work during project preparation and implementation • With the support of design institutes and a tendering agent, design and procure goods and works under the subproject and administer and monitor suppliers • Undertake contract management, construction supervision and quality control, with the support of supervision companies

Project implementation organizations	Management roles and responsibilities
	• Develop project management procedures, implementation plan, and financial management • Maintain separate project accounts for the project • Coordinate with all involved parties and government agencies for project implementation • Communicate and coordinate with Baiyin Municipal Project Management Office for project management and implementation • Establish an environment management unit to coordinate environmental management plan implementation • Coordinate environment management system subcomponent implementation • Contract Baiyin environmental monitoring center to conduct regular environment monitoring during project implementation • Engage a construction and supervision consulting service including environment supervision staff to supervise civil works contractors • Engage an external resettlement and social monitor • Coordinate public consultation and disclosure activities • Operate EMS and prepare and submit application for ISO 14001 certification
Implementing agencies for intelligent transportation system installation	
Baiyin Municipal Public Security Bureau Traffic Police Detachment	Responsible for project implementation of intelligent transportation system subproject (i.e., intelligent traffic police system), including finance and administration, technical and procurement matters, monitoring and evaluation, and safeguard compliance • In-charge of all day-to-day management work during project preparation and implementation • With the support of design institutes and a tendering agent, design and procure goods under the subproject and administer and monitor suppliers • Undertake contract management and equipment installation quality control • Develop project management procedures, implementation plan, and financial management • Maintain separate project accounts for the project • Coordinate with all involved parties and government agencies for the project implementation • Communicate and coordinate with Baiyin Municipal Project Management Office for project management and implementation
Baiyin Public Transportation Company	Responsible for project implementation of intelligent transportation system subproject (i.e., intelligent public bus service system), including finance and administration, technical and procurement matters, monitoring and evaluation, and safeguard compliance • In-charge of all day-to-day management work during project preparation and implementation • With the support of design institutes and a tendering agent, design and procure goods under the subproject and administer and monitor suppliers • Undertake contract management and equipment installation quality control • Develop project management procedures, implementation plan, and financial management • Maintain separate project accounts for the project • Coordinate with all involved parties and government agencies for the project implementation • Communicate and coordinate with Baiyin Municipal Project Management Office for project management and implementation
Implementing agency for technical and vocational education and training enhancement	
Jingyuan County Bureau of Human Resources and Social Security	Responsible for project implementation of technical and vocational education and training subproject, including finance and administration, technical and procurement matters, monitoring and evaluation, and safeguard compliance

Project implementation organizations	Management roles and responsibilities
	• In-charge of all day-to-day management work during project preparation and implementation • With the support of design institutes and a tendering agent, design and procure goods under the subproject and administer and monitor suppliers • Undertake contract management, construction supervision, equipment installation quality control • Develop project management procedures, implementation plan, and financial management • Maintain separate project accounts for the project • Coordinate with all involved parties and government agencies for the project implementation • Communicate and coordinate with Baiyin Municipal Project Management Office for project management and implementation
ADB	Responsible for administering ADB-funded components of the project

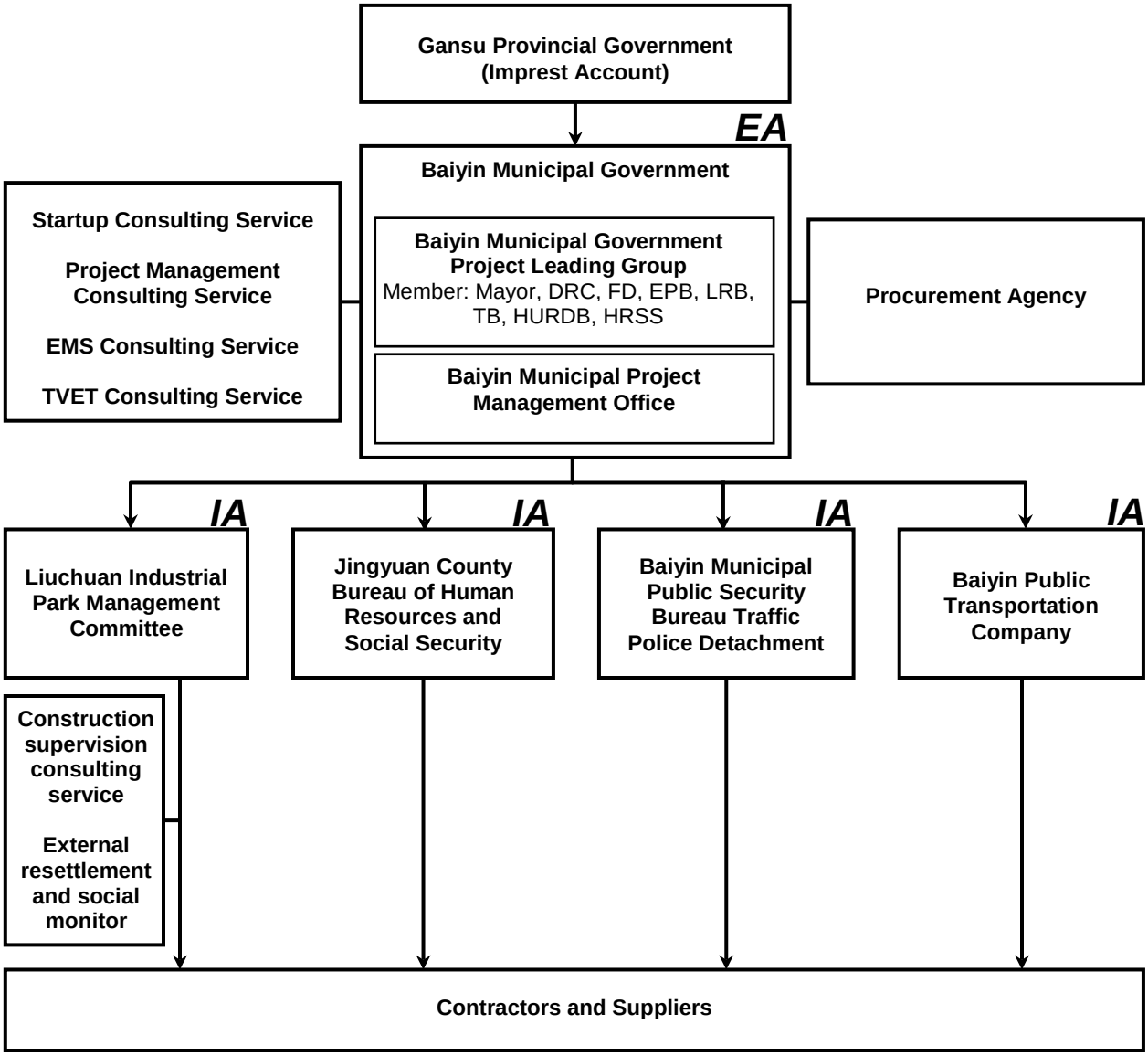
ADB = Asian Development Bank, DRC = development and reform commission, EMS = environmental management system, EMP = environmental management plan, EPB = environmental protection bureau, FB = finance bureau, GAP = gender action plan, HCB = housing and construction bureau, ISO = International Organization for Standardization, LRB = land resources bureau, SDAP = social development action plan, TB = transport bureau.

B. Key Persons Involved in Implementation

Provincial Government		
Gansu Provincial Finance Department	Officer's Name: Position: Telephone(Fax): Email Address: Office Address:	Zhang Xiaoping (Ms.) Deputy Director, International Division +86 931 8891 039 xpzhang@vip.sina.com 696 Donggang Xi Road, Chengguan District, Lanzhou, Gansu Province, People's Republic of China
Executing Agency		
Baiyin Municipal Government	Officer's Name: Position: Telephone(Fax): Email Address: Office Address: Officer's Name: Position: Telephone(Fax): Email Address: Office Address:	Wang Lubang (Mr.) Director, Baiyin Project Management Office Deputy Governor/Director General, Baiyin Development and Reform Commission +86 943 8255 330 gsbypmo@126.com Baiyin Development and Reform Commission, Municipal Government Building, Baiyin Municipality Gansu Province, People's Republic of China Zhou Jianhua (Mr.) Fulltime Deputy Director, ADB Project Management Office, Baiyin Development and Reform Commission +86 943 8255 330 gsbypmo@126.com Baiyin Development and Reform Commission, Municipal Government Building, Baiyin Municipality Gansu Province, People's Republic of China
Implementing Agencies		
Liuchuan Industrial Park Management Committee	Officer's Name: Position: Telephone No.: Email address:	Wang Jianquan (Mr.) Director, Liuchuan Industrial Park Management Committee +86 138 3001 0238 912943855@qq.com
Baiyin Municipal Public Security Bureau Traffic Police Detachment	Officer's Name: Position: Telephone No.: Email address:	Zhou Huaguo (Mr.) Chief of Department of Information Management Baiyin Municipal Public Security Bureau Traffic Police Detachment +86 136 3930 0510 1176019125@qq.com

Implementing Agencies		
Baiyin Public Transportation Company	Officer's Name: Position: Telephone No.: Email address:	Li Depeng (Mr.) Deputy Manager, Baiyin Municipal Public Transportation Company +86 139 0943 0330 510075683@qq.com
Jingyuan County Bureau of Human Resources and Social Security	Officer's Name: Position: Telephone No.: Email address:	Wang Youru (Mr.) Director, Jingyuan County Bureau of Human Resources and Social Security +86 138 9306 0018 398257833@qq.com
Asian Development Bank		
East Asia Department Urban and Social Sectors Division	Staff Name: Position: Telephone No.: Email Address: Staff Name: Position: Telephone No.: Email Address:	Sangay Penjor (Mr.) Officer-in-Charge, EASS +63 2 632 6730 spenjor@adb.org Satoshi Ishii (Mr.) Senior Urban Development Specialist, EASS +63 2 632 6929 sishii@adb.org

C. Project Organization Structure



DRC = development and reform commission, EA = executing agency, EMS = environment management system, EPB = environment protection bureau, FD = finance department, HRSS = human resources and social security, HURDB = housing urban-rural development bureau, IA = implementing agency, LRB = land resources bureau, TB = transport bureau, TVET = technical and vocational education and training.

IV. COSTS AND FINANCING

1. The project is estimated to cost $212.66 million (Table 1). Loan proceeds will be disbursed according to ADB's *Loan Disbursement Handbook* (2012, as amended from time to time), and subject to the provisions of the Loan Agreement.

Table 1: Project Investment Plan
($ million)

Item			Amount[a]
A.	**Base Cost**[b]		
	1.	Liuchuan Industrial Park infrastructure development	157.63
	2.	Technical and vocational education and training enhancement	2.50
	3.	Intelligent transport systems installation	5.58
	4.	Enhanced environmental management and capacity development	1.82
		Subtotal (A)	**167.53**
B.	**Contingencies**[c]		**36.33**
C.	**Financing Charges During Implementation**[d]		**8.80**
		Total Project Cost (A+B+C)	**212.66**

[a] Includes taxes and duties of $10.0 million, to be financed by the government and Asian Development Bank (ADB) loan resources. The following principles were followed in determining the amount of taxes and duties to be financed by ADB: (i) the amount is within reasonable country thresholds, (ii) the amount does not represent an excessive share of the project investment plan, (iii) taxes and duties apply only to ADB-financed expenditures, and (iv) the financing of the taxes and duties is material and relevant to the success of the project.
[b] In March-2014 prices.
[c] Physical contingencies are computed at 10% for works and goods. Price contingencies are computed using domestic inflation rates: 2.7% for 2014, 3.0% for 2015 onwards; and foreign inflation rates: 2.3% for 2014, 1.0% for 2015, and 1.4% for 2016 onwards.
[d] Includes interest and commitment charges. Interest during construction for the ADB loan has been computed at the 5-year US dollar fixed swap rate plus a spread of 0.50% and a maturity premium of 0.10%. Commitment charge for the ADB loan is 0.15% per year to be charged on the undisbursed loan amount. Interest during construction for the domestic bank loans from the Industrial and Commercial Bank of China and the Bank of Gansu is computed at 7.2% per year and 6.7% per year, respectively.
Source: Asian Development Bank estimates.

2. The government has requested a loan of $100 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 5 years, a 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, the interest during construction to be capitalized in the loan, and such other terms and conditions to be set forth in the draft loan and project agreements. Based on this, the average loan maturity is 15.25 years and the maturity premium payable to ADB is 0.10% per annum. The ADB loan will also finance taxes and duties for eligible ADB-financed expenditures, and transportation and insurance costs included in the base cost for ensuring smooth project implementation. The loan will finance 47.0% of the project cost, including civil works, equipment and materials, and institutional strengthening. The government will finance $112.66 million including $79.88 million from Baiyin Municipal Government (BMG), and $32.78 million through borrowing from Industrial and Commercial Bank of China (Baiyin Branch) and the Bank of Gansu (Table 2).

3. The Government of the People's Republic of China is the borrower of the loan and will make the loan available, through the Gansu Provincial Government, to BMG on the same terms and conditions as those of the ADB loan. BMG will assume the foreign exchange and interest variation risks of the ADB loan. The People's Republic of China, Gansu Provincial Government, and BMG have assured ADB that counterpart funding will be provided in a timely manner, including any additional counterpart funding required for any shortfall of funds or cost overruns.

Table 2: Financing Plan

Source	**Amount** ($ million)	**Share of Total** (%)
Asian Development Bank		
Ordinary capital resources	100.00	47.0
Baiyin Municipal Government	79.88	37.6
Bank of Gansu	16.39	7.7
Industrial and Commercial Bank of China	16.39	7.7
Total	**212.66**	**100.0**

Source: Asian Development Bank estimates.

A. Detailed Cost Estimates by Expenditure Category

Item	(CNY million) Foreign Exchange	Local Currency	Total Cost[a]	($ million) Foreign Exchange	Local Currency	Total Cost	% of Total Base Cost
A. Investment Cost[b]							
1. Civil works	65.26	636.35	701.61	10.70	104.32	115.02	69
2. Mechanical and equipment	79.76	79.76	159.52	13.08	13.08	26.15	16
3. Technical and vocational education and training	7.38	7.87	15.25	1.21	1.29	2.50	1
4. Land acquisition	0.00	86.51	86.51	0.00	14.18	14.18	8
5. Survey, design, and supervision	0.00	47.97	47.97	0.00	7.86	7.86	5
6. Consultants							
a. Project management	2.04	6.42	8.46	0.33	1.05	1.39	1
b. Environment management system	0.82	1.80	2.62	0.14	0.30	0.43	0
Subtotal (A)	**155.26**	**866.67**	**1,021.94**	**25.45**	**142.08**	**167.53**	**100**
B. Contingencies[c]							
1. Physical	15.53	86.67	102.19	2.55	14.21	16.75	10
2. Price	8.16	111.25	119.41	1.34	18.24	19.57	12
Subtotal (B)	**23.69**	**197.91**	**221.60**	**3.88**	**32.44**	**36.33**	**22**
C. Financing Charges During Implementation[d]							
1. Interest	18.99	32.40	51.39	3.11	5.31	8.42	5
2. Commitment charges	2.32	0.00	2.32	0.38	0.00	0.38	0
Subtotal (C)	**21.31**	**32.40**	**53.71**	**3.49**	**5.31**	**8.80**	**5**
Total Project Cost (A+B+C)	**200.26**	**1,096.99**	**1,297.25**	**32.83**	**179.83**	**212.66**	**127**

Note: Numbers may not sum precisely because of rounding.

[a] Includes taxes and duties of $10.0 million to be financed from government and Asian Development Bank (ADB) loan resources.

[b] In March 2014 prices.

[c] Physical contingencies are computed at 10% for works and goods. Price contingencies are computed using domestic inflation rates: 2.7% for 2014, 3.0% for 2015 onwards; and foreign inflation rates: 2.3% for 2014, 1.0% for 2015, and 1.4% for 2016 onwards. Excluding contingencies for the land acquisition and resettlement cost which is already included in the base cost.

[d] Includes interest and commitment charges. Interest during construction for the ADB loan has been computed at the 5-year US dollar fixed swap rate plus a spread of 0.50% and a maturity premium of 0.10%. Commitment charges for an ADB loan are 0.15% per year to be charged on the undisbursed loan amount. Interest during construction for the domestic bank loans has been computed at the domestic rates of 7.20% per annum for the Industrial and Commercial Bank of China, and 6.7% per annum for the Bank of Gansu.

Source: Asian Development Bank estimates.

B. Allocation and Withdrawal of Loan Proceeds

Category				ADB Financing
No.	Item	Total Amount Allocated for ADB Financing ($)		Percentage and Basis for Withdrawal from the Loan Account
		Category	Subcategory	
1	Works	66,044,000		62% of total expenditure
2	Mechanical and Equipment	26,150,000		100% of total expenditure
2A	Liuchuan Industrial Park infrastructure development		20,943,000	100% of total expenditure
2B	Traffic police intelligent transport system		3,913,000	100% of total expenditure
2C	Intelligent public transport management system		1,294,000	100% of total expenditure
3	Technical and vocational education and training	2,500,000		100% of total expenditure
4	Consultants	1,817,000		100% of total expenditure
4A	Project management		1,387,000	100% of total expenditure
4B	Environment management system		430,000	100% of total expenditure
5	Interest and commitment charges	3,489,000		100% of amount due
Total		**100,000,000**		

C. Detailed Cost Estimates by Financier

($ million)[a]

Item	ADB Amount	ADB % of Cost Category	Baiyin Municipal Government Amount	Baiyin Municipal Government % of Cost Category	Industrial and Commercial Bank Amount	Industrial and Commercial Bank % of Cost Category	Bank of Gansu Amount	Bank of Gansu % of Cost Category	Total Cost
A. Investment Cost[b]									
1. Civil works									
a. Liuchuan Industrial Park infrastructure development	66.04	62	8.16	8	16.39	15	16.39	15	106.99
b. Wastewater pipeline network	0.00	0	8.03	100	0.00	0	0.00	0	8.03
2. Mechanical and equipment									
a. Liuchuan Industrial Park infrastructure development	20.94	100	0.00	0	0.00	0	0.00	0	20.94
b. Intelligent transport system									
b1. Traffic police intelligent transport system	3.91	100	0.00	0	0.00	0	0.00	0	3.91
b2. Intelligent public transport management system	1.29	100	0.00	0	0.00	0	0.00	0	1.29
3. Technical and vocational education and training	2.50	100	0.00	0	0.00	0	0.00	0	2.50
4. Land acquisition	0.00	0	14.18	100	0.00	0	0.00	0	14.18
5. Survey, design, and supervision	0.00	0	7.86	100	0.00	0	0.00	0	7.86
6. Consultants									
a. Project management	1.39	100	0.00	0	0.00	0	0.00	0	1.39
b. Environment management system	0.43	100	0.00	0	0.00	0	0.00	0	0.43
Subtotal (A)	**96.51**	**58**	**38.24**	**23**	**16.39**	**10**	**16.39**	**10**	**167.53**
B. Contingencies[c]									
1. Physical	0.00	0	16.75	100	0.00	0	0.00	0	16.75
2. Price	0.00	0	19.57	100	0.00	0	0.00	0	19.57
Subtotal (B)	**0.00**	**0**	**36.33**	**100**	**0.00**	**0**	**0.00**	**0**	**36.33**
C. Financing Charges During Implementation[d]									
1. Interest during construction	3.11	37	5.31	63	0.00	0	0.00	0	8.42
2. Commitment charges	0.38	100	0.00	0	0.00	0	0.00	0	0.38
Subtotal (C)	**3.49**	**40**	**5.31**	**60**	0.00	**0**	**0.00**	**0**	**8.80**
Total Project Cost (A+B+C)	**100.00**	**48**	**79.88**	**36**	**16.39**	**8**	**16.39**	**8**	**212.66**

Note: Numbers may not sum precisely because of rounding.

[a] Includes taxes and duties of $10.0 million to be financed from government and Asian Development Bank (ADB) loan resources.

[b] In March 2014 prices.

[c] Physical contingencies are computed at 10% for works and goods. Price contingencies are computed using domestic inflation rates: 2.7% for 2014, 3.0% for 2015 onwards; and foreign inflation rates: 2.3% for 2014, 1.0% for 2015, and 1.4% for 2016 onwards. Excluding contingencies for the land acquisition and resettlement cost which is already included in the base cost.

[d] Includes interest and commitment charges. Interest during construction for the ADB loan has been computed at the 5-year US dollar fixed swap rate plus a spread of 0.50% and a maturity premium of 0.10%. Commitment charges for an ADB loan are 0.15% per year to be charged on the undisbursed loan amount. Interest during construction for the domestic bank loan has been computed at the domestic rates of 7.2% per annum for the Industrial and Commercial Bank of China, and 6.7% per annum for the Bank of Gansu.

Source: Asian Development Bank estimates.

D. Detailed Cost Estimates by Outputs/Components

($ million)[a]

Item	Total Cost	Liuchuan Industrial Park infrastructure development		Technical and vocational education and training enhancement		Intelligent transport systems installation	
		Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category
A. Investment Cost[b]							
1. Civil works	115.02	115.02	100	0.00	0	0.00	0
2. Mechanical and equipment	26.15	20.94	74	2.30	8	5.21	18
3. Technical and vocational education and training	2.50	0.00	0	2.50	100	0.00	0
4. Land acquisition	14.18	14.18	100	0.00	0	0.00	0
5. Survey, design, and supervision	7.86	7.49	95	0.00	0	0.37	5
6. Consultants							
a. Project management	1.39	1.13	82	0.00	8	0.25	18
b. Environment management system	0.43	0.43	100	0.00	0	0.00	0
Subtotal (A)	**167.53**	**159.20**	**95**	**2.50**	**1**	**5.83**	**4**
B. Contingencies[c]							
1. Physical	16.75	15.91	95	0.25	2	0.59	4
2. Price	19.57	18.87	96	0.44	2	0.26	1
Subtotal (B)	**36.33**	**34.79**	**96**	**0.68**	**2**	**0.86**	**2**
C. Financing Charges During Implementation[d]							
1. Interest during construction	8.42	8.00	95	0.12	2	0.30	4
2. Commitment charges	0.38	0.36	95	0.01	2	0.01	4
Subtotal (C)	**8.80**	**8.36**	**95**	**0.13**	**2**	**0.31**	**4**
Total Project Cost (A+B+C)	**212.66**	**202.24**	**95**	**3.42**	**2**	**7.00**	**3**

Note: Numbers may not sum precisely because of rounding.

[a] Includes taxes and duties of $10.0 million to be financed from government and Asian Development Bank (ADB) loan resources.

[b] In March 2014 prices.

[c] Physical contingencies are computed at 10% for works and goods. Price contingencies are computed using domestic inflation rates: 2.7% for 2014, 3.0% for 2015 onwards; and foreign inflation rates: 2.3% for 2014, 1.0% for 2015, and 1.4% for 2016 onwards. Excluding contingencies for the land acquisition and resettlement cost which is already included in the base cost.

[d] Includes interest and commitment charges. Interest during construction for the ADB loan has been computed at the 5-year US dollar fixed swap rate plus a spread of 0.50% and a maturity premium of 0.10%. Commitment charges for an ADB loan are 0.15% per year to be charged on the undisbursed loan amount. Interest during construction for the domestic bank loan has been computed at the domestic rates of 7.2% per annum for the Industrial and Commercial Bank of China, and 6.7% per annum for the Bank of Gansu.

Source: Asian Development Bank estimates.

E. Detailed Cost Estimates by Year

($ million)[a]

Item	Total Cost	2014	2015	2016	2017	2018	2019	2020
A. Investment Cost[b]								
1. Civil works	115.02	1.61	5.35	17.44	22.46	27.49	32.32	8.34
2. Mechanical and equipment	26.15	0.00	2.08	6.23	4.67	5.70	3.20	4.27
3. Technical and vocational education and training	2.50	0.00	0.25	0.38	0.50	0.50	0.63	0.25
4. Land acquisition	14.18	0.00	7.09	4.25	2.84	0.00	0.00	0.00
5. Survey, design, and supervision	7.86	0.00	0.76	1.14	1.80	1.88	1.88	0.40
6. Consultants								
a. Project management	1.39	0.00	0.25	0.27	0.27	0.27	0.27	0.07
b. Environment management system	0.43	0.00	0.00	0.09	0.11	0.11	0.11	0.02
Subtotal (A)	**167.53**	**1.61**	**15.79**	**29.80**	**32.65**	**35.95**	**38.40**	**13.25**
B. Contingencies[c]								
1. Physical	16.75	0.16	1.58	2,98	3.26	3.59	3.84	1.33
2. Price	19.57	0.19	1.84	3.48	3.81	4.20	4.49	1.56
Subtotal (B)	**36.33**	**0.35**	**3.42**	**6.46**	**7.08**	**7.80**	**8.33**	**2.89**
C. Financing Charges During Implementation[d]								
1. Interest during construction	8.42	0.00	2.38	1.68	1.15	1.34	1.28	0.60
2. Commitment charges	0.38	0.00	0.15	0.13	0.07	0.02	0.01	0.00
Subtotal (C)	**8.80**	**0.00**	**2.53**	**1.81**	**1.22**	**1.36**	**1.28**	**0.60**
Total Project Cost (A+B+C)	**212.66**	**1.95**	**21.74**	**38.07**	**40.95**	**45.10**	**48.01**	**16.84**
% of Total Project Cost		**1**	**10**	**18**	**19**	**21**	**23**	**8**

Note: Numbers may not sum precisely because of rounding.

[a] Includes taxes and duties of $10.0 million to be financed from government and Asian Development Bank (ADB) loan resources.

[b] In March 2014 prices.

[c] Physical contingencies are computed at 10% for works and goods. Price contingencies are computed using domestic inflation rates: 2.7% for 2014, 3.0% for 2015 onwards; and foreign inflation rates: 2.3% for 2014, 1.0% for 2015, and 1.4% for 2016 onwards. Excluding contingencies for the land acquisition and resettlement cost which is already included in the base cost.

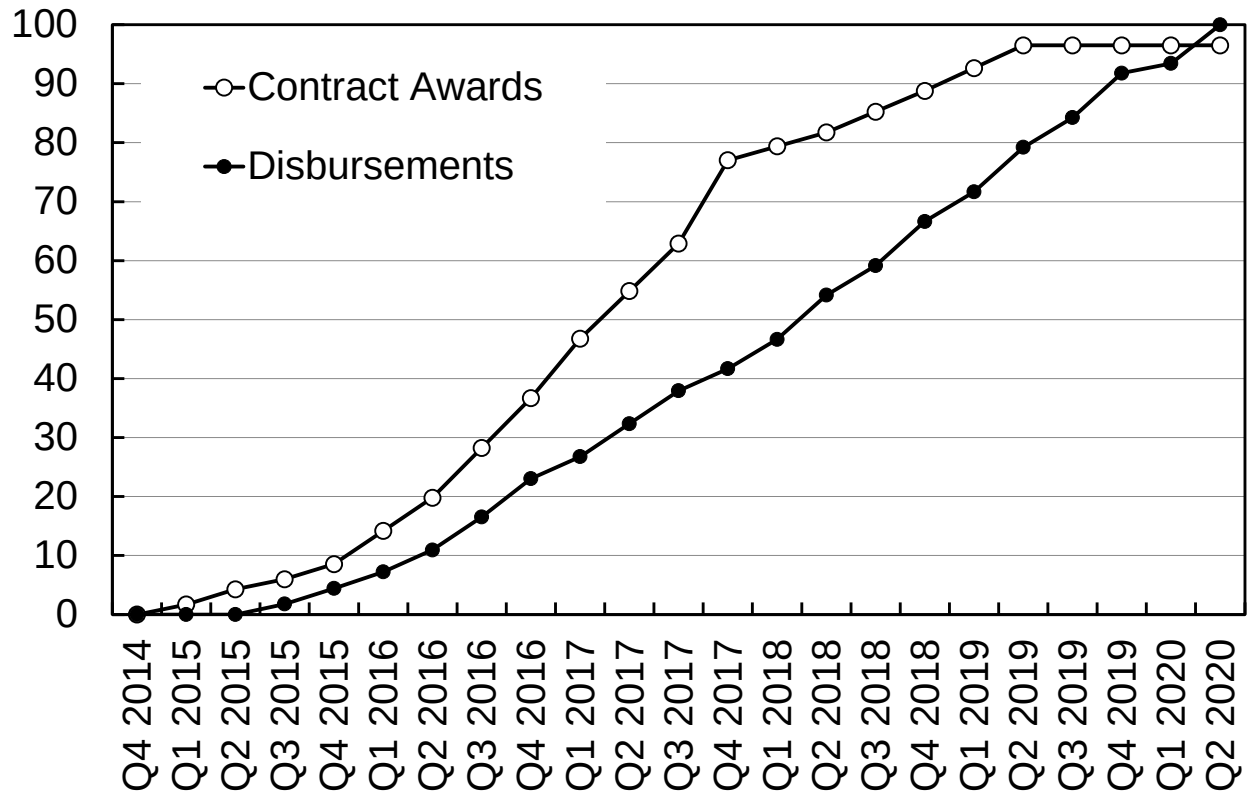
[d] Includes interest and commitment charges. Interest during construction for the ADB loan has been computed at the 5-year US dollar fixed swap rate plus a spread of 0.50% and a maturity premium of 0.10%. Commitment charges for an ADB loan are 0.15% per year to be charged on the undisbursed loan amount. Interest during construction for the domestic bank loan has been computed at the domestic rates of 7.2% per annum for the Industrial and Commercial Bank of China, and 6.7% per annum for the Bank of Gansu.

Source: Asian Development Bank estimates.

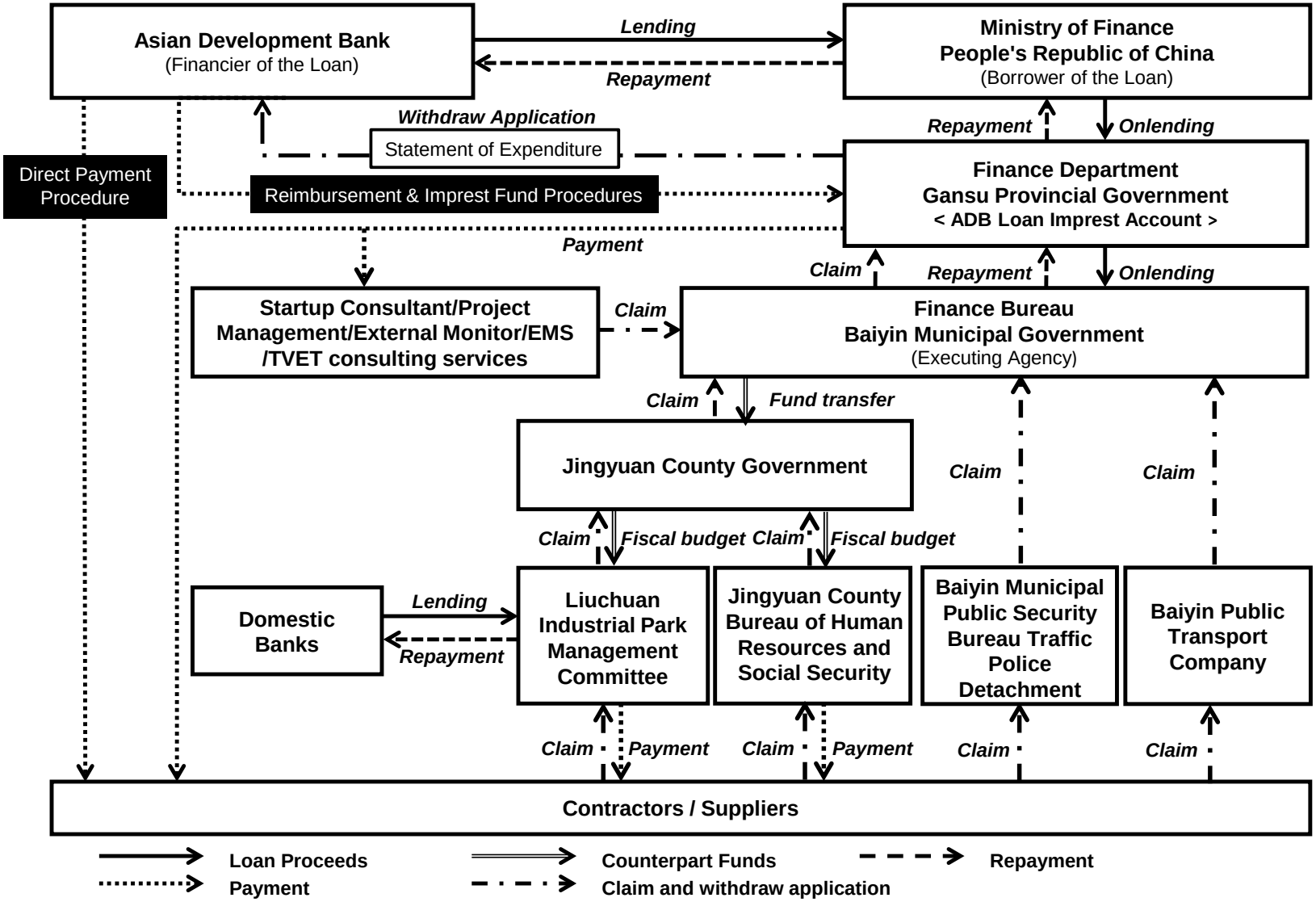
F. Contract and Disbursement S-Curve

($ million)

	2015	2016	2017	2018	2019	2020
Contract awards	8.5	28.1	40.3	11.8	7.7	0.0
Disbursement	4.4	18.6	18.6	25.0	25.2	8.2
Cumulative						
Contract awards	8.5	36.6	76.9	88.7	96.4	96.4
Disbursement	4.4	23.0	41.6	66.6	91.8	100.0



G. Fund Flow Diagram



V. FINANCIAL MANAGEMENT

A. Financial Management Assessment

1. The financial management assessment was carried out in accordance with ADB's Guidelines for the *Financial Management and Analysis of Projects*[1] to assess the financial management capacity of Baiyin Municipal Government (BMG), Jingyuan County Government (JCG) and the two implementing agencies–Baiyin Public Transportation Company (BPT), and Liuchuan Industrial Park Management Committee (LMC); including funds-flow arrangements, staffing, accounting policies and procedures, internal and external auditing arrangements, reporting and monitoring, and financial information systems. Baiyin Municipal Public Security Bureau Traffic Police Detachment (TPD) is part of BMG and is financially dependent to BMG. Jingyuan County Bureau of Human Resources and Social Security (JHRSS) is part of JCG and is financially dependent to JCG. The assessment concluded that with the exception of BMG; JCG, BPT, and LMC are inexperienced in managing projects funded by international financial institutes. The overall financial management risk-rating of the project is "moderate to low risk", although, the risk can be mitigated by adequate preparatory project training. The identified risks in financial management will be closely monitored during project implementation. The assessment indicated that (i) there are established accounting and financial management policies and procedures in the PRC, which are strictly followed by BMG, BPT, JCG, and LMC; and (ii) they have sound accounting and financial management capability and are experienced in managing large projects. Gansu Provincial Finance Department (GFD), which will operate and administer the imprest account, is experienced in administering ADB and other foreign-financed projects. The number of staff in the agencies are adequate for current day-to-day activities. However, for new project requirements, staff will need to be complemented and will need specific training to comply with ADB guidelines for project fiscal management and reporting.

2. Understanding of, and adherence to, ADB's financial management policies and procedures and strengthened internal audit system can be enhanced during project implementation. BMG and LMC are required to maintain a separate project account which is in line with the PRC's accounting standards and these are subject to independent external audit by qualified commercial or government auditors. It was agreed that the Baiyin Municipal project management office (Baiyin PMO), BPT, LMC and JCG will strengthen their financial management capability to manage the project, including (i) finalizing organizational arrangements; (ii) setting up clear institutional arrangements and strengthen coordination mechanism; (iii) completing staff recruitment to fill identified positions; (iv) undertaking more training, particularly on ADB policy and procedures; and (v) seeking external financial management assistance as needed.

B. Disbursement

3. The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2012, as amended from time to time), and detailed arrangements agreed upon between the Government and ADB.[2]

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

[2] Available at: http://www.adb.org/documents/loan-disbursement-handbook. Link to Chinese version: http://www.adb.org/documents/loan-disbursement-handbook-zh

4. Based on the information from BPT, JHRSS, LMC, and TPD; BMG as the executing agency will be responsible for all disbursement arrangements, including (i) preparing disbursement projections, (ii) requesting budgetary allocations for counterpart funds, (iii) collecting supporting documents, and (iv) preparing and sending withdrawal applications to ADB through GFD. At the end of each year, realistic projections of contract awards/commitments and disbursement for the next year will be made for an assessment and projection of ADB funds. The Baiyin PMO will be responsible for preparing disbursement projections each year.

5. Direct payment procedure will generally be used for large civil works, equipment contracts, and consulting service contracts. Reimbursement procedures will also be used as appropriate when the government initially funds ADB-eligible expenditures from its own resources. Statement-of-expenditure (SOE) procedures will be used.

6. To facilitate project implementation and funds flow, GFD on behalf of Gansu Provincial Government (GPG) will, upon loan effectiveness, establish the imprest account at a commercial bank acceptable to ADB. Expenditures not using the imprest account may use other disbursement procedures such as direct payment (to the supplier or contractor), commitment, and reimbursement.

7. Currency of the imprest account will be in US Dollar. The imprest account is to be used exclusively for ADB's share of eligible expenditures. GPG, through GFD who established the imprest account in its name, is accountable and responsible for proper use of advances to the imprest account.[3] The government may request for initial and additional advances to the imprest account based on six months estimated expenditures to be financed through the imprest account. The imprest account will be established, managed, and liquidated in accordance with ADB's *Loan Disbursement Handbook* and detailed arrangements agreed by the Government and ADB. ADB's *Loan Disbursement Handbook* describes which supporting documents should be submitted to ADB and which should be retained by the government for liquidation and replenishment of an imprest account.

8. To expedite funds flow and simplify the documentation process, the SOE procedure will be used for liquidation and replenishment of the imprest account and reimbursement of eligible expenditures.[4] Payments in excess of the statement of expenditures procedure ceiling will be reimbursed, liquidated, or replenished based on full supporting documentation process. SOE records should be maintained and made readily available for review by ADB's disbursement and review mission or upon ADB's request for submission of supporting documents on a sampling basis, and for independent audit. ADB may institute or re-institute an SOE ceiling, subject to due diligence on financial management performance, including disbursement, during the project implementation.

9. Before the submission of the first withdrawal application, BMG, through Baiyin PMO, should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the government, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is $100,000, under reimbursement and imprest fund procedures, unless otherwise approved by ADB. Individual payments below this amount should generally be paid from the imprest account, or by BMG (or BPT, JCG, and LMC) and subsequently claimed to ADB through reimbursement. ADB reserves the right not to accept withdrawal applications below the minimum amount.

[3] The bank charges in the operation of the imprest account may be financed from the loan proceeds.
[4] Checklists for SOE procedures and formats are available at Appendix 9B of the Loan Disbursement Handbook.

Withdrawal applications and supporting documents will demonstrate, among other things that the goods, and/or services were produced in or from ADB members, and are eligible for ADB financing.

10. For the domestic funds, BMG will allocate the designated funding for the project as specified in the project agreement. Counterpart funds from the government will be disbursed and liquidated by the implementing agencies to contractors and service providers. The disbursement process will follow this process: (i) according to the progress of the contract, the implementing agencies will submit disbursement request to Baiyin PMO; and (ii) once approved, counterpart funds will be disbursed from finance bureaus of BMG and through JCG if appropriate.

11. After the project secures all required domestic approvals, the final loan application can be submitted to the domestic bank. The bank will review and evaluate the loan application, and submit to the bank board for approval. Once the application is approved, the bank and the borrower will negotiate and sign the loan agreement. The loan will have a fixed-term period. The interest rate will be based on the standard loan interest rate determined by China People's Bank plus premium. The bank as well as the government auditing agencies will conduct auditing for the loan payments in accordance with the loan agreement and the PRC regulations.

C. Accounting

12. BMG will maintain, or cause to be maintained, separate books and records by funding source for all expenditures incurred on the project. Consolidated project financial statements will be prepared annually in accordance with the government's accounting laws and regulations, which are consistent with international accounting principles and practices.[5]

D. Auditing and Public Disclosure

13. BMG will cause the detailed consolidated project financial statements to be audited in accordance with International Standards on Auditing and the Government Auditing Standards of the PRC (where these are consistent with International Standards on Auditing), by an auditor acceptable to ADB. The audited project financial statement will be submitted in the English language to ADB within six months of the end of the financial year by the BMG.

14. The annual audit report for the project will include an audit management letter[6] and auditor's opinions which cover (i) whether the project financial statements present a true and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting framework; (ii) whether loan and grant proceeds were used only for the purposes of the project or not; (iii) the level of compliance for each financial covenant contained in the legal agreements for the project; (iv) use of the imprest fund procedure; and (v) use of the SOE procedure certifying to the eligibility of those expenditures claimed under SOE procedures, and

[5] Applicable laws, regulations and guidelines include:
The Accounting Law of the PRC (2000).
State-owned Construction Enterprise Accounting Control Regulations.
Capital Construction Financial Control Regulations.
Accounting Methods for Projects Financed by the World Bank.

[6] A management letter means formal communications from the auditor to the client management in accordance with the International Standard on Auditing 265 (communicating deficiencies in internal control to those charged with governance and management), which is not required to be provided separately as it is equivalent to the Audit Findings and Recommendations prepared by the project auditor and submitted to ADB.

proper use of the SOE and imprest procedures in accordance with ADB's Loan Disbursement Handbook and the project documents.

15. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal program supervision, and followed up regularly with all concerned, including the external auditor.

16. The Government, GPG, and BMG have been made aware of ADB's policy on delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements. ADB reserves the right to require a change in the auditor (in a manner consistent with the constitution of the borrower), or for additional support to be provided to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

17. Public disclosure of the project financial statements, including the audit report on the project financial statements, will be guided by ADB's Public Communications Policy (2011).[7] After review, ADB will disclose the financial statements for the project and the opinion of the auditors on the financial statements within 30 days of the date of their receipt by posting them on ADB's website. The Audit Management Letter will not be disclosed.

[7] Available from http://www.adb.org/documents/pcp-2011. Link to Chinese version: http://www.adb.org/documents/pcp-2011-zh

VI. PROCUREMENT AND CONSULTING SERVICES

A. Advance Contracting and Retroactive Financing

1. All advance contracting and retroactive financing will be undertaken in conformity with the Procurement Guidelines (2013, as amended from time to time)[1] and Guidelines on the Use of Consultants (2013, as amended from time to time) [2] of the Asian Development Bank (ADB). Advance contracting was approved on 27 May 2014 and approval of retroactive financing will be requested in ADB's management review meeting in July 2014. The issuance of invitations to bid under advance contracting and retroactive financing will be subject to ADB approval. It was explained to the borrower; Baiyin Municipal Government (BMG), the executing agency; and Baiyin Public Transportation Company (BPT), Jingyuan County Bureau of Human Resources and Social Security (JHRSS), Liuchuan Industrial Park Management Committee (LMC), and Baiyin Municipal Public Security Traffic Police Detachment (TPD); that (i) advance contracting includes the advertisement, bidding documents, evaluation of bids and up to the recommendation of contracts award; and, that all steps will require ADB's no objection; (ii) approval of advance contracting and retroactive financing does not commit ADB to finance the project; and (iii) where advance contracting is approved, ADB's approval must be sought for the draft bidding documents before they are issued.

2. To expedite project implementation, the Government requested ADB to approve advance contracting, which includes the recruitment of consultants and procurement of civil works; and the request for retroactive financing of eligible expenditures for consulting services, civil works, and equipment procurement.

3. **Advance contracting**. Advance contracting will include (i) tendering, bid evaluation and award of contracts for civil works and equipment contract packages up to the recommendation of contract award; and (ii) recruitment of consultants. The issuance of invitations to bid and bidding documents under advance procurement action will be subject to ADB approval.

4. **Retroactive financing**. The Government was informed that as a general rule, retroactive financing is permitted only if (i) it is specifically agreed by ADB and the Borrower; (ii) the goods, works, services, and consultants for which it is requested are procured in accordance with ADB's Procurement Guidelines (2013, as amended from time to time) and ADB's Guidelines on the Use of Consultants (2013, as amended from time to time); (iii) the amount to be retroactively financed does not exceed 20% of the loan amount; and (iv) the expenditures must have been incurred before effectiveness of the relevant loan but, generally, no earlier than 12 months before signing of the Loan Agreement. In either instance, detailed assessments (due diligence) on each retroactive financing proposal must demonstrate that (a) the expenditures incurred are genuine, reasonable, and material to getting the project off the ground; and (b) they were incurred for proper reasons, in a transparent manner over a reasonable period of time. The retroactive financing will include one civil works, two equipment and two consulting service packages (Table 10).

[1] Available at: http://www.adb.org/Documents/Guidelines/Procurement/Guidelines-Procurement.pdf
[2] Available at: http://www.adb.org/Documents/Guidelines/Consulting/Guidelines-Consultants.pdf

B. Procurement of Goods, Works and Consulting Services

5. All procurement of goods and works will be undertaken in accordance with ADB's Procurement Guidelines (2013, as amended from time to time). International competitive bidding (ICB) will be used for civil works contracts estimated to cost $10 million and above. National competitive bidding (NCB) will be used for civil works contracts estimated to cost over $100,000 equivalent up to below $10 million. For goods and equipment, ICB will be used for values exceeding $1 million, while NCB will be used for goods and equipment from over $100,000 to below $1 million equivalent. For NCB, the first draft English language of the procurement documents (bidding documents, and draft contract) should be submitted for ADB approval regardless of the estimated contract amount. Subsequent procurements are subject to post review. All ICB contracts are subject to prior review. Prior review and approval of ADB of the procurement documents (prequalification, bidding, contract) is required.

6. A procurement plan indicating threshold and review procedures, goods, works, and consulting service contract packages and national competitive bidding guidelines is in **Section C**.

7. All consultants financed by ADB will be recruited according to ADB's Guidelines on the Use of Consultants (2013, as amended from time to time).[3] The terms of reference for project implementation consulting service and start-up consulting service are detailed in **Section D**. An estimated 151 person-months (14 international and 137 national) of consulting services are required to (i) facilitate project management and implementation, (ii) provide capacity building and institutional strengthening, (iii) conduct external monitoring, (iv) provide support for implementation of technical and vocational education and training (TVET) component, and (v) design and install environmental management system.

C. Procurement Plan

Table 1: Basic Data

Project Name: Gansu Baiyin Integrated Urban Development Project	
Project Number: 46062	**Approval Number:** xxxx
Country: People's Republic of China	**Executing Agency:** Baiyin Municipal Government
Project Financing Amount: $212.66 million ADB Financing: $100.00 million Non-ADB Financing: $112.66 million	**Implementing Agencies:** Baiyin Public Transportation Company, Jingyuan County Bureau of Human Resources and Social Security, Liuchuan Industrial Park Management Committee, and Baiyin Municipal Public Security Bureau Traffic Police Detachment
Date of First Procurement Plan: (loan approval date)	**Date of this Procurement Plan:** 15 October 2014

1. Methods, Thresholds, Review and 18-Month Procurement Plan

a. Procurement and Consulting Methods and Thresholds

8. Except as ADB may otherwise agree, the following process thresholds shall apply to procurement of goods and works.

[3] Checklists for actions required to contract consultants by method available in e-Handbook on Project Implementation at: http://www.adb.org/documents/handbooks/project-implementation/

Table 2: Procurement of Goods and Works

Method	Threshold
ICB for works	$10,000,000 or more
ICB for goods	$1,000,000 or more
NCB for works	Beneath that stated for ICB, Works
NCB for goods	Beneath that stated for ICB, Goods
Shopping for works	Below $100,000
Shopping for goods	Below $100,000

ICB = international competitive bidding, NCB = national competitive bidding.

Table 3: Consulting Services

Method	Comments
QCBS	Quality- and cost-based selection (80:20)
CQS	
ICS	

CQS = consultants' qualifications selection, ICS = individual consultant selection, QCBS = quality- and cost-based selection.

b. Goods and Works Contracts Estimated to Cost $1 Million or More

9. The following tables list goods and works contracts for which procurement activity is either ongoing or expected to commence within the next 18 months.

Table 4: Goods and Works Contracts Estimated to Cost $1 Million or More

Package Number	General Description	Estimated Value[a] ($ million)	Procurement method	Review (Prior/ Post)	Bidding Procedure	Advertisement Date (quarter/year)	Comments
WORKS							
Wastewater							
WW-C01	Construction site preparation work	5.16	NCB	Prior	1S1E	Q1/2015	
WW-C02	Main WWTP facility construction work	7.97	NCB	Post	1S1E	Q2/2015	
WW-C03	WWTP connection and surrounding site completion work	4.40	NCB	Post	1S1E	Q2/2016	
WW-C04	Wastewater pipeline network no. 1	3.48	Non-bank financing		1S1E	Q4/2014	
WW-C05	Wastewater pipeline network no. 2	4.55	Non-bank financing		1S1E	Q4/2014	
Water supply							
WS-C01	Water intake facility construction	3.60	NCB	Post	1S1E	Q3/2015	
WS-C02	Primary WTP facility construction	9.70	NCB	Post	1S1E	Q4/2015	
WS-C03	Primary WTP connection and surrounding site completion work	2.81	NCB	Post	1S1E	Q4/2016	
WS-C04	Water transmission line tunnel section	1.65	NCB	Post	1S1E	Q4/2015	
WS-C05	Water transmission line construction	19.16	ICB	Prior	1S1E	Q4/2015	
WS-C06	Secondary WTP construction	10.49	ICB	Prior	1S1E	Q1/2016	
WS-C07	Secondary WTP connection and surrounding site completion work	3.65	NCB	Post	1S1E	Q3/2016	
WS-C08	Water supply network construction	6.28	NCB	Post	1S1E	Q1/2016	
Road							
RD-C01	Bridge and road construction work no. 1	18.41	ICB	Prior	1S1E	Q3/2015	
RD-C02	Road construction work no. 2	13.70	ICB	Prior	1S1E	Q1/2017	
GOODS							
Wastewater							
WW-E01	WWTP treatment process	10.28	ICB	Prior	1S1E	Q3/2015	

Package Number	General Description	Estimated Value[a] ($ million)	Procurement method	Review (Prior/ Post)	Bidding Procedure	Advertisement Date (quarter/year)	Comments
	equipment						
Water							
WS-E01	WTP treatment process equipment	10.67	ICB	Prior	1S1E	Q1/2018	
Intelligent transport system							
IT-E01[b]	Traffic management system installment	3.91	ICB	Prior	1S1E	Q1/2015	
IT-E02[b]	Public transportation system installment	1.29	ICB	Prior	1S1E	Q1/2015	

ICB = international competitive bidding, NCB = national competitive bidding, Q = quarter, WTP = water treatment plant, WWTP = wastewater treatment plant.

[a] All contract values include physical contingencies.

[b] Timing of intelligent transport system installation can be earlier than road packages (RD-C01 and C02) due to different location.

Source: Asian Development Bank.

c. Consulting Services Contracts Estimated to Cost $100,000 or More

10. The following table lists consulting services contracts for which the recruitment activity is either ongoing or expected to commence within the next 18 months.

Table 5: Consulting Services Contracts Estimated to Cost $100,000 or More

Package Number	General Description	Estimated Value[a] ($ million)	Recruitment Method	Review (Prior/ Post)	Advertisement Date (quarter/year)	Type of Proposal	Comments
CS02	Project management consulting service	1.34	QCBS	Prior	Q3/2014	FTP	International (80:20)
CS03	External resettlement and social monitor	0.25	Non-bank financing		Q3/2014		
CS04	TVET consulting service	0.20	CQS	Prior	Q4/2014	BTP	International
CS05	EMS consulting service	0.43	CQS	Prior	Q4/2014	BTP	International

BTP = biodata technical proposal, CQS = consultants' qualifications selection, EMS = environment management system, FTP = full technical proposal, Q = quarter, QCBS = quality- and cost-based selection, TVET = technical and vocational education and training.

[a] All contract values include physical contingencies.

Source: Asian Development Bank estimates.

d. Goods and Works Contracts Estimated to Cost Less than $1 Million and Consulting Services Contracts Less than $100,000 (Smaller Value Contracts)

11. The following table groups smaller-value goods, works and consulting services contracts for which the activity is either ongoing or expected to commence within the next 18 months.

Table 6: Summary Procurement of Small Goods and Works[a]

Package Number	General Description	Estimated Value[b] ($ million)	Number of Contracts	Procurement Method	Review (Prior/ Post)	Bidding Procedure	Advertisement Date (quarter/year)	Comments
CS01	Startup consulting service	0.04	1	ICS	Prior		Q2/2014	
TV-C01	Training center upgrading work	0.04	1	Shopping	Post		Q3/2016	
TV-E01	Training and testing equipment no. 1	0.40	1	NCB	Post		Q3/2016	
TV-E02	Training and testing equipment no. 2	0.13	1	NCB	Post		Q3/2016	
TV-E03	Training and testing equipment no. 3	0.68	7	Shopping	Post		Q3/2016	

Package Number	General Description	Estimated Value[b] ($ million)	Number of Contracts	Procurement Method	Review (Prior/ Post)	Bidding Procedure	Advertisement Date (quarter/year)	Comments
TV-E04	HRSS database system	0.09	1	Shopping	Post		Q1/2016	
TV-E05	Text books and training materials No. 1	0.09	9	Shopping	Post		Q1/2016	
TV-E06	Labor market software	0.06	1	Shopping	Post		Q1/2016	
TV-E07	Text books and training materials no. 2	0.04	3	Shopping	Post		Q3/2015	

HRSS = human resources and social security, ICS = individual consultant selection, NCB = national competitive bidding, Q = quarter.
[a] The total amount of $0.73 million under the technical and vocational education and training was withdrawn by the Baiyin PMO for training and capacity building activities under the project.
[b] All contract values include physical contingencies.
Source: Asian Development Bank estimates.

2. Indicative List of Packages Required Under the Project

12. The following table provides an indicative list of goods, works and consulting services contracts over the life of the project, other than those mentioned in previous sections (i.e., those expected beyond the current period).

Table 7: Summary Indicative List of All Contracts–Goods and Works

General Description	Estimated Cumulative Value[a] ($ million)	Estimated Number of Contracts	Procurement Method	Domestic Preference Applicable	Comments
Works	61.77	4	ICB	No	
	45.22	9	NCB		
	0.04	1	Shopping		
	8.03	2	Non-bank financing		
Goods	26.15	4	ICB	No	
	0.52	2	NCB		
	0.95	21	Shopping		

ICB = international competitive bidding, NCB = national competitive bidding.
[a] All contract values include physical contingencies.
Source: Asian Development Bank estimates.

Table 8: Summary Indicative List of of All Contracts–Consulting Services

General Description	Estimated Cumulative Value[a] ($ million)	Estimated Number of Contracts	Recruitment Method	Type of Proposal	Comments
Consulting services	1.34	1	QCBS	FTP	
	0.63	2	CQS	BTP	
	0.04	1	ICS		
	0.25	1	Non-bank financing		

BTP = biodata technical proposal, CQS = consultants' qualifications selection, FTP = full technical proposal, ICS = individual consultant selection, QCBS = quality- and cost-based selection.
[a] All contract values include physical contingencies.
Source: Asian Development Bank estimates.

3. List of Awarded and Ongoing, and Completed Contracts

13. The following tables list the awarded, ongoing, and completed contracts: awarded and ongoing contracts–none; completed contracts–none.

4. Non-ADB Financing

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

Table 9: Non-ADB Financing Packages–Goods, Works, and Consulting Services

Package Number	General Description	Estimated Value[a] ($ million)	Number of Contracts	Procurement /Recruitment Method	Comments
WW-C04	Wastewater pipeline network no. 1	3.48	1	Non-bank financing	
WW-C05	Wastewater pipeline network no. 2	4.55	1	Non-bank financing	
CS03	External resettlement and social monitor	0.25	1	Non-bank financing	

[a] All contract values include physical contingencies.
Source: Asian Development Bank estimates.

5. Advance Contracting

15. The loan processing is scheduled to be completed in December 2014/January 2015 prior to the inception mission of the project.

Table 10: Advance Contracting and Retroactive Financing Plan

Package Number	General Description	Value of Contracts[a] ($ million)	Number of Contracts	Recruitment Method	Advertisement Date (quarter/year)
WW-C01	Construction site preparation work	5.16	1	NCB	Q1/2015
WW-C04[b]	Wastewater pipeline network no. 1	3.48	1	Non-bank financing	Q4/2014
WW-C05[b]	Wastewater pipeline network no. 2	4.55	1	Non-bank financing	Q4/2014
IT-E01	Traffic management system installment	3.91	1	ICB	Q1/2015
IT-E02	Public transportation system installment	1.29	1	ICB	Q1/2015
CS01	Startup consulting service	0.04	1	ICS	Q2/2014
CS02	Project management consulting service	1.34	1	QCBS (80:20)	Q3/2014
CS03[b]	External resettlement and social monitor	0.25	1	Non-bank Financing	Q3/2014

CQS = consultants' qualifications selection, ICS = individual consultant selection, ICB = international competitive bidding, NCB = national competitive bidding, Q = Quarter, QCBS = quality- and cost-based selection.
[a] All contract values include physical contingencies.
[b] Advance contracting only.
Source: Asian Development Bank estimates.

6. National Competitive Bidding

16. The Borrower's *Law of Tendering and Bidding of the People's Republic of China* promulgated by Order No. 21 of the President of the People's Republic of China on 30 August 1999, are subject to the following clarifications required for compliance with the Guidelines:

(i) All invitations to prequalify or to bid shall be advertised in the national press, or official gazette, or a free and open access website in the Borrower's country. Such advertisement shall be made in sufficient time for prospective bidders to obtain prequalification or bidding documents and prepare and submit their responses. In any event, a minimum preparation period of thirty (30) days shall be given. The preparation period shall count (a) from the date of advertisement,

or (b) when the documents are available for issue, whichever date is later. The advertisement and the prequalification and bidding documents shall specify the deadline for such submission.

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

(iii) If bidding is preceded by a prequalification process, all bidders that meet the qualification criteria set out in the prequalification document shall be allowed to bid and there shall be no limit on the number of prequalified bidders.

(iv) All bidders shall be required to provide a performance security in an amount sufficient to protect the Borrower/Project Executing Agency in case of breach of contract by the contractor, and the bidding documents shall specify the required form and amount of such performance security.

(v) Bidders shall be allowed to submit bids by mail or by hand.

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

(vii) All bid evaluation criteria shall be disclosed in the bidding documents and quantified in monetary terms or expressed in the form of pass/fail requirements.

(viii) No bid may be rejected solely on the basis that the bid price falls outside any standard contract estimate, or margin or bracket of average bids established by the Borrower/Project Executing Agency.

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

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

(xi) Government owned enterprises in the Borrower’s country may be permitted to bid if they can establish that they (a) are legally and financially autonomous, (b) operate under commercial law, and (c) are not a dependent agency of the Borrower/Project Executing Agency.

(xii) Rebidding shall not be allowed solely because the number of bids is less than three (3).

D. Consultant's Inputs and Terms of Reference

1. Introduction

17. The project will have five consulting services packages, four of which will be financed by ADB, to support BMG as executing agency, and four implementing agencies in project implementation and capacity development. An individual startup consultant (CS01) and a project management consulting service (CS02) will be recruited for project management and capacity development. An external resettlement and social monitor (CS03) will ensure compliance of external monitoring under the ADB Safeguards Policy Statements (2009). Two teams of technical and vocational education and training (TVET) (CS04) and environment management system (EMS) (CS05) will support Baiyin Municipal project management office (Baiyin PMO) and respective implementing agencies to ensure quality outputs under the project. All consultant recruitments except CS03 will be engaged in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). Baiyin PMO on behalf of BMG will engage consultants through quality- and cost-based selection (QCBS) for the project management consulting service, individual consultant selection (ICS) for the startup consulting service, and consultants' qualifications selection (CQS) for the TVET and EMS components teams.

(i) **Project management and capacity development**. Both the startup consultant and the project management and capacity development consulting service will provide project management assistance to BMG and four implementing agencies to comply with ADB procedural requirements including (a) project performance management system (PPMS), (b) procurement of contracts, (c) disbursement and contract management, (d) construction planning, supervision and monitoring, (e) reporting requirements, (f) safeguard management and monitoring, and (g) corporate planning and financial management. The consultants will also provide capacity development support to BMG and four implementing agencies with (a) ADB's procedural requirements of procurement, disbursement, safeguards and financial management; (b) operation and maintenance (O&M) of project components; (c) capacity development policy studies; and (d) training, organization of study visits, and workshops.

(ii) **External monitor**. An individual consultant will be engaged to provide external monitoring and verification of the project's involuntary resettlement safeguard and social monitoring due diligence activities. The external monitor will provide advice to BMG and four implementing agencies to comply with ADB's procedural requirements by (a) conducting regular and spot monitoring on project's safeguards due diligence related activities; (b) assessing the progress of resettlement and land acquisition, impacts on ethnic minority population, if any, and identifying potential risks and measures to further minimize and mitigate the issues, if necessary; (c) monitoring and reporting the implementation of project activities and designed indicators for social aspects including gender targets; and (d) providing advice to BMG and four implementing agencies on corrective actions; and (e) compiling and submitting required semiannual reports and annual evaluation reports to ADB and BMG.

(iii) **TVET subcomponent support**. A consulting firm will support the implementation of the TVET component which will address skills needs of new and emerging industries in the Liuchuan Industrial Park (LIP) and training needs of local farmers, laid-off workers, and surplus labor groups to enhance local employment opportunities.

(iv) **EMS subcomponent support**. A consulting firm with expertise in EMS development and implementation for industrial parks will support the implementation of the EMS component, which aims to ensure safe, environment–friendly and sustainable operation of the LIP. The primary and short-term objectives of the EMS subcomponent are to enhance environmental management and emergency preparedness and response capacity of the Liuchuan Industrial Park Management Committee (LMC), and to minimize the risk of environmental pollution incidents. The midterm objective (2018) of the subcomponent is to be certified under ISO 14001.

2. Consulting Services for Project Management and Capacity Development

18. Project management and capacity development consulting service of estimated 8 person-months of international and 82 person-months of national consultants will be engaged by QCBS method, with a standard quality:cost ratio of 80:20 and full technical proposal procedure. The outline terms of reference is in the following paragraphs. The project management and capacity building consultant team will assist BMG and four implementing agencies to:

a. Project management and technical audit

(i) set up (a) institutional framework, (b) operational procedure, (c) document filing system, and (d) work plan to guide and facilitate project implementation;
(ii) set up project performance management system (PPMS) in accordance with ADB's policy requirements, including establishing baseline and operation mechanism for data collection, analysis, and reporting;
(iii) upgrade and improve the project management information system (MIS) to: (a) ensure efficient and effective information sharing and coordination on project management (e.g., procurement, disbursement, construction, safeguard compliance); and (b) monitor the project's design and monitoring framework through the use of the PPMS;
(iv) conduct design; technical, environmental, and social review and audit; and provide expert comments on engineering detailed design in accordance with required design codes and standards;
(v) conduct routine site visits and provide technical inputs to construction planning, supervision, and monitoring for quality control of the subproject construction;
(vi) provide expert inputs, review and provide justification for contract variations, and prepare necessary documents (e.g., a due diligence report) in accordance with government and ADB requirements;
(vii) review procurement documents including technical specifications, bill of quantity, bidding documents, bid evaluation procedures, and contract negotiations;
(viii) conduct contract management during project implementation, to include monitoring of construction progress, preparing quarterly and annual progress reports, reviewing and certifying contractors' claims for payments, coordinating project implementation among contractors and various stakeholders, and coordinating daily operational tasks;

b. Financial management

(i) establish an efficient and effective financial management system for the project implementation (e.g., fund disbursement management, withdrawal application review, use of loan proceeds and counterpart funds) in accordance with ADB

policy and procedural requirements;

(ii) assist BMG and four implementing agencies in preparing financial statements and consolidated financial statements according to relevant project financial covenants, and make necessary arrangement with auditing units to supervise the financial management of BMG and four implementing agencies;

c. Support for compliance with ADB safeguard policies and PRC safeguard requirements

(i) review and update the environmental management plan (EMP), gender action plan (GAP), resettlement plan, and social action plan (SDAP);

(ii) assist Baiyin project management office (PMO) to establish management supervision mechanisms for implementation, monitoring and reporting of the project safeguards issues based on the relevant ADB documentation (e.g., EMP, GAP, resettlement plan, and SDAP) and provide support for their implementation;

(iii) assist Baiyin PMO and four implementing agencies to ensure implementation of GAP and SDAP requirements by conducting necessary workshops and focus group discussions;

(iv) conduct compliance monitoring of social and safeguards issues, assist Baiyin PMO and four implementing agencies to formulate corrective actions where necessary, and help Baiyin PMO to prepare safeguards and social development section in the quarterly progress report and relevant semiannual (resettlement) and annual (environment) safeguards monitoring reports;

(v) assist in establishing and managing a project-level grievance redress mechanism (GRM), including assistance to the Baiyin PMO to establish a project public complaint unit, and to provide training for project public complaint members and grievance redress mechanism access points;

(vi) assist Baiyin PMO, four implementing agencies, and other relevant agencies to develop reporting formats and establish mechanisms to prepare and submit the environment safeguards related reports specified in the loan and project agreements;

d. Institutional strengthening and reporting

(i) collect all necessary information, edit, draft, and submit on time the reports required under loan and project agreements with quality acceptable to BMG and ADB;

(ii) organize and provide training on the skills necessary for construction supervision, project management, implementation of GAP, SDAP, and EMP and resettlement plans for ADB requirements;

(iii) discuss with BMG and four implementing agencies to finalize a training plan, and organize appropriate training according to the plan;

(iv) provide training on prevention and control of transmissible diseases and HIV/AIDS, and community disturbance to contractors;

(v) organize and provide capacity building for Baiyin PMO and four implementation agencies with respect to gender and development;

e. Capacity building support

(i) create and refine a plan for public awareness campaigns identified under the EMP, GAP, SDAP, and conduct them by making necessary coordination with

BMG and four implementing agencies and relevant local stakeholders;

(ii) conduct critical assessment on the capacity of project facility O&M entities and provide expert opinions and recommendations to strengthen its institutional settings to ensure the capacity of O&M entities will be further improved before project completion;

(iii) plan, coordinate, and organize study tours on: (a) good practices in industrial park management (e.g., financial, resource efficiency, environmental management), (b) good practices in human resource development through technical and vocational education and training, (c) innovative O&M planning and practice of roads/water supply/wastewater facilities, (d) good practices in road safety awareness and public transportation, and (e) other relevant aspects related to the project (e.g., public financial management);

(iv) plan, coordinate, and organize a training and prepare required documents for ADB's approval;

f. BMG and ADB project administration support

(i) prepare basic project information including updated project scope, implementing schedule, contract management, procurement plan, social and safeguards compliance, and PPMS monitoring for ADB's loan administration missions;

(ii) support BMG in processing minor and major changes in project scope, including conducting detailed technical and safeguards audits and preparing necessary documents (e.g., due diligence reports);

(iii) conduct a detailed project review by updating project financial status, project cost tables, financing plan, financial and economic analysis, and prepare for safeguard reviews for ADB's loan midterm review; and

(iv) collect and consolidate all necessary project information, prepare for project completion report, and ADB's project completion mission.

3. Initial Startup Consulting Service for Project Management and Procurement

19. An initial project management consultant will be engaged as a national individual consultant through ICS method. A consultant with a total input of 6 person-months will assist BMG and four implementing agencies in initial project implementation before the engagement of project implementation consulting service. The consultant will

(i) establish initial project management system including internal procedures of routine data filling and information exchange among Baiyin PMO and implementing agencies for procurement, disbursement, and required reporting on project progress;

(ii) assist Baiyin PMO and four implementing agencies to (a) review detailed engineering design, bill of quantities, commercial, technical and legal parts of bidding documents; (b) finalize the bidding documents submitted for ADB's review, and (c) support the tendering process;

(iii) assist in engagement of project management and capacity development consulting service through QCBS method in accordance with ADB guidelines and procedures;

(iv) assist in engagement of technical and vocational education and training consulting service and environment management system consulting service through CQS method in accordance with ADB guidelines and procedures;

(v) collect necessary information for reporting requirement of ADB including, quarterly progress report and project administration manual update for ADB loan

administration missions;
(vi) provide training on project management and procurement; and
(vii) ensure smooth project management and implementation, and assist the Baiyin PMO to (a) closely coordinate with the engaged project management consulting service company, and (b) prepare handover notes for the project management consulting service company and the Baiyin PMO.

4. Consulting Service for External Resettlement and Social Monitor

20. An external resettlement and social monitor will be an individual consultant engaged for the whole duration of project implementation on intermittent basis. The consultant with a total input of 10 person-months and engaged by domestic fund will assist BMG and four implementing agencies to examine and verify the project's social and resettlement safeguards performance. The external resettlement and social monitor will:

(i) update the draft resettlement plan based on detailed measurement survey as a result of the detailed engineering design;
(ii) collect additional information and/or conduct additional consultation, if necessary, to ensure that the revised resettlement plan will be in full compliance with ADB's safeguard policy;
(iii) conduct a baseline survey (sex disaggregated, wherever possible) of affected persons and collect baseline information for the various gender indicators and monitoring to ensure implementation of GAP, resettlement plan, and SDAP are in compliance with ADB's safeguard and other relevant policies;
(iv) provide recommendations to resolve any issues or problems on implementation of plans (as specified above), and provide advice to Baiyin PMO and implementing agencies;
(v) check whether Baiyin PMO and four implementing agencies are paying special attention to vulnerable groups, including women, the poor, and ethnic minority groups (if any) to assess whether they have participated and fully regained their standard of living; and
(vi) submit English and Chinese external resettlement and social monitoring reports to BMG and ADB with quality acceptable to ADB every six months during and until completion of resettlement process and activities under the GAP and SDAP.

5. TVET Component Consulting Service

21. A firm with the total inputs of 3 person-months of international and 21 person-months of national consulting services will be required to ensure the effective implementation of the TVET component. The firm should have knowledge and experience of developing appropriate curriculum (e.g., course for women), capacity building training activities and labor market database. The consulting firm will be engaged by CQS method. The consulting firm will be responsible for planning, organization, and management of activities to be supported under the TVET component. The TVET consultant team is expected to and has expertise in (i) competency-based curriculum and training materials development; (ii) teacher, instructor and skills assessor training; (iii) management capacity building; (iv) capacity enhancement of Bureau of Human Resources and Social Security (BHRSS) in labor market information and public employment services; and institutional strengthening of Baiyin Municipal and Jingyuan County BHRSS. The TVET consultant team will ensure the following outputs/activities are implemented under the project.

a. Development of competency-based curriculum for a long–term course in Jingyuan County Secondary Vocational School (Output A)

22. Through development of competency-based curriculum, the output aims to strengthen capacities of TVET institutions and increase quality and relevance of TVET provision at secondary level. A new major in logistics will be developed and implemented at Jingyuan County Secondary Vocational School in order to meet skills needs of new and emerging industries in the LIP. The output comprise the following activities:

(i) review of occupational skills standards for logistics and development of competency-based curriculum development and teaching-learning materials in collaboration with logistics enterprises in the LIP;
(ii) training of existing and newly recruited teachers in competency-based teaching and learning methodologies, assessment techniques, and occupational skills for logistics;
(iii) training of occupational skills assessors in logistics;
(iv) provision of practical training skills testing equipment and rehabilitation/refurbishment of the existing training facilities; and
(v) capacity building of school management and administration for institutional quality improvement

Table 11: Tentative Workshop/Training Plan for Output A

Workshop/Training program	Participants
Three, 3-day workshops for development and validation of occupational profile charts and occupational standards documents	DACUM expert team, including representatives from: • LIP enterprises • Master workers • Senior teachers (Estimated number of participants: 40 persons/workshop)
Three, 3-day workshops for development and validation of CBT modules	• LIP enterprises • Master workers • Teachers (Estimated number of participants: 40 persons/workshop)
Two, 5-day training for existing teachers	• Existing teachers • LIP enterprises (Estimated number of participants: 15 persons/training)
Two, 3-day training for newly recruited teachers	• New teachers • LIP enterprises (Estimated number of participants: 15 persons/training)
Three, 2-day training courses for course assessors	• State examination assessors (Estimated number of participants: 15 persons/training)
Four, 3-day training courses for TVET institution management	• Senior TVET institutions managers (Estimated number of participants: 10 persons/training)
Four, 5-day training courses for administrative staff training	• TVET institution administrators (Estimated number of participants: 15 persons/training)
Two, 1-day workshops for institutional quality assurance	• TVET institution staff (managers, teachers, administrative) (Estimated number of participants: 50 persons/workshop)

CBT = competency-based curriculum-based training, DACUM = development a curriculum, LIP = Liuchuan Industrial Park, TVET = technical and vocational education and training.
Source: Asian Development Bank.

b. Enhancement of short-term skills training courses (Output B)

23. Short-term skills training courses targeted at local farmers, laid-off workers, and surplus labors will be strengthened by improving the quality of the existing courses and developing new courses to meet the skill set needs of new and emerging industries in the LIP and enhance employment opportunities for women. The output includes the following specific activities:

(i) revision of training plans for the existing short-term skills training courses (welding and electronics) being offered by Jingyuan County Secondary Vocational School, coupled with training of instructors, and provision of practical training equipment;
(ii) instructor training, skills assessor training, management capacity building, and institutional quality assurance for private short-term skills training providers; and
(iii) development of new short-term skills training courses, particularly for women, to be offered by Jingyuan County Secondary Vocational School and Public Employment Training Center through development of competency-based training modules, instructor and skills assessor training, and provision of practical training and skills testing equipment.

Table 12: Tentative Workshop/Training Plan for Output B

Workshop/Training program	Participants
Three, 3-day workshops for development and validation of new CBT module	• LIP enterprises • Master workers • Instructors (Estimated number of participants: 40 persons/workshop)
Three, 3-day training courses for instructor training–new short courses	• Instructors • LIP enterprises (Estimated number of participants: 15 persons/training)
Three, 2-day training courses for instructor training–existing short courses	• Instructors • LIP enterprises (Estimated number of participants: 10 persons/training)
Two, 3-day training courses for assessors in new short courses	• State examination assessors (Estimated number of participants: 15 persons/training)
Three, 2-day training courses for assessors in existing short courses	• State examination assessors (Estimated number of participants: 5 persons/training)
Three, 2-day courses management training for private training providers	• Senior TVET institutions managers (Estimated number of participants: 10 persons/training)
Four, 1-day workshops for quality assurance	• Training provider staff (managers, teachers, administrative) (Estimated number of participants: 40 persons/workshop)
Ten, 7–21 days training of trainees for various skill training (Average of 15 days per training)	• Agricultural workers, surplus labor, laid off workers (Estimated number of participants: 50 persons/training)

CBT = competency-based curriculum-based training, LIP = Liuchuan Industrial Park, TVET = technical and vocational education training.
Source: Asian Development Bank.

c. Establishment of an effective labor market information system (Output C)

24. The capacity of BHRSS to develop and manage labor market information and public employment services in Jingyuan County will be enhanced to improve access to skills training and employment opportunities. The output includes the following specific activities:

(i) review and improvement of the existing system and method of collection and management of labor market information to identify skill set needs of enterprises and local communities in Jingyuan County;
(ii) provision of specific hardware and software to BHRSS agencies, together with

related training;

(iii) piloting and implementation of labor market surveys (sex disaggregated) within Jingyuan County; and

(iv) training of BHRSS staff in the use of labor market information and career guidance/counselling to strengthen public employment services at county levels, including the Liuchuan Industrial Park area.

Table 13: Tentative Workshop/Training Plan for Output C

Workshop/Training program	Participants
Four, 2-day workshops for labor market information collection and data management	• BHRSS and PES personnel (Estimated number of participants: 20 persons/training)
Four, 2-day training courses for career guidance counselors	• BHRSS and PES personnel (Estimated number of participants: 20 persons/training)

BHRSS = bureau of human resource and social security, PES = public employment services.
Source: Asian Development Bank.

d. Institutional strengthening of Baiyin Municipal BHRSS

25. Capacity of Baiyin Municipal BHRSS for TVET policy, planning and management will be strengthened by developing policy guidelines and implementing short, medium and long-term strategic actions to strengthen TVET provision. The output includes the following specific activities:

(i) capacity assessment and training needs analysis for BHRSS at municipal level, including policy and functional reviews;

(ii) tailor-made training provided to departmental line-managers aimed at organizational strengthening and development of strategic action plans; and

(iii) provision of opportunities for learning international and national good practices through study visits and exchange of expertise with national institutions and organization through periodic TVET conferences.

Table 14: Tentative Workshop/Training Plan for Output D

Workshop/Training program	Participants
Four study visits to national partner institutions for exchange of expertise	• Selected stakeholders (Estimated number of participants: 35 persons/study visits)
Four annual conferences on themes of relevance to local government and enterprises	• Local government • TVET institutions • Enterprises • National partner institutions (Estimated number of participants: 200 persons/conference)

TVET = technical and vocational education and training.
Source: Asian Development Bank.

6. EMS Component Consulting Service

26. A consulting firm with a total of 21 person-months of consultant's inputs (i.e., 3 person-months international and 18 person-months national) will be required to carry out the EMS component. The consulting firm will be engaged by CQS method. The consultants will have expertise in EMS development and implementation for industrial parks, emergency preparedness and response (EPR) planning, and environmental management information systems. The main objective of the component is to achieve ISO 14001 EMS certification for the LIP in 2018. Ultimately, the proposed EMS for LIP is designed to achieve the eco-industrial park

accreditation requirements (HJ 274-2009) by 2025. A scope of the EMS component includes the following. The EMS report is in **Attachment 1**.

(i) establishment of an EMS including EMS center within the LIC under LMC including development of clear EMS management procedures, and procurement and installation of office equipment and mobile environmental monitoring equipment;
(ii) development of an EPR plan, including EPR management procedures, and procurement of emergency responses equipment;
(iii) establishment of an environmental management information system (EMIS) including EMS communications plan, targeting dissemination of information on pollutants of concern. The EMIS will include EMIS software; and
(iv) training program including study tours on all EMS aspects.

27. The EMS consultant team will ensure that the following outputs/activities are implemented under the project.

a. Environmental management system for LIP

28. The EMS for LIP will comply with international best practices including International Finance Corporation Performance Standard 1 (Assessment and Management of Environmental and Social Risks and Impacts, 1 January 2012), and incorporate the following elements: (i) policy, (ii) identification of risks and impacts, (iii) management programs, (iv) organizational capacity and competency, (v) emergency preparedness and response, (vi) stakeholder engagement and communication, and (vii) monitoring and review. The EMS establishment, planning, and strategic oversight roles are largely with the LMC and these activities include:

(i) setting environmental policy, objectives, and targets for LIP;
(ii) developing a program to meet objectives and targets, including resources;
(iii) developing EMS communication plan, document control, and emergency preparedness;
(iv) approval of LIP enterprise operational plans relative to environmental aspects;
(v) introduction of LIP enterprise environmental measures to minimize environmental impacts and wastes such as industrial symbiosis, resource conservation, etc.; and
(vi) monitoring and measuring performance of EMS.

b. Emergency preparedness and response system

29. An emergency preparedness and response (EPR) plan will be prepared through the EMS component consulting service and training program. International and national environmental preparedness and planning consultants will be engaged to work with the LMC to define the EPR program needs as well as necessary emergency response equipment, and perform initial training. The EPR plan will address all aspects of planning and managing emergencies including the following:

(i) analysis of LIP hazards and current capabilities to manage risks;
(ii) vulnerability analyses to estimate probabilities of various potential emergencies and potential impacts to people, property, business and environment;
(iii) development of formal plan including priorities, budget, training, etc.;

(iv) procurement and installation of necessary EPR equipment based on needs identified; and
(v) implementation of the plan, including coordination of internal and external stakeholders.

c. Environmental management information system

30. An environmental management information system (EMIS) will be developed and implemented to help LMC track the LIP and its industries' compliance with relevance with, and progress towards, achieving eco-industrial park accreditation. The web-based EMIS will provide an automatic, state-of-the art information and communications technology solution and include the main following functions:

(i) administrative and technical database of enterprises, emission sources, waste streams, monitoring data analysis, embedded geographic information system for the industrial estates, and surrounding environment and population;
(ii) performance monitoring, which uses model supported monitoring and reporting and regular forecasting of all environmental impacts from normal operations (atmospheric and aquatic/marine releases, waste streams and hazardous waste, noise) with scheduled online compliance reporting, alerts and alarms based on monitoring results; and
(iii) technological risk assessment and real-time emergency management in case of accidental release of hazardous materials, atmospheric or aquatic dispersion, and fires.

d. Institutional strengthening and training

31. The training program will focus on ISO 14001 certification, EPR, and EMIS. The training program will include study tours to other PRC industrial parks which have achieved ISO 14001 certification and/or eco-industrial park accreditation. A national training consultant will work with the EMS, EMIS, and EPR consultants to develop and implement the training program.

7. Inputs and Cost of Consulting Services

32. The consulting service inputs for project management and capacity development are summarized below in the following table.

Table 15: Consulting Service Inputs for Project Management and Capacity Development

Experts inputs	International	National
Project management consulting service		
Team leader/urban engineer–project management	5.0	
Deputy team leader/contract management and procurement engineer		40.0
Water and sanitation engineer		8.0
Financial management specialist		10.0
Environment specialist		10.0
Resettlement and social specialist	3.0	
Resettlement specialist		7.0
Social and gender specialist		7.0
Subtotal	**8.0**	**82.0**
Startup project management and procurement consulting service		
Procurement management and procurement specialist		6.0
Subtotal		**6.0**

External resettlement and social monitor		
Resettlement and social specialist(s)		10.0
Subtotal		**10.0**
TVET consulting service		
Institutional development specialist	1.0	7.0
Competency-based curriculum and training specialist	1.0	
Teaching-learning method specialist		5.5
Competency-based training curriculum development specialist		5.5
TVET equipment specialist		0.5
Labor and social security specialist	1.0	2.5
Subtotal	**3.0**	**21.0**
EMS consulting service		
Environmental management specialist	3.0	10.0
Emergency preparedness and response specialist		5.0
Environment trainer		3.0
Subtotal	**3.0**	**18.0**
Total	**14.0**	**137.0**

Source: Asian Development Bank estimates.

Table 16: Capacity Building Component and Consulting Service Budget

Item	**Amount** ($)
A. Project management and capacity building consulting service	
1. Consultants	
a. Remuneration and per diem (inc. fees, international/local travel)	
i. International consultants (8 person-months at $23,000 per month)	184,000
ii. National consultants (82 person-months at $6,000)	492,000
2. Capacity development training	
a. Workshops	50,000
b. Overseas/domestic training (provisional sum)	200,000
3. Local transportation	66,000
4. Survey and data collection (provisional sum)	50,000
5. Report and translation	100,000
6. Office administration and operation (inc. office equipment)	100,000
7. Contingency	100,000
Subtotal	**1,342,000**
B. Startup project management support	
1. Consultants	
a. Remuneration and per diem (inc. fees, local travel)	
i. National consultants (6 person-months at $6,000)	36,000
2. Local transportation	2,800
3. Contingency	6,000
Subtotal	**44,800**
C. External resettlement and social monitor	
1. Consultants	
a. Remuneration and per diem (inc. fees, local travel)	
i. National consultant (15 person-month at $6,000 per month)	90,000
2. Data collection and survey	30,000
3. Report and translation (10 reports x $3,000)	30,000
4. Miscellaneous administration	10,000
5. Contingency	90,000
Subtotal	**250,000**
D. TVET consulting service	
1. Consultants	
a. Remuneration and per diem (inc. fees, international/local travel)	
i. International consultants (3 person-months at $20,000 per month)	60,000
ii. National consultants (21 person-months at $6,000)	126,000
2. Local transportation	5,000
3. Contingency	9,000
Subtotal	**200,000**

E. EMS consulting service	
1. Consultants	
a. Remuneration and per diem (inc. fees, international/local travel)	
i. International consultants (3 person-months at $20,000 per month)	60,000
ii. National consultants (18 person-months at $6,000)	108,000
2. Reports and communications	10,000
3. Equipment	150,000
4. Training, seminars and conferences	80,000
5. Contingency	22,000
Subtotal	**430,000**
Grand Total	**2,266,800**

Source: Asian Development Bank estimates.

8. Indicative List of Training Program

33. The following training programs will be delivered or organized by the project management consulting service during the course of project implementation.

Table 17: Indicative List of Training Program[a]

Training program	Scope of Training	Trainer	Trainee
ADB's disbursement procedure and financial management (including financial audit)	- ADB loan disbursement procedure - Role and responsibility of each stakeholders - Monitoring of fund flow and utilization of loan proceeds - Risk of delay in disbursement	SCS, PMC	BMG, BPT, JHRSS, LMC, TDP
Organizational financial management and financial audit system	- Basic project financial management of the implementing entities (e.g., BMG, BPT, JHRSS, LMC, TPD) - Annual financial audit and its preparation for domestic and ADB requirement	PMC	BMG, BPT, JHRSS, LMC, TPD
Procurement and contract management	- ADB's procurement process - Bidding document preparation - ADB's guideline for bid evaluation - Risk of improper procurement and mitigation measures - Handling variation orders and contract management	SCS, PMC	BMG, BPT, JHRSS, LMC, TPD
Corruption risks in project implementation and anticorruption measures	- Definition and type of corruption - Risk of corruption under project implementation - Mitigation measures - Institutional framework and anticorruption mechanisms - Case studies and international best practices	PMC	BMG, BPT, JHRSS, LMC, TPD
Implementation of EMP and other ADB requirements	- Environmental laws, regulations and policies - EMP implementation, including implementation responsibilities, environmental monitoring, inspection and reporting, consultation and participation, mechanism of EMP review, feedback, and adjustment - GRM, including GRM structure, responsibilities and timeframe, types of grievances, eligibility assessment - EHS considerations during project construction and operation, including community and occupational health and safety	PMC	BMG, BPT,JCG, JHRSS, LMC, TPD, Baiyin EPB, Jingyuan EPB, Contractors, GRM access points, other related local bureaus (e.g., water resources bureaus)
Implementation of	- Establishing effective monitoring and	SCS, PMC	BMG, BPT,

Training program	Scope of Training	Trainer	Trainee
resettlement plan and other ADB requirements	inspection and the information flow mechanism - Key indicators and methodology of data collection - Progress of resettlement plan reporting - GRM structure, responsibilities, timeframe - Types of grievances, eligibility assessment - Reporting procedures		JHRSS, LMC, TPD, Jingyuan land resources bureau, other related bureaus, GRM access point
Implementation of GAP, SDAP, and other ADB requirements	- Establishing effective monitoring and inspection and the information flow mechanism - Key indicators and methodology of data collection - GAP and SDAP improvement and reporting - Gender development - GRM structure, responsibilities, timeframe - Types of grievances, eligibility assessment - Reporting procedures - Communication with the public by different means (innovative community-based advocacy campaigns) - Prevention and control of transmissible diseases and HIV/AIDS	PMC	BMG, BPT, JHRSS, LMC, TPD, Jingyuan land resources bureau, other related local bureaus, GRM access point ACWF, bureau responsible for advocacy campaigns
Public financial management at municipal and county level	- Strengthen city and counties' credit worthiness - Identify alternative financing options - Revenue enhancement - Expenditure control - Debt management - Domestic and international good practices - Use of performance indicators - Internal audit and financial evaluation	External resource person engaged by the project management consulting service PMC	BMG, BPT, JCG, JHRSS, LMC, TPD (especially finance bureau)
Strategic industrial zone development and their conceptual planning	- Policy analysis on overall regional and urban planning of Baiyin Municipality - International and national good practices for strategic regional and urban planning - Regional SWOT assessment for the Gansu Province and Baiyin Municipality for strategic planning	External resource person engaged by the project management consulting service PMC	BMG
Strategic human resources development planning for Baiyin Municipality[a]	- Concept of human resources development strategy at municipal level (e.g., TVET schools, labor market systems) - International and national good practice for human resource development in industrialized cities: new approaches and technologies - Role and responsibilities of participating entities and local stakeholders	TVC	BHRSS, BMG, JCG
Environmental management systems in industrial parks and PRC national accreditations	- Accreditation programs and their requirement (e.g., ISO 14001 certification, PRC circular economy and eco-industrial park) - Strategic planning and road maps for obtaining national accreditation - International and national good practice for EMS in industrial parks - Emergency preparedness and response - Environment management information system	Environment management system consultant team	BMG, JCG, LMC

Training program	Scope of Training	Trainer	Trainee
Transport management in Baiyin Municipality (i.e., road safety and public transport systems)	- International and national good practice for road safety - Road safety audit tools and approaches - Data collection for road safety - Stakeholder assessment - Institutional responsibility and setup - Policies for improving road safety - Public awareness program and education - Use of performance indicators - Short, medium, and long-term planning	PMC	BMG, other related local bureaus (e.g., transport bureau)
Private participation in public infrastructure development for Baiyin Municipality	- Concepts of private participation - International and national good practices for private participation and public-private partnership - Risks and benefits of private participation in public sector projects - Financial value for money analysis - Potential PPP opportunities for Baiyin's industrial transformation and economic diversification	External resource person engaged by the project management consulting service PMC	BMG
Advanced and innovative operation and maintenance for urban, water, sanitation, road infrastructure, and ITS services	- International and national good practice of water supply and wastewater pipeline network operation and maintenance - International and national good practice of road and bridge maintenance - Detection of non-revenue water and its management - Water and sanitation tariff reviews - Short, medium, and long-term investment and financial planning of water supply, wastewater utilities, and roads	External resource person engaged by the project management consulting service	LMC, project operators

ACWF = All China Women's Federation, ADB = Asian Development Bank, BHRSS = bureau of human resource and social security, BMG = Baiyin Municipal Government, BPT = Baiyin Public Transportation Company, EHS = environment, health, and safety, EMP = environmental management plan, EMS = environment management system, EPB = environment protection bureau, GAP = gender action plan, GRM = grievance redress mechanism, JCG = Jingyuan County Government, JHRSS = Jingyuan County Bureau of Human Resources and Social Security, LMC = Liuchuan Industrial Park Management Committee, PMC = project management consultant team, PPP = public-private partnership, PRC = People's Republic of China, SDAP = social development action plan, SCS = startup consulting service, SWOT = strengths, weaknesses, opportunities, and threat, TPD = Baiyin Municipal Public Security Traffic Police Detachment, TVC = technical and vocational education and training consultant team, TVET = technical and vocational education and training.

[a] A number of trainings related to the TVET component will be conducted separately. Those include: teacher/instructor/assessor training, assessment techniques, curriculum development, learning methodologies, training equipment, Jingyuan County Secondary Vocational School management and administration for industrial quality improvement, use of labor market information and public employment services for BHRSS staff and BHRSS managerial training for organizational strengthening and strategic plan development.

E. Procurement Guidelines and Resources

http://www.adb.org/Documents/Guidelines/Procurement/default.asp
Procurement Guidelines (in Chinese)
http://www.adb.org/Documents/Translations/Chinese/Guidelines-Procurement-CN.pdf

Guidelines on Use of Consultants by ADB and Its Borrowers
http://www.adb.org/Documents/Guidelines/Consulting/default.asp
Consulting Services Recruitment Notice:
http://csrn.adb.org
http://csrn.adb.org:8080/csrn/login.jsp

Templates for engagement of consultants: (including submission templates)
http://www.adb.org/Consulting/loan-rfp.asp

Harmonized RFP (Loans)
http://www.adb.org/Consulting/all-methods-loan.asp

Sample Individual consultant contract
http://www.adb.org/Consulting/ICS-Contract-Loan.pdf

Consulting Services Operations Manual
http://www.adb.org/Documents/Manuals/Consulting-Services-Operations-Manual/CSOM.pdf

Toolkits and Templates for Consultants:
http://www.adb.org/Consulting/toolkit-template.asp

Procurement Documents:
http://www.adb.org/Procurement/prequalification-bid-documents.asp

User's Guide (Procurement of Goods)
http://www.adb.org/Documents/Manuals/Bidding_Documents/Goods/SBD-Goods-Users-Guide.pdf

User's Guide (Small Civil Works - below 10 Million USD)
http://www.adb.org/Documents/Manuals/bidding_documents/prequalification/SBDWorks-sml-UserGuide.pdf

Guide on Bid Evaluation
http://www.adb.org/site/business-opportunities/operational-procurement/goods-services/documents/guide-bid-evaluation

Procurement Plans
http://www.adb.org/Projects/reports.asp?key=reps&val=PP

Electronic Procurement
http://www.mdbegp.org/www/eGPInteractiveus/tabid/69/language/en-US/Default.aspx

E-GP (Electronic Government Procurement) Toolkit
http://www.mdbegp.org/www/eGPToolkitus/tabid/67/language/en-US/Default.aspx

Project Administration Instructions
http://www.adb.org/Documents/Manuals/PAI/default.asp

E-Handbook on Project Implementation
http://www.adb.org/Documents/handbooks/project-implementation/default.asp?p=proj

Anticorruption and Integrity
http://www.adb.org/Integrity/default.asp

How to report fraud and corruption
http://www.adb.org/Integrity/howto.asp

VII. SAFEGUARDS

A. Environment

1. **Environment due diligence**. The wastewater component and road component were classified as Category A in accordance with the Guideline on EIA Classification for Construction Projects issued by the Ministry of Environmental Protection of the People' Republic of China (PRC) in 2008, requiring environment impact assessment (EIA). The water supply component was Category B, requiring a simplified, tabular environment impact statement. These assessment reports, together with the planning EIA for the Liuchuan Industrial Park (LIP) (approved by Gansu Provincial Environment Protection Department (GPEPD) in 2012), the soil erosion protection plan (approved by Gansu Provincial Water Resources Department (GPWRD) in January 2014); and the water resources assessment (approved by GPWRD in February 2014); were consolidated in a domestic EIA prepared by Lanzhou University, the EIA institute. The domestic report was submitted to GPEPD for review on 25 March 2014 and approved on 30 June 2014.

2. At ADB, the project was classified as Category B for environment safeguards, requiring an initial environmental examination (IEE) in compliance with ADB's Safeguard Policy Statement (2009).[1] A project IEE was prepared and disclosed on the ADB website on 2 July 2014.[2] The IEE incorporated findings of the various domestic assessments listed above, as well as results of site investigations and public consultations, and concluded that the project's anticipated environmental impacts can be mitigated through the implementation of the environmental management plan (EMP), which is in **Attachment 2**.

3. The EMP defines mitigation measures, monitoring requirements, and institutional responsibilities to ensure proper environmental management throughout the project construction and operation. In the design stage, the Baiyin Municipal project management office (Baiyin PMO) will forward the EMP to the design institutes to incorporate mitigation measures into the technical detailed designs. The EMP will be updated at the end of the detailed design, as needed, and disclosed on the ADB website. To ensure that bidders will respond to the EMP's provisions, Baiyin PMO will prepare and provide the following specification clauses for incorporation into the bidding documents: (i) a list of environmental management requirements to be budgeted by the bidders in their proposals, (ii) environmental clauses for contractual terms and conditions, and (iii) individual EIAs, and project IEE including updated EMP for compliance.

4. **Anticipated impacts**. Construction and operation of the project components have potential impacts to the environment. The project will occupy state-owned land (including state–owned barren hills, irrigated land owned by Lantong Farm, and collectively-owned land previously acquired) and acquire collectively-owned land permanently, including irrigated land, housing site land and idle land. Major safeguards issues during construction include significant earthwork and soil erosion; permanent and temporary acquisition of land and residents' resettlement, noise pollution, air pollution, surface water pollution, inadequate construction waste management, and occupational and community health and safety. Overall, construction-related impacts are localized, short-term, and can be effectively mitigated through the application of good construction and housekeeping practices and implementation of construction phase community and occupational health and safety plans. Appropriate mitigation measures and monitoring programs have been developed to address these issues. No area of

[1] ADB. 2009. *Safeguard Policy Statement*. Manila.
[2] Initial Environmental Examination (accessible from the list of linked documents in Appendix 2).

the project site is within a legally protected site or a site proposed for protection. The project site does not include critical habitats with recognized critically endangered or endangered species. No rare and endangered species were identified and recorded in the project area during the domestic EIA process.

5. The main potential adverse impacts during operation of the project facilities include improper operation of water and wastewater treatment facilities, traffic noise, and air pollution at some sensitive areas along the constructed roads. Sludge disposal at both the water treatment plants (WTP) and wastewater treatment plant (WWTP) will require careful management (by the operator) and oversight (by the LMC and the Baiyin EPB). Noise and air quality predictions indicate that they will have minimal impact on these media, even in the long term. Affected by noise exceeding night time limits are 80 households. The project will finance noise-insulation windows for these households. The Dasha River, which may periodically receive treated wastewater (in case that the targeted 100% reuse cannot be achieved), is not able to sustain aquatic life of ecological significance or high biodiversity due to its polluted state.[3] The IEE concludes that the anticipated impacts will be acceptable subject to implementation of EMP mitigation measures and sound environmental management during the construction and operational stages of the project.

6. The impact of water extraction on regional water resources has been assessed through regional water balance analysis in the context of the Yellow River water allocation plan. The assessment confirmed that the Yellow River water extraction rate for the project's WTP will remain within the approved extraction quota of 340 million cubic meters per year for Jingyuan County. The proposed supply amount is 60,000 cubic meters per day for 2020 and 200,000 cubic meters per day for 2030, with a design abstraction guarantee rate of 97%. The Yellow River has an average annual flow of 920 cubic meters per second and a historic minimum flow of 236 cubic meters per second. The amount proposed to be withdrawn will thus not exceed 1% of the Yellow River at maximum extraction rate and minimum flow. The water quota is transferred internally from irrigation savings due to the promotion of drip irrigation to replace flood irrigation. A water quota transfer and usage agreement has been signed between Liuchuan Industrial Park Management Committee (LMC), Liuchuan Irrigation Project Management Bureau, and Jingyuan County Water Affairs Bureau. The proposed water supply subcomponent will not increase additional water quota of Jingyuan County.

7. **LIP environment management system**. The potential concern that the project may induce uncontrolled industrial development within LIP has been addressed through the conduct of a planning EIA for the LIP, which was approved by the GPEPD in 2012. The planning EIA concluded that the LIP is feasible from an environment point of view, but defined clear requirements to safeguard the environment during LIP development and operation, including: (i) industries introduced to the LIP must comply with national industry development policy, clean production and circular economy, promote resource use efficiency; (ii) introduction of high water consuming industries must be strictly controlled; (iii) an EIA including water resources assessment is a pre-requirement for each enterprise planning to enter the park; (iv) each enterprise in the park as well as the LIP as a whole, must prepare emergency preparedness

[3] The WWTP will include a treated effluent storage tank (volume of 3,000 cubic meters) to allow for management of the wastewater reuse distribution system, consisting of both piped water reuse distribution as well as tanker trucks. The storage tank will also be used in case of WWTP malfunctioning as emergency storage tank. Such a storage system is necessary to balance the treated water production with the treated water reuse, which are not always matched in time or volume. Although the system will eventually be capable of handling 100% of the treated wastewater effluent, a discharge pipeline is constructed to the Dasha River in the interim period until 100% reuse can be achieved (by 2019).

and response plans; and (v) the LIP should establish an environmental protection division and develop strict environmental management and supervision procedures and plans. These requirements will be complied with through the establishment of an environment management system (EMS) for the LIP. The EMS subcomponent will work to ensure that environmental management of the LIP is performed to international best practices and move LIP into ISO 14001 certification as well as "eco-industrial park" (EIP) status under the Ministry of Environment EIP program. The EMS subcomponent under the project will have a budget of CNY2.6 million ($430,000), which will support: (i) development of environmental management and early response policies and procedures for LIP and LMC, targeting ISO 14001 certification by 2018; (ii) strengthening supervision, monitoring, and reporting of environmental activities in the LIP, including basic equipment, environmental management information and communication system, emergency preparedness and response, and training; and (iii) developing a road map for national EIP accreditation of LIP by Ministry of Environmental Protection by 2025.

8. **EMP implementation responsibilities**. Baiyin Municipal Government (BMG) and the implementing agencies will be responsible for ensuring that the project will be designed, constructed, decommissioned, and operated in accordance with (i) national and local government environmental, health and safety laws, regulations, procedures, and guidelines; (ii) EMP responding to ADB's Safeguard Policy Statement (2009), and (iii) IEE including the EMP. Baiyin PMO will have main EMP coordination responsibility. Baiyin PMO will appoint an environmental management lead (EML) to coordinate environmental issues associated with each infrastructure component, subcomponent, and contract package. The EML will take charge of (i) coordinating the implementation of the EMP and developing implementation details; (ii) supervising the implementation of mitigation measures during project construction and operation; (iii) ensuring that environmental management, monitoring, and mitigation measures are incorporated into bidding documents, construction contracts, and operation management plans; (iv) submitting annual EMP monitoring and progress reports to ADB; (v) coordinating the local grievance redress mechanism (GRM); and (vi) responding to any unforeseen adverse impact beyond those mentioned in the project IEE and the EMP. The EML will be technically supported by the loan implementation environment consultant (LIEC) and they will jointly check the overall implementation of environmental management provisions of the EMP. The contractors and construction supervision companies (CSC) will be responsible for internal environmental monitoring and supervision during construction. EMP implementation and supervision responsibilities are defined in the EMP (**Attachment 2**). The LIEC will support Baiyin PMO, LMC and contractors in implementing the EMP.[4]

9. **Institutional strengthening, training**. The capacity of Baiyin PMO, LMC and contractors' staff responsible for EMP implementation and supervision will be strengthened. All parties involved in implementing and supervising the EMP must have an understanding of the goals, methods, and practices of project environmental management. The project will address the lack of capacities and expertise in environmental management through institutional capacity building and training. The capacities of Baiyin PMO and LMC to coordinate environmental management will be strengthened through the following set of measures:

(i) assign a Baiyin PMO staff in charge of EMP coordination, including GRM;
(ii) appoint a national environmental specialist under the loan implementation consultant services to guide Baiyin PMO and LMC in implementing the EMP and ensure compliance with ADB's Safeguard Policy Statement; and

[4] The LIEC is the national environment specialist under the project management consulting service (CS02). Outline terms of reference for the LIEC are included in the EMP, para. 11 (Attachment 2 to this PAM).

(iii) LMC to create an environmental management unit to conduct regular site inspections and coordinate EMS implementation.

10. In addition, Baiyin PMO, LMC, contractors, and facility operators for WTP and WWTP will receive training in EMP implementation, supervision, and reporting, and on the GRM. Training will be facilitated by the LIEC with support of other experts under the loan implementation consultant services. A comprehensive training specific to the needs of the EMS subcomponent will be defined and implemented by EMS specialists.

11. **Public consultation**. Meaningful consultation was conducted with key stakeholders and potentially affected people. A total of 120 questionnaires were distributed by the EIA Institute to 115 affected persons from different age groups, gender, educational backgrounds and five project affected organizations. Consulted people believed that the project will benefit the local economy, the quality of life, the environment, and especially the county's economic and industrial diversification and transformation. Negative opinions about the project focused on noise and air pollution associated with project construction, the need to ensure sustainable and reasonable long-term development plan of the LIP, and introduction of low pollution industries to protect the regional environment. The mitigation measures defined in the EMP as well as the proposed EMS address these specific concerns. Three community representatives from Nanchuan Village, Nanshanwei Village, and Xinmin Village near the project sites have been determined as community environment supervisors to perform regular site inspections. They will accompany the LIEC during construction site visits and will participate in public consultation meetings.

12. **Grievance redress mechanism**. A GRM has been defined to deal with public complaints related to project activities during project implementation and operation. Baiyin PMO will establish a project public complaint unit (PPCU) that will instruct contractors and CSCs if people complain about the project. The PPCU will coordinate with the county environment protection bureau and other government divisions, if necessary, and will be supported by the LIEC. The PPCU will establish a GRM tracking and documentation system, including procedures to retrieve data for reporting purposes to Baiyin PMO and ADB.

B. Involuntary Resettlement

13. The project is classified as Category A for involuntary resettlement due to significant land acquisition and resettlement impacts. LMC, with the support of a local institute, prepared a resettlement plan according to Safeguard Policy Statement (2009) for the LIP infrastructure component, which is the only one involving land acquisition and resettlement (LAR). The resettlement planning and implementation was designed to ensure that the affected persons will be better off or at least not worst off as a result of the project.

14. **Land acquisition and resettlement**. In total, the project will occupy 1,158.3 *mu* of state-owned land (including 831.0 *mu* of stated-owned barren hills, 6.0 *mu* of irrigated land owned by Lantong Farm, and 321.3 *mu* of land acquired already and fully paid for the construction of WWTP in 2012 and the north section of Xihuan Road in 2013) and acquire 397.7 *mu* of collectively-owned land, including 286.9 *mu* of irrigated land, 32.6 *mu* of housing site land and 78.3 *mu* of unused land.[5] The project will affect 4 groups, 2 villages, and 2 townships, 67 rural households, and 337 persons in Jingyuan County due to the land acquisition and house relocation. Nearly 8,252.4 square meter (m^2) of rural residential houses will be demolished and

[5] A *mu* is a Chinese unit of measurement (1 *mu* = 666.7 m^2).

35 households and 156 persons in total will be affected, in which land acquisition will also affect 23 households and 99 affected persons. 155.0 *mu* of land will be occupied temporarily and 46 rural households and 243 persons will be affected. Four households with 20 persons affected by the project fall into vulnerable groups. Detailed impacts are presented in Table 1.

15. The land acquisition and resettlement (LAR) compensation standards will follow the policy principles of ADB's Safeguard Policy Statement (2009), the PRC Land Administration Law (2004), Decisions on Deepening the Reform and Strengthening Land Administration (issued by the State Council on 21 October 2004), and other applicable guidelines. They will also be based on local policies regarding LAR in Gansu Province and BMG. BMG, Baiyin PMO, and LMC will provide necessary assistance for house construction and relocation during resettlement implementation.

16. All affected people are eligible to compensation and assistance. The cutoff date for eligible resettlement entitlement of the project was 15 March 2010.[6] Compensation for acquisition of collectively-owned land includes land compensation, resettlement subsidy, social security fund, young crop compensation, and ground attachment compensation. Compensation on rural residential houses to be relocated will be made based on the house replacement price determined by the market price assessment which will include all potential fees and taxes, and be exclusive of depreciation.

17. **Resettlement and income restoration**. The key actions of economic restoration will include cash compensation, land replacement, land circulation, pension insurance, and employment creation by existing or new enterprises in the LIP, skill training for the affected persons, employment related to the project and non-monetary support, etc. The resettlement measures for houses of affected farmers include cash compensation and unified resettlement houses or self-built new houses. If affected persons prefer the resettlement houses, they will be relocated in the resettlement area south of LIP, which will be completed in December 2014 with floor areas of 173.2 m^2 for a two-storey house. According to the survey, 34 households (out of 35 households) affected by house demolition are willing to choose these resettlement houses. One household plans to purchase land in the same village group and build a new home on the land. During house demolition and relocation in the resettlement living area, affected persons need to "pay or retain the difference" between the actual appraisal value of the old houses and the physical cost of the new resettlement houses; the original housing site will be compensated at the rate of land acquisition (CNY19,356.8 per *mu*); the new housing site will be fully serviced and provided to the affected households for free.

18. **Institutional arrangements**. BMG will be the executing agency for the project. LMC will be the implementing agency for the LIP infrastructure component. Baiyin PMO will assume the overall responsibility for the management and monitoring of LAR, including compilation and implementation of the resettlement plan, the planning of the LAR, internal monitoring, and engagement of external monitor. The LMC will take the primary implementation responsibility for the resettlement quantity confirmation, consultation, financing and timely delivery of entitlements with the support from relevant local government bureaus. The township resettlement offices and village resettlement offices will actively participate in the implementation of the resettlement plan. To ensure smooth implementation, the staff in-charge of land acquisition will undertake training

[6] Upon the completion of LIP planning concept, the People's Government of Jingyuan County issued the Circular on Planning and Construction of Liuchuan Industrial Park in 2010 and disclosed the boundaries of LIP of 50 km^2. This Circular took effect from the day it was issued and became the basis of the land use existing physical status of LIP planning area. The cut-off date for any new construction in the affected areas of the LIP infrastructure development subproject was, therefore, set as March 15, 2010.

on resettlement implementation organized by Baiyin PMO. A training program is included in the resettlement plan to develop the capacity of resettlement personnel at various levels. The resettlement implementation schedule was prepared based on the preparation and construction timetable, and past experience of land acquisition in the former ADB project. The resettlement plan will be (i) updated based on the final design and detailed measurement survey, (ii) disclosed to affected persons, and (iii) submitted to ADB for review and approval prior to awarding of civil works contract.

19. All costs incurred during LAR will be included in the general budget of the project. Based on March 2014 prices, the initial estimated resettlement cost of the project is CNY96,539,907 (about 7.7% of the total project cost of CNY1.25 billion), including basic land acquisition and house demolition cost of CNY63,786,523 or 66.1% of total costs; taxes and fees (include resettlement planning and monitoring costs, resettlement management costs, and resettlement institute training costs and supporting fund for vulnerable groups) on land acquisition and house demolition of CNY23,977,029 or 24.8% of total resettlement cost; and contingencies of CNY8,776,355 or 9.1% of total resettlement cost. The detailed resettlement cost will be revised when the resettlement plan is updated. The resettlement cost estimate is in Table 2.

20. **Grievance redress mechanism**. LMC will establish the four stages of grievance mechanism at the village-level, city/town government, state land acquisition office, and people's court as elaborated below:

(i) Stage 1: If any displaced person is dissatisfied with the resettlement plan, s/he can report this to village/community committee orally or in writing. In case of an oral appeal, the village/community committee shall make a disposition and keep written records. Such appeal should be solved within two weeks.

(ii) Stage 2: If the displaced person is dissatisfied with the disposition of Stage 1, s/he may file an appeal to the city/town government after receiving such disposition, which shall make a disposition within two weeks.

(iii) Stage 3: If the displaced person is dissatisfied with the disposition of Stage 2, s/he may file an appeal to the state land and resources bureau/house demolition management office of LMC after receiving such disposition, which shall make a disposition within 30 days.

(iv) Stage 4: If the displaced person is still dissatisfied with the disposition of Stage 3, s/he may apply for administrative reconsideration with Baiyin PMO. Also at any point, s/he may file an administrative action in the district people’s court in accordance with the PRC Civil Procedure Law after receiving such disposition.

21. Displaced persons may file an appeal on any aspect of resettlement, including compensation rates, etc. The above means of appeal, and the names, locations, persons responsible and telephone numbers of the appeal accepting agencies will be communicated to the displaced persons at a meeting, through an announcement or the resettlement information booklet, so that the displaced persons know their right of appeal. Mass media will be used to strengthen publicity and reporting, and the resettlement organization will share comments and suggestions on resettlement from all parties concerned. All agencies will accept grievances and appeals from the affected persons for free, and costs so reasonably incurred will be disbursed from the contingency costs. During the whole design and construction period of the project, these appeal procedures will remain effective to ensure that the affected persons can use them

to address relevant issues. Affected persons can also submit complaints to ADB which will be handled by the project team. If an affected person is still not satisfied and believes he/she has been harmed due to non-compliance with ADB policy, s/he may submit a complaint to ADB's Accountability Mechanism.

22. **Monitoring**. A detailed plan for both the internal and external monitoring is included in the resettlement plan. Baiyin PMO will submit an internal monitoring report through quarterly project monitoring report to ADB. Furthermore, Baiyin PMO will employ an external resettlement monitoring institute or firm to establish an independent external monitoring organization in order to deliver an independent and unbiased external monitoring report. A baseline study of affected persons will be completed for resettlement monitoring before the LAR begins.[7] After that and until project completion, semiannual monitoring reports will be prepared and submitted for ADB's review during resettlement implementation and annually for two years after completion of resettlement. The implementation plan of the resettlement plan is summarized in Table 3.

[7] The first monitoring report will be submitted in December 2014.

Table 1: Summary of Land Acquisition and Resettlement Impacts

(As of May 2014)

		Land use							Affected Persons							
				State-owned occupation (*mu*)[a]			Collectively-owned acquisition (*mu*)	HD	LA		HD		Both LA & HD		Subtotal	
Subproject	Location	Total (*mu*)	Subtotal (*mu*)	Barren Hills	Farm	Previously acquired by LIP		m^2	HH	AP	HH	AP	HH	AP	HH	AP
Permanent																
Xihuan Road	Nanshanwei	560.1	360.3	80.0	0	280.3	199.7	8,052.4	33	127	34	146	22	89	45	184
Pumping Station	Lantong Farm	6.0	6.0	0	6.0	0	0	0	4	23	0	0	0	0	4	23
Primary WSP	Xintian	198.0	0	0	0	0	198.0	200.0	18	130	1	10	1	10	18	130
Sludge landfill site	Xintian	462.0	462.0	462.0	0	0	0	0	0	0	0	0	0	0	0	0
Secondary WSP	LIP	150.0	150.0	150.0	0	0	0	0	0	0	0	0	0	0	0	0
WWTP	LIP	180.0	180.0	139.0	0	41.0	0	0	0	0	0	0	0	0	0	0
Total		**1,556.1**	**1,158.3**	**831.0**	**6.0**	**321.3**	**397.7**	**8,252.4**	**55**	**280**	**35**	**156**	**23**	**99**	**67**	**337**
Temporary																
Main Pipeline	Xintian	155.0	0	0	0	0	155.0	0	46	243	0	0	0	0	46	243

AP = affected person, HD = house demolition, HH = household, LA = land acquisition, LIP = Liuchuan Industrial Park, m^2 = square meter, WSP = water supply plant, WWTP = wastewater treatment plant.

[a] A *mu* is a Chinese unit of measurement (1 *mu* = 666.7 m^2).

Source: Asian Development Bank estimates.

Table 2: Resettlement Cost Estimate

(CNY)

Item	Xihuan Road	Primary WSP	Pumping Station	Transmission	WWTP	Total	Percent (%)
1. Land compensation	7,136,668	6,620,048	242,841	0	0	13,999,557	14.5
2. Temporary land occupation	0	0	0	545,600	0	545,600	0.6
3. Housing compensation	17,254,823	440,300	0	0	0	17,695,123	18.3
4. Auxiliary structures and ground attachments compensation	20,447,843	6,698,400	0	4,400,000	0	31,546,243	32.7
5. Tax and various fees	15,191,094	6,094,231	172,278	294,983	970,892	22,723,477	23.5
6. Contingency	6,959,884	2,301,740	48,128	607,589	112,564	10,029,906	10.4
Subtotal of Items 1-6	**66,990,312**	**22,154,719**	**463,247**	**5,848,172**	**1,083,456**	**96,539,907**	**100.0**
Percent (%)	**69.4**	**23.0**	**0.5**	**6.1**	**1.1**	**100.0**	

WSP = water supply plant, WWTP = wastewater treatment plant.
Note: Numbers may not sum precisely because of rounding.
Source: Asian Development Bank estimates.

Table 3: Milestones for Resettlement Activities

(As of May 2014)

No.	Resettlement Activities	Objective	Responsible Organization	Schedule	Notes
1	Information disclosure				
1.1	RP information booklet	2 villages	LMC	2014-5-30	Completed
1.2	Disclosure of the RP on ADB's website			2014-6-16	Completed
2	Budget approval and RP updating				
2.1	RP and budget approval (compensation rates)	CNY96,539,907	JCG and LMC	2014-5-30	Completed
2.2	Detailed measurement survey on land acquisition	2 villages	LMC	2014-11	
2.3	RP update after detailed design	2 villages	LMC	2014-12-30	
3	LA announcement				
3.1	Disclosure of the final RP	2 villages	Baiyin PMO and LMC	2015-1	
3.2	Release of the announcement of land acquisition	2 villages	JCG	2015-2	
4	Compensation agreement				
4.1	Signing and payment of land agreement	AHs in 2 villages	LMC and villages	2015-3	
4.2	Signing and payment of household agreement	1 HH	LMC and Santan Township	2015-3	
		34 HHs	LMC and Liuchuan Township	2015-12	
4.3	House demolition	1 HH	LMC and Santan Township	2015-4	
		34 HHs	LMC and Liuchuan Township	2016-1	
5	Resettlement house reconstruction				
5.1	Completion of construction	34 HHs	APs, LMC and villages	2014-12-31	
5.2	Moving to new houses	35 HHs	APs, LMC and villages	2016-1	
6	Implementation of restoration measures				
6.1	Advance on income restoration programs	AHs in 2 villages	APs, LMC, JHRSS, and villages	2015-3 to 2017-12	
6.2	Implementation of training program	AHs in 2 villages	APs, LMC, JHRSS, and villages	2015-3 to 2017-12	
6.3	Hiring affected persons for employment under the project	AHs in 2 villages	LMC and employers	2015-3 to 2017-12	
6.4	Identifying vulnerable households and implementing assistance measures	Affected vulnerable households	LMC and village committees	2015-3 to 2017-12	
7	Capability building				
7.1	Training of staff of LMC and land bureau	50 persons	Baiyin PMO and LMC	2015-1	
7.2	Training of county, township, and village officials	200 persons	Baiyin PMO and LMC	2015-2	

No.	Resettlement Activities	Objective	Responsible Organization	Schedule	Notes
8	Monitoring and evaluation				
8.1	Baseline survey	AHs in 2 villages	External M&E agency	2015-1	
8.2	Establishing an internal M&E mechanism	As per the RP	Baiyin PMO and LMC	2014-6	
8.3	Engagement of an external M&E agency	One agency	Baiyin PMO and LMC	2014-9	
8.4	Internal monitoring and reporting	Quarterly monitoring	Baiyin PMO and LMC	2014-12 to 2017-12	
8.5	External monitoring reporting	Semiannual	External M&E agency	2014-12-31	Rep. 1
				2015-6-28	Rep. 2
				2015-12-31	Rep. 3
				2016-6-30	Rep. 4
				2016-12-31	Rep. 5
8.6	External evaluation reporting	Annual reporting	External M&E agency	2017-12-31	Rep. 6
				2018-12-31	Rep. 7
8.7	Post-evaluation report	One report	Baiyin PMO and LMC	2019-12-31	
9	Public consultation		LMC	2014-6-1 to 2017-12-30	
10	Grievance redress		LMC	2014-6-1 to 2017-12-30	
11	Disbursement of compensation fees				
11.1	Disbursement to LMC	Initial funds	JCG	2015-1	
11.2	Disbursement to Liuchuan and Santan townships	Initial funds	LMC	2015-2	
11.3	Disbursement to AHs	Initial funds	Township government	2015-3	
12	Commencement of civil construction				
12.1	WWTP			2014-6 to 2017-12	LAR completed in 2012
12.2	WSP			2015-9 to 2019-11	
12.3	Xihuan Road			2016-4 to 2018-9	

ADB = Asian Development Bank, AHs = affected households, APs = affected persons, BHRSS = Bureau of Human Resources and Social Security, BPMO = Baiyin Municipal project management office, CNY = yuan, HHs = households, JCG = Jingyuan County Government, LA = land acquisition, LAR = land acquisition and resettlement, LMC = Liuchuan Industrial Park Management Committee, M&E = monitoring and evaluation, RP = resettlement plan, WSP = water supply plant, WWTP = wastewater treatment plant.
Source: Asian Development Bank estimates.

C. Ethnic Minority

23. The project is categorized as C for the indigenous peoples safeguard. Ethnic minorities make up about 1.8% of the population of Baiyin. The social assessment found they are economically and socially integrated and will benefit equally from the project activities as the mainstream population of Han. The project will not have any impact on the dignity, human rights, traditional lands or culture of ethnic minorities. No buildings with cultural or religious significance to ethnic minorities are in the project area. The project will not have any direct impact on their livelihoods.

VIII. GENDER AND SOCIAL DIMENSIONS

A. Summary Poverty Reduction and Social Strategy

1. This section describes the required actions for gender and social dimensions, other than social safeguards. A social, poverty, and gender analysis was undertaken in accordance guidelines of the Asian Development Bank. The analysis collected information to assist in the design of the project by identifying the poor, examining causes of poverty, and recommending poverty reduction measures within the scope of the project.

2. **Key Issues**. Baiyin has a land area of 21,200 square kilometers with a total population of 1.74 million and poverty incidence of 30.3% in 2012. The main project area is located in a 23–square kilometer planned area of LIP of the poverty-stricken Jingyuan County, Baiyin Municipality. Jingyuan County has the second largest population among the districts and counties of Baiyin, with a total population of 0.48 million, and poverty incidence of 35.2% in 2012, which is much higher than the national average of 15.4%. The industrial and financial crises arising from mineral resource depletion have resulted in the unemployment of numerous workers and a growing urban poor population. The estimated urban unemployment rates of Baiyin Municipality's and Jingyuan County were 22.3% and 22.5% respectively in 2012, among the highest in Gansu Province and in the People's Republic of China.

3. The project will directly benefit people who will live and work in LIP, estimated as 39,000 residents and employees by 2020 and 123,000 by 2030; indirect beneficiaries are the 2 million residents from Baiyin District and Jingyuan County. The TVET component sets out to contribute to improved livelihoods for communities impacted by the LIP development, specifically through strengthening employment opportunities through skills training. About 87,000 rural and 6,000 urban residents of Jingyuan County are expected to benefit from the project through increased access to training and employment opportunities in a variety of occupational sectors. In addition, the intelligent transport system component will benefit 276,500 residents of Baiyin District directly through providing safety and better traffic services.

4. **Design features**. The project will implement the following.

(i) **Gender action plan**. The gender action plan (GAP) will promote gender inclusion in the project activities and monitoring system. It will address gender mainstreaming in all project components and under training and capacity building. Implementation and monitoring of GAP is included in the loan assurances.

(ii) **Social development action plan**. The social development action plan (SDAP) includes targets for employment for the poor and women on project works and subsequent operation and maintenance, protection of labor that will be employed on project works, mitigation of HIV/AIDS and construction disturbances, and consultation with and participation of community members throughout project implementation. In addition, it ensures that more than 30% of new jobs will target the poor. Implementation and monitoring of the SDAP is included in the loan assurances.

B. Gender Development and Gender Action Plan

5. The project is categorized as effective gender mainstreaming and a GAP has been prepared with agreed activities and indicators. The poverty and social analysis indicates that

women are a very important stakeholder and beneficiary in the project. Despite sharing similar social resources and job opportunities, there are still large gender differences in certain aspects. For example, in Baiyin Municipality, 70% of all urban community members are women while only 14% of all village community committee members are women. Similarly, not more than 15% of leadership members of governments and functional departments at or above the township level are women. Survey and focus group discussions reveal that among the female respondents (40%), 20% do full-time jobs, 34% do part-time jobs, and 46% are unemployed. Most women do not understand the labor law and labor security policies. Majority of female respondents support the project as it will generate more job opportunities through LIP construction, and are willing to work in the chemical industry if health protection measures are sufficient. In addition, focus group discussions reveal that women are interested in gaining skills through training that will provide them with better non-farming employment opportunities, and they also consider the improvements in traffic safety and access to transport facilities to be provided under the project as important benefits.

6. A GAP (Table 1) has been prepared for the project and gender specific parameters have been included in the project's design and monitoring framework to ensure that targets are met, women fully participate in the project and enjoy project benefits, and adverse effects upon women are avoided or mitigated. Baiyin Municipal Government (BMG) will work with the All China Women's Federation, municipal and county government agencies, contractors, and communities to facilitate the participation of women in paid work opportunities for physical works, and ensures that all labor laws of the People's Republic of China and core labor standards are respected. Project assurances include that (i) contractors be required to employ women with specific targets, (ii) implementation of GAP is ensured; and (iii) GAP targets and implementation will be monitored.

7. The project will ensure that: (i) priority will be given to women for employment, including a 30% target for project employment opportunities during the project construction phase, and 30% target for the project operation phase; (ii) women will not be discriminated on the basis of age or sex with respect to any job that they are capable of carrying out; (iii) sex disaggregated baseline and survey data will be collected; and (iv) the GAP measures are implemented. Baiyin project management office with the assistance of the project management consulting firm are responsible for the implementation of the GAP, and reporting on progress and achievements of the project. BMG agreed to provide necessary costs for implementation of the GAP (Table 1) and SDAP (Table 2). All activities in GAP and SDAP are part of the capacity building component (e.g., training, consultation, awareness raising activities). Therefore, no additional cost is required specifically for the implementation of GAP.

C. Social Development Action Plan

8. The SDAP was prepared for the project. It sets out activities (i) for the mitigation of adverse impacts and risks identified in the course of the poverty and social analysis of the project, and (ii) to help maximize the benefits to be derived from the project. Actions include: (i) public awareness program on LIP development, public safety and labor law; (ii) public hearing on transportation, water supply and wastewater tariff increase;[1] and (iii) targets for employment of local labor, women, and the poor during construction and operation. Its implementation will be

[1] Follow up discussions will be held with the government to ensure that subsidies for poor and vulnerable people will remain unchanged.

monitored through the project performance management system, project progress reports, and ADB supervision missions.

9. To address the risk of spread of HIV/AIDS, the project requires (i) inclusion of clauses on HIV/AIDS and other communicable disease into contract bidding documents; (ii) conduct of public health and HIV/AIDS prevention education to the civil works contractors and LIP employees; (iii) establishment of health measures for construction workers (e.g., setting up a temporary infirmary, using local medical resources); and (iv) conduct of diverse publicity activities on HIV/AIDS (e.g., brochures, posters and picture albums).

10. The creation of new job opportunities is seen as a very important outcome of the project. To increase residents' income, the project will (i) establish an employment information platform for LIP for release and publicity; (ii) generate about 206 skilled and 181 unskilled jobs at the construction and operation stage, 30% of them are first made available to the poor; (iii) attract enterprises to locate in LIP, which will generate about 77,000 job opportunities, as well as create 8,300 jobs from the services sector in the LIP, 30% of which are first made available to the poor. In addition, the project will (i) conduct inclusiveness of the TVET component targeting urban laid-off workers and rural surplus labor, and (ii) provide smooth traffic, safe travel and good service for Baiyin transportation.

11. Measures in the SDAP place a particular emphasis on the design and implementation of campaigns to encourage appropriate behavior with respect to developing management programs together with employees in LIP and residents, and establishing a public consultation and participation mechanism.

D. Other Social Aspects

12. As ensured in the assurances, construction workers from the local communities will be trained on sanitation knowledge campaigns and training, and capacity building will be undertaken to protect their legal labor rights. In addition, the project municipal and county governments have agreed to provide necessary public service facilities in LIP as residential needs, e.g., schools, hospitals, solid waste collection, etc. In addition, Jingyuan County Government will build public rental houses for migrant labor, graduate students, and poor employees.

13. **Labor issues**. Core labor standards will be implemented. Civil works contracts will stipulate priorities to (i) employ local people for works; (ii) ensure equal opportunities for women and men; (iii) pay equal wages for work of equal value; (iv) pay women's wages directly to them; (v) not employ children or forced labor; and (vi) ensure that all contracted labor have written contracts. Specific targets for employment have been included in the GAP and SDAP. BMG is responsible for the implementation of the GAP and SDAP. The detailed SDAP is provided in Table 2. BMG will monitor contractors' compliance with these project assurances in conjunction with the Departments of Labor and Social Security Bureau, and Civil Affairs of Baiyin Municipality and Jingyuan County.

14. Under the project management consulting service, a social and gender specialist will be engaged to support Baiyin PMO director to implement, monitor, and report on progress of the GAP, SDAP, and other social aspects. They will be monitored semiannually and reported via periodic progress reports.

Table 1: Gender Action Plan

Proposed Actions	Targets and Indicators	Agencies Concerned	Timeline	Funding Source
Output 1: Liuchuan Industrial Park infrastructure development				
• Share LIP master plan and project's detailed design to women and promote their participation during consultation • Women participate in LIP's community management • Disclosure to women on LAR policies and programs on compensation as they entitled to receive compensation fees • Public traffic safety awareness and education for residents and employees in LIP • Public hearing for water supply and wastewater treatment tariff in Jingyuan County	• At least 70% of women around LIP (towns of Liuchuan, Mitan, Santan and Wulan) will be informed • 40% female participants • 100% of affected women are aware of LAR compensation program • 30% of women participation • Participants and elected representatives (sex-disaggregated) • 50% women representatives collect information and comments from community-based focus group discussion	**Responsible agencies**: LMC, design agency, women's federation, and contractor **Assisting agencies**: Baiyin PMO, planning bureau, communities, and enterprises	2014–2016	Jingyuan County Government Project design and construction funds
Output 2: Technical and vocational education and training enhancement				
• More access of unemployed workers and surplus labor groups to training and employment opportunities • Development of labor market database • Women are involved in capacity building for development of labor market information and employment services • Training course on cooking	• At least 30% female teachers will be hired • At least 40% female trainees will be enrolled for 3 existing and 5 new short-term training courses by the end of year 5 • 40% of female instructors will participate in CBT and teaching-learning development activities • Sex-disaggregated database • Numbers of workshops for BHRSS personnel on data collection and management (40% female participants) • Numbers of BHRSS personnel receiving training in career guidance (40% female participants) • 100% of participants are women	**Responsible agencies**: Jingyuan County Secondary Vocational School and county labor and social security bureaus **Assisting agencies**: Baiyin PMO, LMC, municipal education bureau, municipal labor and social security bureau, and pertinent enterprises **Responsible agencies**: Municipal and county labor and social security bureaus **Assisting agencies**: Baiyin PMO and LMC	2014–2019 2014–2019	Budget from capacity building component, and local government funds Budget from capacity building component, and local government funds
Output 3: Intelligent transport systems installation				
• Public traffic safety awareness and education for school and residents in Baiyin • Public traffic safety awareness and education for drivers	• 50% female participants • 30% female participant	**Responsible agencies**: Women's federation and municipal traffic police detachment **Assisting agencies**: Mass media, driving schools, and taxi drivers association	2014–2016	CNY20,000/year x 3 years = CNY60,000 from local government budget

Proposed Actions	Targets and Indicators	Agencies Concerned	Timeline	Funding Source
Output 4: Enhanced environment management and capacity development				
• Women are involved in institutional strengthening	• Numbers of BHRSS personnel and stakeholders participating in management development workshops (30% female participants) • Number of persons participating in study tours and exchange of expertise (40% female participants)	**Responsible agencies**: Jingyuan County Secondary Vocational School, municipal and county labor and social security bureaus **Assisting agencies**: Baiyin PMO, LMC, municipal education bureau	2014–2019	Budget from capacity building component, and local government funds
For All Outputs				
Project management • BPMO and implementing agencies assign persons for implementation and reporting of GAP and SDAP • A social and gender specialist is recruited to support the implementation of the GAP and SDAP • BPMO and implementing agencies' staff are trained to ensure effective project implementation • Sex-disaggregated data will be collected to ensure monitoring, evaluation and reporting of GAP and SDAP	• Number of staff members of the BPMO and implementing agencies responsible for GAP and SDAP reporting • Indicators involved social development and gender in PPMS • 100% staff of BPMO and implementing agencies receive training (at least 30% representatives in all trainings) • Women employees in LMC will increase from 10% to 30%	**Responsible agencies**: Baiyin PMO, LMC **Assisting agencies**: Social and gender experts	2014–2018	Budget of the capacity building component: CNY50,000/year x 5 years = CNY250,000
Contractors and enterprises' owners • Generate skilled and unskilled jobs at construction and operation stages • Ensure female workers are aware of the Labor Law • Ensure female workers sign labor contracts • Ensure work environment and conditions on construction sites are responsive to women's needs • Provide separate training on transmission and prevention of HIV/AIDS and sexual harassment for female and male employees.	• 30% of jobs at construction and operation stages are available to women, and 20% of jobs for enterprises in LIP are provided to women (disaggregated by sex and position) (Baseline female construction workers: 15%) • 90% of female workers are aware of the Labor law, and women's rights and interests (Baseline: 50%) • 90% of female workers sign labor contracts (Baseline: 40%) • Separate sanitary facilities (toilets) are available to women in all construction sites • 95% women workers attend the HIV/AIDS and sexual harassment training	**Responsible agencies**: Baiyin PMO, contractor, enterprises in LIP, labor and social security bureau **Assisting agencies**: Women's federation, communities	2014–2018	Project construction and operation funds Costs of enterprises in LIP

BHRSS = Bureau of Human Resources and Social Security, BPMO = Baiyin Municipal project management office, CBT = competitive-based training, CNY = yuan, GAP = gender action plan, LAR = land acquisition and resettlement, LIP = Liuchuan Industrial Park, LMC = Liuchuan industrial park management committee, PPMS = project performance management system, SDAP = social development action plan.
Source: Asian Development Bank estimates.

Table 2: Social Development Action Plan

Actions or Activities	Target and Indicators	Responsible Agencies	Timeline	Budget and Cost
A. LIP infrastructure improvement **Whole LIP** • Provide necessary public service facilities in LIP by Jingyuan County Government as residential needs; such as school, hospitals, commercial properties, etc. • Buses from LIP to the urban area and county town are serviceable • Construct public rental houses for migrant labor, graduated students, and poor employees **Roads** • Improve design of bicycle lanes, sidewalks, crosswalks, street lights, well-lit bus stops and traffic signals and other traffic facilities on roads; and set up warning signs or isolation facilities for section with many heavy industrial vehicles • Traffic safety awareness education program for residents of Baiyin City and Jingyuan County **Water supply and wastewater treatment** • Public hearing for water supply and wastewater treatment tariff in Jingyuan County	• All potential employees and residents in LIP • Satisfaction level of employees and residents in LIP with public service facilities is not less than 70% • Number of public rental houses constructed • 30% of laborers who live in the public rental houses are poor • Satisfaction level of residents in LIP is not less than 80% and new roads are functional and sound • 30% of attendees to traffic safety awareness campaigns are poor • Number of public hearings held • Poor representatives are elected (sex disaggregated) • Poor representatives collect comments from focus group discussion of community based poor groups	**Responsible agencies**: Baiyin PMO, construction bureau, design agency, LMC, planning bureau, price bureau **Assisting agencies**: Health bureau, environmental protection bureau, women's federation, poverty alleviation office, transport bureau	2015–2019	LIP development budget of the local government, the project detailed design cost
B. LIP community management • Prepare LIP community management scheme with participation of poor people • Give training program to the staff of the LIP Community Management Department at least twice a year	• 30% poor participants in LIP community management scheme preparation • Frequency of training programs (sex disaggregated)	**Responsible agency**: LMC **Assisting agency**: Baiyin PMO	2015–2019	LIP operational funds
C. Establishing a public consultation and participation mechanism • Disclose LIP master plan and project information to local residents and employees in LIP • Public hearings are held for transportation, water supply, and wastewater tariff; attended by representatives of the poor	• At least 70% of residents around LIP (four townships) are informed, of which 30% are poor • Number of public hearings • Number of poor representatives	**Responsible agencies**: Baiyin PMO, LMC **Assisting agencies**: Civil affairs bureau, communities, price bureau, women's federation, poverty alleviation office	2015–2019	Project preparation budget, government funds

Actions or Activities	Target and Indicators	Responsible Agencies	Timeline	Budget and Cost
D. Vocational education and training				
• County secondary TVET school meets skill set needs of new and emerging industries in LIP	• At least 200 students enrolled by the end of Year 5, employment rate increased from 70% to 90% • Number of newly hired teachers (at least one dual qualified teacher) • All teachers in the new subject and representatives from enterprises participate in CBT and teaching-learning development activities	**Responsible agency**: Jingyuan County Secondary TVET School **Assisting agencies**: Baiyin PMO, LMC, municipal education bureau, municipal and county labor and social security bureaus	2015–2019	Budget from capacity building component, and local government funds
• Relocated farmers, agricultural workers, unemployed workers and surplus labor groups have more access to training and employment opportunities	• At least 1,000 trainees enrolled for 3 existing and 5 new short-term training courses by the end of Year 5 • Number of instructors participating in CBT and teaching-learning development activities • Numbers of instructors, assessors, and management staff that receive training	**Responsible agencies**: County labor and social security bureau, Jingyuan County Secondary TVET School **Assisting agencies**: Baiyin PMO, LMC, municipal education bureau, municipal labor and social security bureau, pertinent enterprises	2015–2019	
• Matched labor market demand and supply information for effective employment service	• Labor market information software developed or procured • Number of local people accessing and benefiting from career guidance services (sex disaggregated) • Employment promotion program implemented (sex disaggregated)	**Responsible agencies**: Municipal and county labor and social security bureaus **Assisting agencies**: Baiyin PMO, LMC		
E. Baiyin intelligent transport management systems				
• Provide subsidies for use of the public transport to vulnerable groups, e.g., disabled, old people, school age students	• Number of subsidized disabled, old people, and students • Amount of subsidies	**Responsible agencies**: Baiyin PMO, municipal traffic police detachment **Assisting agencies**: Communities, mass media, women's federation	2015–2019	Local government funds
F. Generating job opportunities				
1. Job opportunities generated by project and enterprises in LIP • Generate skilled and unskilled jobs at the construction stage	131 skilled and 150 unskilled jobs generated at the construction stage (30% of which are first made available to the	**Responsible agencies**: Baiyin PMO, LMC, enterprises in LIP	2015–2018	Project construction

Actions or Activities	Target and Indicators	Responsible Agencies	Timeline	Budget and Cost
	poor)			
• Generate skilled and unskilled jobs at the operation stage • Generate job opportunities by attracting enterprises to locate in LIP	• 75 skilled and 31 unskilled jobs generated at the operation stage (30% of which are first made available to the poor) • About 77,859 jobs generated by enterprises in LIP and created 8,392 jobs from the service sector in LIP • 30% of jobs provided to the poor	**Assisting agencies**: Civil affairs bureau, contractors, labor and social security bureaus, poverty alleviation office		and operation funds, construction and operation costs of enterprises in LIP
2. Protection of labor rights and interests of employees in LIP • Conduct knowledge campaign on the Labor Law • Sign labor contracts with employees in LIP • Provide health and labor protection measures to employees in LIP	• 90% of employees in LIP are aware of the Labor Law • 90% of employees in LIP sign labor contracts • Protection measures are provided to not less than 95% of employees in LIP • Employees are paid on time and in full	**Responsible agencies**: Baiyin PMO, labor and social security bureau **Assisting agencies**: LMC, enterprises in LIP	2015–2019	Local government funds
G. Health publicity and HIV/AIDS prevention education				
• Include HIV/AIDS and other communicable disease clauses into contract bidding documents • Public health and HIV/AIDS prevention education conducted to civil works contractors and LIP employees • Health measures for construction workers (e.g., set up a temporary infirmary, use of local medical resources) are established • Conduct diverse publicity activities on HIV/AIDS, e.g., brochures, and posters and picture albums	• Terms of construction contracts and implementation • Public health and HIV/AIDS prevention training courses and number of trainees • Number of health measures • Forms of publicity on HIV/AIDS prevention at the construction stage, e.g., number of brochures, posters and picture albums distributed	**Responsible agencies:** LMC, contractors, local sanitation agencies **Assisting agencies:** Baiyin PMO, communities, enterprises, women's federation, communities	2015-2017	Funds under the construction contract, budget of the sanitation agency (CNY20,000/ year)

BPMO = Baiyin Municipal project management office, CBT= competency-based training, CNY = yuan, LIP = Liuchuan Industrial Park, LMC= Liuchuan Industrial Park Management Committee, TVET = technical and vocational education and training.
Source: Asian Development Bank estimates.

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION

A. Project Design and Monitoring Framework

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact Inclusive and environmentally sustainable development in Baiyin	**By 2022 (baseline 2013)** Ratio of incomes of urban to rural residents reduced from 3.6 to 3.0 in Baiyin municipality	Baiyin Statistical Yearbook	**Assumptions** Development of the Lanzhou–Baiyin Economic Zone remains a national priority of the Government of the PRC Socioeconomic development of Gansu province and Baiyin municipality is steady and in accordance with the 12th and 13th five-year plans
	Unemployment rate in urban area reduced from 22.3% to 10.0% in Baiyin municipality	Baiyin Statistical Yearbook	
	Average per capita net income of rural households increased by 7% per annum from CNY5,772 in Jingyuan county	Baiyin Statistical Yearbook	
	LIP certified as a PRC Eco-Industrial Park by 2025	Annual report of LMC	
Outcome Accelerated industrial transformation and economic diversification of Baiyin	**By 2019 (baseline 2013)** Committed land area for industry increased from 24.0% to 75.0% in the LIP	Annual report of LMC	**Assumptions** Other urban infrastructure in Baiyin are constructed on time and are operational Project facilities are properly operating and maintained TVET long- and short-term courses serve direct needs of industries in the LIP and Baiyin **Risks** Actual economic growth and population are far from estimates Baiyin and the LIP become less competitive in industrial relocation from the eastern coastal region to the western inland region
	Industries operating in the LIP increased from 6 firms in 6 sectors to 15 firms in 8 sectors	Annual report of LMC	
	1,000 trainees, of which 40% are women, enrolled with 80% of participants successfully completing existing and newly developed training courses supported by the project	Jingyuan County Statistical Yearbook and annual reports of JSVS and PETC	
	Modal share of public transport in Baiyin district increased from 36.8% to 40.0%	Annual report of Baiyin Public Transportation Company	
	Number of major road accident (deaths and permanent injury) per 10,000 vehicles reduced from 4.0 to 3.5 and number of traffic violations per vehicle reduced from 0.64 to 0.50	Baiyin Statistical Yearbook and data obtained by the ITS	
	206 skilled and 181 unskilled jobs provided during construction and operation, of which 30% are for women and 30% for the poor	Project completion and periodic progress reports	

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
	LIP certified under ISO 14001	Annual report of LMC	
Outputs 1. LIP infrastructure developed and operational	**By 2020 (baseline 2012)** A new water supply facility of 60,000 m^3/day, about 14.4 km of water transmission pipeline, and about 14.0 km of water supply pipeline network are operational	Project completion report	**Assumptions** Project counterpart fund provided on time Other domestically financed projects are completed on time
	A new wastewater treatment facility of 35,000 m^3/day, about 46.0 km of wastewater pipeline network, effluent reuse and discharge systems, and sludge treatment facilities are operational	Project completion report	**Risk** Delays in land acquisition approvals and implementation
	A new 6.0 km artery road is opened to traffic	Project completion report	
2. TVET enhanced and labor market database developed and operational	Two new long-term and 3 short-term courses developed and 6 existing short-term courses upgraded in JSVS and PETCs with at least one course targeted to women	Project completion report	**Assumption** Government agencies and training institutions are committed to improve quality and relevance of training courses in collaboration with industries and enterprises **Risk** Industries and enterprises are unwilling to collaborate in training course development
	More than 60 teachers and instructors in 14 vocational school and agencies in Jingyuan county are trained successfully, with at least 40% women	Project completion report	
	Labor market database developed and operational	Project completion report	
3. Baiyin district ITS installed and operational	Traffic safety and security system is installed and operational	Project completion report	**Assumption** All government agencies associated with transportation management collaborate closely
	Public transport management and information system is installed and operational	Project completion report	
	Road safety training conducted successfully with 50% women participation (public)	Project completion report	

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
4. Environmental management enhanced and institutional capacity of the executing and implementing agencies strengthened	EMS developed and working for the LIP Staff are trained and systems are in place for effective functioning of executing agency and implementing agencies, with 30% women participation	Project completion report Project completion report	**Assumption** Project financing is provided on time **Risk** Recruitment of the consulting services is delayed.
Activities with Milestones **1. Liuchuan Industrial Park infrastructure development** 1.2 Complete detailed design and updated resettlement plan by Q1 2015 1.3 Complete land acquisition and resettlement by Q4 2016 1.4 Complete bidding and contract award by Q4 2017 1.5 Complete water supply facilities and pipelines by Q4 2019 1.6 Complete wastewater treatment facilities and pipelines by Q4 2016 1.7 Complete road and bridge by Q3 2018 **2. Technical and vocational education and training enhancement** 2.1 Develop curricula for a long-term course by Q4 2016 2.2 Complete bidding and contract award by Q4 2018 2.3 Develop curricula for short-term courses by Q4 2018 2.4 Develop a labor market information database system by Q4 2019 2.5 Conduct training and workshops by Q4 2019 **3. Intelligent transport systems installation** 3.1 Complete detailed design by Q4 2014 3.2 Complete bidding and contract award by Q2 2015 3.3 Install traffic security and control system by Q4 2015 3.4 Install public transport monitoring control system by Q4 2015 **4. Enhanced environmental management and capacity development** 4.1 Engage and mobilize start-up consultant from Q4 2014 to Q2 2015 4.2 Set up organizational arrangement by Q4 2015 4.3 Engage and mobilize project management consulting service from Q3 2015 to Q4 2019 4.4 Engage and mobilize TVET consultant from Q1 2016 to Q4 2019 4.5 Engage and mobilize EMS consultant from Q1 2016 to Q4 2019 4.6 Monitor and complete implementation of environmental management plan, gender action plan, resettlement plan, and social development action plan from Q3 2014 to Q4 2019 4.7 Conduct capacity development training from Q1 2015 to Q4 2019 4.8 Obtain ISO 14001 certification for the LIP by Q4 2019			**Inputs** **ADB:** $100.0 million **Baiyin municipal government:** $79.9 million **Others (domestic banks):** $32.8 million

ADB = Asian Development Bank, EMS = environmental management system, ISO = International Organization for Standardization, ITS = intelligent transport system, JSVS = Jingyuan County Secondary Vocational School, km = kilometer, LIP = Liuchuan Industrial Park, LMC = Liuchuan Industrial Park Management Committee, m^3 = cubic meter, PETCs = public employment training centers, PRC = People's Republic of China, Q = quarter, TVET = technical and vocational education and training.
Source: Asian Development Bank.

B. Monitoring

1. Project Performance Monitoring

1. The project performance management system (PPMS) indicators, their relevance, and monitoring practicalities will be discussed with Baiyin Municipal Government (BMG), the executing agency and Baiyin Public Transportation Company (BPT), Jingyuan County Bureau of Human Resources and Social Security (JHRSS), Liuchuan Industrial Park Management Committee (LMC), and Baiyin Municipal Public Security Traffic Police Detachment (TPD), the implementing agencies; and project beneficiaries during project implementation. Disaggregated baseline data for output and outcome indicators gathered during project processing will be updated and reported quarterly through the periodic progress reports of the project management office (Baiyin PMO) and after each ADB review mission. These periodic reports will provide information necessary to update ADB's project performance reporting system.[1] At the start of project implementation, Baiyin PMO and four implementing agencies, with the project management consulting services, will develop integrated PPMS procedures to systematically generate data on the inputs and outputs of the components, as well as the indicators to be used to measure the project's impact and outcome taking into account the components' scope. Baiyin PMO will be responsible for monitoring and reporting on project performance. The basis for performance monitoring will be the design and monitoring framework (DMF), which identifies performance targets for the impact, outcomes, and outputs of the project. By collecting data from sources identified in the DMF, Baiyin PMO will be able to report on an annual basis the performance of the project. Specific reporting requirements will be set out in the agreement between ADB and the Government. Baiyin PMO will collect the data, calculate the indicators, analyze the results, and prepare a brief report describing the extent to which the project is generating the intended outputs and outcomes, as well as the overall impact on the project municipalities. The relevance and practicability of data collection for indicators was confirmed with Baiyin PMO and the four implementing agencies. Meanwhile, the agreed socioeconomic and environmental indicators to be used will be further enhanced to measure project impacts. Baiyin PMO and the four implementing agencies agreed and confirmed that they will (i) refine and integrate the PPMS framework at the start of project implementation; (ii) confirm that targets are achievable; (iii) develop recording, monitoring, and reporting arrangements; and (iv) establish systems and procedures no later than six months after project inception.

2. Once the project is started, a procurement review for effective implementation (PREI) will be considered at the midterm review stage to revisit the procurement capacity assessment (Attachment 3).

2. Compliance Monitoring

3. BMG, with assistance of Jingyuan County Government and four implementing agencies and the project management consultants will conduct compliance monitoring, and submit reports and information to ADB concerning (i) the use of the loan proceeds, (ii) project implementation, (iii) implementing agencies' project performance, and (iv) compliance with loan and project covenants. These reports will include (i) quarterly progress reports on project implementation and (ii) a project completion report which should be submitted not later than three months after the completion of the project facilities. The compliance status of loan and

[1] ADB's project performance reporting system is available at: http://www.adb.org/Documents/Slideshows/PPMS/default.asp?p=evaltool

project covenants will be reported and assessed through quarterly progress report. ADB review missions will verify status.

3. Safeguards Monitoring

a. Environment

4. Environment safeguards monitoring will include (i) project readiness monitoring, to be conducted by the loan implementation environment consultant (LIEC); (ii) environmental impact monitoring, to be conducted by a licensed entity; and (iii) EMP compliance verification during project implementation and the first year of project operation, to be conducted by Baiyin PMO and LIEC. Monitoring and reporting arrangements defined for this project are described below.

5. **Assessment of project readiness**. Before construction, the LIEC will assess the project's readiness in terms of environmental management based on a set of indicators (Attachment 2, Table EMP-4) and report it to the Asian Development Bank (ADB) and the Baiyin PMO. This assessment will demonstrate that environmental commitments are being carried out and environmental management systems are in place before construction starts, or suggest corrective actions to ensure that all requirements are met.

6. **Environmental impact monitoring**. During construction, regular environmental impact monitoring will be conducted by the environment monitoring center of Baiyin (EMC), contracted by LMC. In addition, construction supervision consultants will be required to conduct frequent internal noise and air quality monitoring around construction sites and to report monitoring results in the framework of their monthly progress reports to Baiyin PMO and LMC. During operation, the LMC will contract the EMC to conduct environmental impact monitoring during the first year of operation. Monitoring will also be periodically conducted by the local environmental authorities in the framework of their legal mandate to check compliance with applicable environmental regulations. They will be responsible for undertaking regular and random environmental monitoring and inspection activities before, during, and after construction as well as in the event of emergencies. The wastewater treatment plant will install an online monitoring system and the data will be automatically transmitted to Baiyin Municipal Environment Protection Bureau (EPB). In addition, Baiyin Municipal EPB will conduct quarterly inspections. Three community representatives from villages of Nanchuan, Nanshanwei, and Xinmin near the project sites are determined as independent supervisors to perform regular site inspections.

7. **Environmental management plan compliance verification and reporting**. Environmental management plan (EMP) compliance monitoring will be undertaken by the Baiyin PMO, with support of LIEC. Baiyin PMO will report to ADB the project's adherence to the EMP, information on project implementation, environmental performance of the contactors, and environmental compliance through the quarterly project progress reports and annual EMP progress and monitoring reports (Table 1). Quarterly progress reports by Baiyin PMO to ADB will include a summary of EMP implementation progress. The LIEC will support the Baiyin PMO in developing the annual EMP progress and monitoring reports. The reports should confirm the project's compliance with the EMP, local legislation such as environmental impact assessment (EIA) requirements in the People's Republic of China (PRC), and identify any environment related implementation issues and necessary corrective actions, and reflect these in a corrective action plan. The performance of the contractors will also be reported on with respect to environmental protection and impact mitigation. The operation and performance of the project grievance redress mechanism, environmental institutional strengthening and training, and compliance with all covenants under the project will also be included in the report.

8. **Environmental acceptance monitoring and reporting**. Within three months after each component completion, or no later than 1 year with permission of the Baiyin EPB, environmental acceptance monitoring and audit reports of completion of each subcomponent under project component 1 shall be: (i) prepared by a licensed environmental monitoring institute in accordance with the PRC Regulation on Project Completion Environmental Audit (Ministry of Environmental Protection, 2001), (ii) reviewed for approval of the official commence of individual component operation by environmental authorities, and (iii) finally reported to ADB (Table 1). The environmental acceptance reports of the component completions will indicate the timing, extent, effectiveness of completed mitigation and of maintenance, and the needs for additional mitigation measures and monitoring during operations.

b. Resettlement

9. Internal and external monitoring of resettlement plan implementation will be conducted. Monitoring methodologies are specified in the resettlement plan. The project management consulting service will carry out internal supervision and monitoring and reporting to ensure compliance with the provisions of the resettlement plan. Baiyin PMO and the project management consulting service will agree to a set of supervision milestones with ADB, to ensure timely and effective implementation of resettlement activities. An independent agency under contract to Baiyin PMO will implement external monitoring and evaluation. Semiannual external monitoring reports and annual evaluation reports will be forwarded directly to both the Baiyin PMO and ADB.

4. Gender and Social Action Plans Monitoring

10. Monitoring of the gender action plan (GAP) and social development action plan (SDAP) will be incorporated into the PPMS. Clear targets and indicators have been established and some indicators, such as those on employment, are also captured in the DMF. Assistance will be provided for the executing and implementing agencies by the resettlement and social development consultant who will help to set up effective monitoring systems and work with the focal points in the executing and implementing agencies to ensure implementation of the GAP, and SDAP. The GAP and SDAP will be monitored semiannually and reported via the periodic project progress reports.

C. Evaluation and Reporting

11. ADB, BMG, and the four implementing agencies will undertake a semiannual review mission to evaluate the progress of project implementation. ADB, BMG, and the four implementing agencies will undertake a comprehensive midterm review two years after the start of project implementation to have a detailed evaluation of the scope, implementation arrangements, resettlement, achievement of scheduled targets, and progress on the agenda for policy reform and capacity building measures. Feedback from the PPMS activities will be analyzed. Within three months of physical completion of the project, Baiyin PMO will submit a project completion report to ADB.[2]

12. Baiyin PMO will provide ADB with (i) quarterly progress reports in a format consistent with ADB's project performance reporting system; (ii) consolidated annual reports including (a) progress achieved by output as measured through the indicator's performance targets, (b) key

[2] Project completion report format available at: http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar

implementation issues and solutions, (c) updated procurement plan, and (d) updated implementation plan for the next 12 months; and (iii) a project completion report within six months of physical completion of the project.

13. BMG and the four implementing agencies have agreed on the following reporting commitments: (i) submission of quarterly progress reports during project implementation; (ii) submission of semiannual report and annual report on the progress of safeguards monitoring, i.e., resettlement activities (semiannually), EMP implementation (annually), GAP, and SDAP; (iii) submission of project completion report three months after completion of the project; and (iv) submission of audited project accounts and financial statements six months after the end of fiscal year. PPMS data will be incorporated in the quarterly progress reports.

14. The following table summarizes the key reporting requirements during project implementation.

Table 1: Key Reporting Requirements

Report	Reference	Timing of Reporting	Responsible Agency
Project performance management system - Develop comprehensive project performance management system procedures - Reporting of baseline and progress data including environmental management plan	Project Agreement, Schedule, paragraphs	- No later than 6 months after loan effectiveness - Semiannual, included in the periodic project progress reports	- Baiyin project management office, four implementing agencies, and the project management consulting service
Project progress reports	Project Agreement, Schedule, Article	Quarterly, within one month after the end of each quarter	- Baiyin project management office
Audited project accounts and financial statements auditor's report (including auditor's opinion on the use of the imprest account and statement of expenditures)	Project Agreement, Schedule, Article	Not later than six months after the closure of fiscal year (end of June)	- Baiyin Municipal Government and the four implementing agencies
Resettlement monitoring - Internal monitoring reports for the executing and implementing agencies	Project Agreement, Schedule, paragraphs	- Semiannual, included in the periodic project progress reports	- Baiyin Municipal Government and the four implementing agencies
- Land acquisition and resettlement phase–external monitoring report		- Semiannual	- External resettlement monitoring firm
- Post-land acquisition and resettlement phase–external monitoring report		- Annual reports for two years after completion of resettlement activities	- External resettlement monitoring firm
- Resettlement completion report		- Within three months after project completion	- Baiyin Municipal Government, four implementing agencies, and project management consulting service
Other social monitoring - Reporting on gender action plan implementation	Project Agreement, Schedule,	- Semiannual, included in the periodic project progress reports	- Baiyin project management office, and the project

Report	Reference	Timing of Reporting	Responsible Agency
- Reporting on social development action plan implementation	paragraphs	- Semiannual, included the periodic project progress reports	management consulting service
Environmental report			
- Quarterly reporting on environment monitoring and EMP during the construction phase implementation progress report	Project Agreement, Schedule, paragraphs	- Quarterly, included in the periodic progress report	- Baiyin project management office and loan implementation environment consultant
- Environment monitoring during the construction phase and operation phase		- Annually, with a separate report until project completion report is issued	
Project completion report			
	Project Agreement, Schedule, Article	Not later than three months after the physical completion of the project	- Baiyin Municipal Government, four implementing agencies, and project management consulting service

D. Stakeholder Communication Strategy

15. Project information will be communicated through public consultation, information disclosure mechanism in ADB's and government's website, meetings, interviews, focus group discussions, and community consultation meetings, in accordance with ADB's requirements of information disclosure policy.

16. **Environment**. Section VII of the project initial environmental examination (IEE) report has described the meaningful public participation and consultation implemented during project preparation. Plans for public involvement during construction and operation stages have been developed during project preparation. Baiyin PMO and LMC are responsible for public participation during project implementation. These plans include public participation in (i) monitoring impacts and mitigation measures during the construction and operation stages; (ii) evaluating environmental and economic benefits and social impacts; and (iii) interviewing the public after the project is completed. These plans will include several types of public involvement, including site visits, workshops, investigation of specific issues, interviews, and public hearings, as indicated in Table 2. Three community representatives from the villages of Nanchuan, Nanshanwei, and Xinmin near the project sites have been identified as community environment supervisors to perform regular site inspections. The cost for public consultation and participation during project implementation will be borne by the LMC. The budget for public consultation is estimated at approximately $4,400.

Table 2: Environment Consultation and Communication Plan

Organizer	Format	No. of Times	Subject	Attendees	Budget ($)
Construction Stage					
BPMO, LMC, LIEC	Public consultation & site visits	4 times: once before construction commences and once each year during construction	Adjusting of mitigation measures, if necessary; construction impact; comments and suggestions	Residents adjacent to components, CES, CSCs	2,400
BPMO, LMC, LIEC	Expert workshop	As needed, based on public consultation	Comments and suggestions on mitigation	Experts of various sectors, BEPB, CES	800

Organizer	Format	No. of Times	Subject	Attendees	Budget ($)
			measures, public opinion		
Operational Stage					
LMC, LIEC	Public consultation and site visits	Once in the first year	Effectiveness of mitigation measures, impacts of operation, comments and suggestions	Residents adjacent to component sites, CES	400
LMC	Public workshop	As needed based on public consultation	Effects of mitigation measures, impacts of operation, comments and suggestions	Representatives of residents and social sectors, CES, BEPB	400
	Public satisfaction survey	At least once	Comments and suggestions	Project beneficiaries	400
Total budget:					**4,400**

BEPB = Baiyin Environmental Protection Bureau, BPMO = Baiyin Project Management Office, CES = community environment supervisors, CSCs = construction supervision companies, EMC = environmental monitoring stations, LMC = Liuchuan Industrial Park Management Commission, LIEC = loan implementation environment consultant.

17. Information disclosure relating to environment safeguards will continue throughout project implementation. The project's environmental information will be disclosed by the Gansu Provincial Environmental Protection Department, Baiyin Environmental Protection Bureau and ADB as follows:

(i) a summary of the domestic EIA report in Chinese was disclosed on the local governments' websites before the EIA report was approved by Gansu Provincial Environmental Protection Department (30 June 2014);
(ii) copies of the domestic EIA (in Chinese) are available on request in both the Gansu Provincial Environmental Protection Department and Baiyin Municipal Environmental Protection Bureau;
(iii) the project IEE is disclosed on the project website at www.adb.org;
(iv) all environmental monitoring reports during project implementation will be available at www.adb.org; and
(v) in accordance with the Interim Provisions on Public Participation in EIA in Gansu Province, BMG will appoint three community representatives as environment supervisors. Three villagers from Nanshanwei, Nanchuan, and Xintian villages have been selected (names not published here). The environment supervisors will perform supervision duty during construction and operation of the project facilities, and accompany the loan implementation consultant and the LMC during periodic construction site visits and public consultations.

18. **Involuntary resettlement**. All of the affected households and towns/townships, leaders and town and township and district governments will be involved in the project impact and socioeconomic survey. Through meetings, interviews, focus group discussions, public consultation workshops, and community consultation meetings; local representatives have participated in the planning and concerns have been integrated into the resettlement plan. Before implementation, Baiyin PMO and LMC will further discuss and consult with the affected persons' representatives the impacts on every town/township and the detailed compensation plan to ensure affected persons' interests are protected and to provide employment opportunities for the affected persons' livelihoods as a result of project implementation. Baiyin PMO and LMC will disclose the resettlement plan in the offices as well as the community offices

and to affected people in the local language. The resettlement plan is also posted on the ADB website. Resettlement information booklets were distributed to affected households. This guideline contains information such as the affected project area, proposed land acquisition and relocation implementation progress and procedure, compensation standards for land acquisition, relocation assistance, and livelihood restoration strategy. LMC will establish a project resettlement unit for supervision of implementation, continued public consultation, monitoring of progress, and response to grievances. The grievance redress procedures will be established and explanations have been included in the resettlement information booklets.

19. GAP and SDAP. Consultations with communities have taken place and will continue at different points in the preparation and implementation of the GAP and SDAP within the components, and will be designed not only to inform people about the component or specific activities related to its preparation and implementation, but also to enable people in the community to ask questions, make suggestions, state preferences, and express concerns. Special attention will be paid to the participation of women and any other vulnerable groups, such as the poor. GAP and SDAP indicators will be monitored and reported semiannually and verified by an external resettlement and social monitor. Public awareness program on LIP development, public traffic safety and labor law will be conducted as part of the SDAP. Public hearings will be held for transportation, water supply, and wastewater treatment tariff, attended by representatives of poor.

20. **Public disclosure**. Public disclosure of all project documents will be undertaken through the implementing agencies and on the ADB website including the project data sheet, design and monitoring framework, IEE, resettlement plan, and the report and recommendation of the President. Disclosure of external resettlement and social and environmental monitoring reports will be undertaken during project implementation.

X. ANTICORRUPTION POLICY

1. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project.[1] All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all project contractors, suppliers, consultants and other service providers. Individuals/entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the project.[2]

2. To support these efforts, relevant provisions are included in the loan agreement, and the bidding documents for the project. ADB's Anticorruption Policy (1998, as amended to date) will be explained to and discussed with BMG and four implementing agencies–BPT, JHRSS, LMC, and TPD. Consistent with its commitment to good governance, accountability and transparency, ADB reserves the right to investigate any alleged corrupt, fraudulent, collusive, or coercive practices relating to the project. To address the risks on governance and corruption related to procurement of civil works, relevant provisions of ADB's Anticorruption Policy will be included in the loan agreement and the bidding documents for the project. In particular, all contracts financed by ADB in connection with the project will include provisions specifying the right of ADB to audit and examine the records and accounts of BMG, BPT, JHRSS, LMC, TPD, and all contractors, suppliers, consultants, and other service providers as they relate to the project. BMG has indicated its commitment to promote good governance and establish a corruption-free environment under the project. Further to this, a number of good governance and anticorruption provisions have been included in the loan and project agreements.

3. BMG will comply with ADB's Anticorruption Policy. BMG agrees (i) that ADB reserves the right to investigate any alleged corrupt, fraudulent, collusive, or coercive practices relating to the project; and (ii) to cooperate fully with, and to require contractors and suppliers 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.

4. BMG will (i) conduct periodic inspections on the contractors' activities related to fund withdrawals and settlements; and (ii) ensure that all contracts financed by ADB in connection with the project include relevant provisions of ADB's Anticorruption Policy in all bidding documents for the project specifying the right of ADB to audit and examine the records and accounts of Baiyin Project Management Office and all the contractors, suppliers, consultants and other service providers as they relate to the project.

5. BMG will also (i) involve the agencies responsible for oversight of each implementing agency in bidding and construction to enhance construction quality control and supervise effective work; (ii) introduce a dual-signing system in which each works contract winner also signs an anticorruption agreement with the employer; (iii) periodically inspect the contractors' activities related to fund withdrawals and settlements; (iv) require the project management consulting service to support Baiyin Project Managenent Office and four implementing agencies to ensure good governance, accountability, and transparency in project operations; and (v) in consultation with relevant ministries at the central level, update rules and regulations on corporate governance and anticorruption to enhance the transparency of the operations of BMG, BPT, JHRSS, LMC, and TPD.

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[1] Available at: http://www.adb.org/sites/default/files/pub/1998/anticorruption.pdf.
[2] ADB's Anticorruption and Integrity Office web site is available at: http://www.adb.org/integrity/unit.asp.

XI. ACCOUNTABILITY MECHANISM

1. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make a good faith effort to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, they should approach the Accountability Mechanism.[1]

[1] For further information see: http://www.adb.org/Accountability-Mechanism/default.asp.

XII. RECORD OF PAM CHANGES

1. The PAM is a living document and is subject to change after ADB Board approval of the project's report and recommendation of the President. It is concise yet informative, providing checklists of all activities related to project implementation along with the necessary procedures for the project management office's to effectively implement and monitor the project.

No.	Changes/Updates	Date	Remarks
1	PAM initial draft agreed	30 May 2014	Agreed during the loan FF mission
2	Updated PAM agreed	15 October 2014	Agreed during the loan negotiation

PAM – ATTACHMENT 1

June 2014

PRC: Gansu Baiyin Integrated Urban Development Project

Liuchuan Industrial Park - Environmental Management System (EMS) Project Sub-Component

Asian Development Bank

Liuchuan Industrial Park
EMS Component Project – June 2014

CONTENTS

ABBREVIATIONS

ADB	–	Asian Development Bank
BPMO	–	Baiyin Project Management Office
EMIS		Environmental Management Information System
EMS		Environmental Management System
EPR		Emergency Preparedness and Response
LIP		Liuchuan Industrial Park
LMC		Liuchuan Industrial Park Management Committee
MSW	–	municipal solid waste
PRC	–	People's Republic of China
WWTP		Wastewater treatment plant

CURRENCY EQUIVALENTS

(9 May 2014)

Currency Unit	–	Yuan (CNY)
CNY1	=	$.1639
$1	=	CNY6.1

Figure EMS-1: Location of the Liuchuan Industrial Park (LIP) in Baiyin Municipality

Figure EMS-2: Liuchuan Industrial Park (LIP) Phase 1 (blue) and Phase 2-3 (red)

I. THE GANSU BAIYIN INTEGRATED URBAN DEVELOPMENT PROJECT

1. Baiyin is a medium-sized city in Gansu province (Gansu), one of the 12 less-developed provinces and autonomous regions targeted under the Western Development Strategy of the People's Republic of China (PRC). The city was originally established as a national copper mining base in the 1950s but its socioeconomic development suffered major setbacks after continuous copper exploitation and depletion, and environmental degradation.

2. Since the Eleventh Five-Year Plan 2006–2010, Baiyin received special support from the national and provincial governments to jumpstart its industrial transformation. The goal was to transform Baiyin from a resource-exhausted mining city into a new industrial center through technology upgrading and diversification of existing production chains, while achieving efficient use of resources and reducing adverse impacts on the environment.

3. In 2008, the Gansu Baiyin Urban Development Project (Phase I project) was approved by ADB, providing assistance on urban road construction and district heating supply to support the initial stage of economic diversification in Baiyin district and Pingchuan district. Although Baiyin's industrial output continued to grow by 18.9% annually in 2008–2012, urban infrastructures are still inadequate to support its economic diversification through industrial transformation. Baiyin's economy still lags behind as its per capita gross domestic product in 2012 remained at $4,136 (CNY25,231), only 66% of the national average of $6,288 (CNY38,354).

4. Baiyin's industrial transformation aims to facilitate inclusive and environmentally sustainable urban development. Although the Phase I project supported Baiyin to kick start its economic diversification, the city faces emerging urban development challenges. The water supply and wastewater treatment facilities are inadequate and land development cannot keep pace with the industrial transformation. Uneven urban–rural development broadens income disparities between two urban districts and three rural counties, thereby undermining inclusive socioeconomic growth. Limited opportunities for vocational capacity development also hinder the surplus labor force and laid-off workers from developing skills in support of the transition. Frequent traffic congestion and road hazards in the urban district adversely affect logistics and people's quality of life.

5. The Gansu Baiyin Integrated Urban Development Project will contribute to the circular economy (CE) goal of the Baiyin municipal government (BMG). The project will support: (i) development of Liuchuan industrial park (LIP); (ii) efficient water service for drinking and industrial processing; (iii) wastewater treatment for residential and industrial areas in LIP; (iv) strengthen vocational education and training capacity in Baiyin and Jingyuan County; (v) enhance environmental management for industrial transformation; and (vi) enhance road safety and traffic management in Baiyin district.

II. SUBCOMPONENT ON ENVIRONMENT MANAGEMENT SYSTEM (EMS)

A. Overview

6. Under subcomponent (v) of the Gansu Baiyin Urban Development II Project, the project will support BMG and the Liuchuan Industrial Park Management Committee (LMC) to develop a comprehensive environmental management system (EMS) for the LIP, and assist LIP moving toward eco-industrial park (EIP) accreditation under national CE and EIP promotion programs coordinated by the PRC Ministry of Environment Protection (MEP) and the National Development and Reform Commission (NDRC).

7. **The project area.** The main project area is located in a 23-km^2 planned area of Liuchuan Industrial Park (LIP) of the poverty-stricken Jingyuan County, one park of the "one zone and six parks" comprising Baiyin Industrial Concentrated Zone, which is a strategic industrial base of the Lanbai (Lanzhou – Baiyin) Core Economic Zone. It aims at attracting large and medium industrial enterprises from the Eastern Region, focusing on rare earth materials, non-ferrous metal processing, coal chemical, equipment manufacturing, warehousing, logistics, and construction material industries. The area possesses advantages in terms of land, coal, water and labor resources. It is comprised mainly of wasteland and low hills, with little farmland and few inhabitants. There are provincial level road and railway links. The LIP will be supplied with centralized water supply and wastewater collection and treatment systems (under components ii and iii of the project). Water supply will come from the Yellow River some 15 kilometers away. The long-term plan is for 100% recycling of wastewater effluent for on-site landscaping or industrial reuse, but until this has been designed and constructed there are plans to discharge treated wastewater effluent to the nearby Dasha River. Solid waste can be disposed of at the nearby Jingyuan county landfill site (currently being extended), while hazardous waste can be hauled to the hazardous waste treatment facility located in Lanzhou.

8. **Current pollution sources and environment management capacities within LIP.** A number of industrial complexes have already been established in the LIP. The major potential hazardous sources and pollutants of concerns identified include the following:

Industries	**Pollutants of Concern, Parameters**			**Relevant Pollutant Discharge Standards**
	Industrial wastewater	**Gas emissions**	**Solid and hazardous wastes[1]**	
Non-ferrous metal smelting	pH, suspended solids, chemical oxygen demand, sulfide, volatile phenol, lead, zinc, arsenic, cadmium, mercury, hexavalent chromium and other	Particulate matter, sulfur dioxide, fluorides, asphalt smoke	Drosses and skimmings, spent linings and refractories, wastes/residues/by-products of air pollution abatement systems, wastes and residues from hydrometallurgical processes.	Emission standard of pollutants for aluminum industry (GB25465-2010)
Rare earth	pH, suspended solids, fluoride, petroleum, COD, TP, TN, ammonia, zinc, thorium, uranium, cadmium, lead, arsenic, chrome, hexavalent	Sulfur dioxide, sulfuric acid mist, hydrogen chloride, chlorine, nitrogen oxide, thorium, uranium	Spent hydroxide cake, spent monazite solids, spent sodium fluoride, waste filtrate, waste solvent, spent lead filter cake, lead backwash sludge, solvent extraction crud	Emission Standards of Pollutants from Rare Earth Industry (GB26451-2011)
Coal Power generation	pH, suspended solids, sulfides, volatile phenol, lead, arsenic, cadmium, petroleum, water temperature, etc.	Smoke, NO_X, SO_2	Fly ash, bottom ash, boiler slag, flue gas desulfurization sludge, demineralizer regenerants and rinses, boiler cleaning wastes, pyrites	Emission standard of air pollutants for thermal power plants. (GB 13223-2011)

[1] In addition to conventional domestic waste streams from packaging, food processing, and other domestic waste streams in the industrial enterprises.

Industries	Pollutants of Concern, Parameters			Relevant Pollutant Discharge Standards
	Industrial wastewater	Gas emissions	Solid and hazardous wastes[1]	
Ceramics	COD, phenol, etc.	Dust, smoke, SO_2	Process sludge resulting from glazing, plaster, and grinding activities, broken ware, solids from dust treatments, spent plaster molds.	Emission Standard for Pollutants from Ceramics Industry (GB 25464-2010)

Sources: For industrial wastewater and gas emissions: LIP Phase 1 planning EIA (2012). For solid and hazardous waste: (1) Guidance Document for Management of Wastes from the Base Metals Smelting Sector, Environment Canada, Web.; (2) U.S. Congress, Office of Technology Assessment, Managing Industrial Solid Wastes From Manufacturing, Mining, Oil and Gas Production, and Utility Coal Combustion-Background Paper, OTA-BP-O-82 (Washington, DC: U.S. Government Printing Office, February 1992); (3) Rare Earth Elements: A Review of Production, Processing, Recycling, and Associated Environmental Issues, US EPA, EPA 600/R-12/572, December 2012; (4) Ceramics Manufacturing Environmental Issues, (ceramic_and_tile.pdf), unidentified author.

9. Any accidents or wrong-doing will cause environmental pollution in the LIP. LMC does not have any EPR system that can provide monitoring and response facilities for LIP's needs. The PPTA review strongly recommended establishing an EMS including emergency preparedness and response (EPR) mechanism for the LIP due to the nature of current and future industries within the LIP, the vulnerability of the Dasha River (tributary to Yellow River), the proximity to residential areas, and the need to abide by regulatory compliance.

10. **PRC programs for circular economy (CE) and eco-industrial parks (EIP).** The PRC National Demonstration EIP Program under MEP divides the development process of an EIP into three stages: (1) EIP planning, (2) EIP implementation, and (3) accreditation of a National Demonstration EIP. According to current practices, the first planning stage tends to last for two to three years for those parks that have already conducted some eco-industrial development practice and obtained an ISO 14001-certified EMS for the entire industrial park. The second stage - EIP implementation - tends to last for three to six years. The NDRC implements the National Pilot Circular Economy Zone Program (NPCEZP) by stimulating cleaner production and eco-design at the firm level, promoting industrial symbiosis and EIPs at the industrial cluster level, and establishing regional eco-industrial networks at the regional level. The MEP and NDRC follow similar and complementary pathways. The PRC Standard for Sector-Integrated Eco-Industrial Parks (HJ 274-2009) issued by MEP (see **EMS-Appendix 4** for full copy of standard) defines the following requirements to quality for EIP accreditation:

(i) The industrial park (IP) has effectively implemented all relevant national and local legislation, regulations and policies;
(ii) No significant pollution accident occurred in the last three years;
(iii) The environmental quality satisfies the environmental function zone standards; all pollutant emitters in the park satisfy the discharge standards; the total pollutant discharge amount is within the total amount control targets;
(iv) An "eco-industry park construction plan" has been prepared and was approved by MEP/State EIP Demonstration Leading Group Office and local government;
(v) The IP has a dedicated environment unit and staff with clear responsibilities for environment management. An independent environmental protection agency dedicated to the IP is encouraged; environmental protection is one performance indicator to assess the performance of IP leaders;
(vi) The IP is ISO 14001 certified;
(vii) New buildings in the IP satisfy energy saving standards for buildings;

(viii) The IP has formed major industry clusters and significant eco-industry chains.

11. **Short-, mid- and long-term objective of EMS subcomponent.** The EMS subcomponent aims at ensuring safe, environmentally friendly and sustainable operations in the LIP. The primary and short-term objective of the EMS subcomponent is to enhance environmental management and emergency response capacity of the LIP to minimize environmental pollution and mitigate negative impacts of environmental incidents (to comply with requirements (i)-(v) and (vii) of HJ274-2009 defined above). The mid-term objective (2018) of the subcomponent is to achieve ISO 14001 EMS certification for the LIP (to comply with requirement (vi) of HJ274-2009 defined above, Outcome Statement). The proposed EMS for LIP is designed to achieve the EIP accreditation requirements (HJ 274-2009) by 2025 (Impact Statement).

B. Main EMS components

12. The proposed EMS will target pollutants of concern from existing and future industries in the LIP, and will include an environmental management information system (EMIS), an emergency warning system, and rescue and mitigation strategies and measures. The proposed scope of the subcomponent includes:

(i) establishment of an EMS including EMS Center within the LIP under LMC including development of clear EMS management procedures, procurement and installation of office equipment, mobile environmental monitoring equipment;
(ii) development of an emergency preparedness and response (EPR) plan, including EPR management procedures, procurement of emergency responses equipment;
(iii) establishment of an environmental management information system (EMIS) targeting pollutants of concern including EMIS software; and
(iv) training program including study tours on all EMS aspects.

13. Drawing on the elements of the established business management process of “plan, do, check, and act,” the EMS must include a methodological approach to managing environmental and social risks and impacts in a structured way on an ongoing basis. A good EMS appropriate to the nature and scale of the project promotes sound and sustainable environmental and social performance, and can lead to improved financial, social, and environmental outcomes.

C. Environmental management system for LIP

14. The **EMS for LIP** will comply with international best practices including IFC Performance Standards[2] (Standard 1 covers Assessment and Management of Environmental and Social Risks and Impacts), and incorporate the following elements: (i) policy; (ii) identification of risks and impacts; (iii) management programs; (iv) organizational capacity and competency; (v) emergency preparedness and response; (vi) stakeholder engagement; and (vii) monitoring and review. **EMS-Appendix 5** provides a programmatic outline of the strategies that will be incorporated into the development of the EMS, while **EMS-Appendix 6** provides detailed roles and responsibility matrices of the LMC and county EPB. All of these EMS aspects will be further explored and refined by the EMS component project international and national consultants who will assist the LMC in the establishment of the EMS as well as moving the LMC and the entire LIP toward ISO14001 certification.

15. The EMS component project has been structured in recognition of the respective roles of the LIP management and staff responsibilities versus the responsibilities and normal operating practices of

[2] International Finance Corporation, Performance Standards on Environmental and Social Sustainability, January 1, 2012

the county and municipal EPBs. The EMS establishment, planning and strategic oversight roles are largely with the LMC and these activities include:

- Setting environmental policy, objectives and targets for LIP;
- Developing a program to meet objectives and targets, including resources;
- Communication plan, document control, and emergency preparedness;
- Approval of LIP enterprise operational plans relative to environmental aspects;
- Introduction of LIP enterprise environmental measures to minimize environmental impacts and wastes such as industrial symbiosis, resource conservation, etc; and
- Monitoring and measuring performance of EMS.

16. The Jingyuan County EPB role will be to ensure that the water supply, wastewater, and waste management systems are properly managed for minimal environmental problems and to foster environmental sustainability of operations. Their role will be regulatory to ensure compliance with PRC laws and regulations as well as technical oversight to help LIP and its tenants stay abreast of advanced environmental techniques.

D. Emergency preparedness and response (EPR) system

17. An emergency preparedness and response (EPR) plan will be prepared through the EMS component project consultancies and training program. A national environmental preparedness and planning consultant will be engaged to work with the LMC to define the EPR program needs as well as necessary emergency response equipment, and perform initial training. The EPR plan will address all aspects of planning and managing emergencies including the following:

- Analysis of LIP hazards and current capabilities to manage risks;
- Vulnerability analyses to estimate probabilities of various potential emergencies and potential impacts to people, property, business and environment;
- Development of formal plan including priorities, budget, training, etc.;
- Procurement and installation of necessary EPR equipment based on needs identified; and
- Implementation of the plan, including coordination of internal and external stakeholders.

18. The more common elements to be addressed in the LIP EPR plan will include the following: (i) fire protection; (ii) hazardous materials spills; (iii) failure of pollution control and/or spill containment equipment; (iv) natural disasters such as floods, hurricanes, tornadoes, winter storms, earthquakes; (v) technological failures of equipment; (vi) security breaches. Industries that have already been established in the LIP will be required to participate in the EPR system.

E. Environmental management information system (EMIS)

19. An environmental management information system (EMIS) will be developed and implemented to help LMC track the LIP and its industries compliance with relevance with, and progress towards, achieving eco-industrial park accreditation. The web-based EMIS will provide an automatic, state-of-the art ICT solution and include an administrative and technical database of enterprises, emission sources, waste streams, monitoring data analysis, embedded GIS for the industrial estates and surrounding environment and population. It will also be a tool to assist performance monitoring and technological risk assessment and real-time emergency management in case of accidental release of hazardous materials, atmospheric or aquatic dispersion, fires etc;

20. The EMIS will focus on the recommended **performance indicators** defined in the government's key standards on eco-industrial parks, including 'Standard for Eco-Industry Park' (HJ/T274-2006), 'Revised Standard for Eco-Industry Park' (MEP, 2012) and 'Management of National Demonstration Eco-industrial Park' (trial) (MEP. [2007] 188):

- Resource efficiency: energy consumption per added value, solid waste generation per added value, water reuse ratio etc;
- Pollutant prevention and abatement: COD emission per added value, SO_2 emission per added value, hazardous waste disposal, wastewater treatment compliance, solid waste collection and disposal system, environmental accidents, pollutant emission compliance ratio, etc;
- Industrial park management: EIA completion, emergency preparedness and response, public complaints redress, etc. [3]

F. Training

21. The training program will focus on ISO 14001 certification, emergency preparedness and response, and EMIS. The training program will include study tours to other PRC industrial parks which have achieved ISO 14001 certification and/or EIP accreditation. A national training consultant will work with the EMS, EPR and EMIS consultants to develop and implement the training program.

G. Implementation schedule

22. The EMS project component will be implemented in three stages. **Stage 1 (3 months)** will be reconnaissance-based and will review international and PRC best practices for industrial park environmental management, emergency response and environmental management information systems. Data will simultaneously be collected on current management systems and practices proposed for implementation in LIP and other Baiyin industrial parks, as well as EMS and/or EPR systems established at industrial estate level (for those industries already located within LIP).

23. **Stage 2 (6 months)** will develop detailed plans to establish the LIP EMS, the LIP EPR, and the LIP EMIS, including staffing and budget requirements, equipment, policies and management systems for all of these outputs.

24. **Stage 3 (9 months)** will provide assistance to LMC in implementing the plans developed under Stage 2. LMC ISO 14001 certification is targeted by month 18.

25. Major risks to the successful implementation of the EMS project component are the (i) inadequate or delayed establishment of EMS Center within the LIP under LMC, (ii) delayed submission of required LIP staffing, (iii) inadequate performance of consultants, and (iv) inefficient implementation of EMS component project findings and outputs in the LIP. To mitigate risks, the recruitment and performance of consultants will be monitored closely. The government has agreed to establish the EMS Center within the LIP under LMC in a timely manner and adequate counterpart support. Close coordination among the consultants, LMC, BPMO, and ADB will further mitigate risks.

[3] Industries that have already established within LIP are partly complying with EIP accreditation indicators (e.g. EIAs have been prepared for each industry; industrial wastewater pretreatment systems have, or will be, installed), or will be required to comply with (e.g. setting water reuse targets, establishing emergency preparedness and response procedure, etc).

H. Budget

26. The EMS project component is estimated to cost $430,000 financed under the loan. The government will provide counterpart support in the form of office space, remuneration and per diem for counterpart staff, city transport, miscellaneous administration and support costs, and other in-kind contributions. The design and monitoring framework is in **EMS-Appendix 1** and cost estimates and the financing plan are in **EMS-Appendix 2**.

I. Implementation Arrangements

27. The EMS project component will be implemented over 1.5 years from August 2015 through January 2017 coinciding with the initial steps of the project implementation period. LMC will have overall subcomponent implementation responsibility, under the supervision of the BPMO. LMC will establish an EMS oversight board which will include the LMC, Jingyuan County EPB, and Baiyin EPB.

28. The EMS project component will finance equipment, consulting services, training, and domestic study tours. Consulting services totaling 19 person-months (3 person-months international and 16 person-months national) will be required. Consultants will provide expertise in EMS development and implementation, emergency preparedness and response (EPR) planning, environmental management information system (EMIS) development; and training on all of these aspects.

29. Consultants will be engaged (under Component D of the project) through a firm according to ADB Guidelines on the Use of Consultants (2010, as amended from time to time) using quality- and cost-based selection criteria and simplified technical proposal procedures. A quality - cost weighting of 90:10 is considered appropriate because the EMS component project is a multidisciplinary assignment that requires innovation and creativity, and the quality of the consulting services will strongly determine the performance of the LIP EMS. Equipment will be procured in line with ADB Procurement Guidelines (2010, as amended from time to time).

30. Outline terms of reference for the consultants are in **EMS-Appendix 3**.

EMS-APPENDIX 1 – DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact LIP promotes sound environmental practices through its EMS program including comprehensive planning for industrial symbiosis	Eco-Industrial Park (EIP) accreditation under MEP or NDRC by 2025.	EIP accreditation certificate. Annual reports and statistics during project implementation from BPMO. Annual environment management reports of LIP (by LMC) to MEP or NDRC.	**Assumptions** The government and LMC remain committed to development of an environmentally friendly and sustainable industrial park. LMC implements EMS component project recommendations and guidelines effectively.
Outcome Accredited environmental management system (EMS) for LIP is operational.	ISO 14001 certification of LMC by 2018. Indicators of Standard for Sector-Integrated Eco-Industrial Parks HJ 274-2009)	ISO certificate. Annual environment management report of LIP (by LMC) to MEP or NDRC.	**Assumption** The LIP embraces the EMS component project recommendations and supplies sufficient budget and staff to fully implement programs.
Outputs 1. An EMS including EMS Center (within the LIP under LMC).	Clear EMS management procedures defined by month 9, and implemented by month 16. Office equipment, mobile environmental monitoring equipment procured and installed by month 14.	Interim report and draft final report of EMS consultant to BPMO	**Assumptions** Senior authorities in LIP prioritize implementing the EMS component project. Municipal and local authorities fully cooperate with proposed EPR program for LIP
2. An emergency preparedness and response (EPR) plan for LIP.	EPR management procedures defined by month 9, and implemented by month 16. Emergency response equipment procured and operational by month 16.	Interim report and draft final report of EMS consultant to BPMO	**Risks** The provision of necessary LIP staff and budget is insufficient. The performance of the consultants is inadequate.
3. An environmental management information system (EMIS) targeting pollutants of concern	EMIS including procedures and required equipment defined by month 9, and implemented by month 16.	Interim report and draft final report of EMS consultant to BPMO	.

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
for LIP. 4. Training including study tours on all EMS aspects conducted.	Training Needs Assessment (TNA) conducted by month 3. Training plan defined by month 8 and implemented by month 16. One national study tour conducted to review industrial park EMS operations by month 9.	Interim report and draft final report of EMS consultant to BPMO	

Activities with Milestones (18 month project)	Inputs
1. Phase 1 (3 months) 1.1 EMS consultant mobilization (August 2015) 1.2 Submission of draft inception report (by end of month 2) 1.3 Reconnaissance including review international and PRC best practices for industrial park environmental management, emergency response and environmental management information systems. 1.4 Data collection on current management systems and practices proposed for implementation in LIP and other Baiyin industrial parks. 1.5 Establishment of LIP environmental protection division (to host EMS Center). 1.6 Conduct Training Needs Assessment (TNA) for LIP EMS. **2. Phase 2** (6 months) 2.1 Drafting of EMS including policy, structure, institutional responsibilities, equipment needs. 2.2 Drafting of EPR plan including equipment needs. 2.3 Drafting of EMIS proposal including equipment needs. 2.4 Conduct national study tour. 2.5 Submission of interim report (by month 8). **3. Phase 3** (9 months) 3.1 Implement recommended EMS program, including equipment procurement and installation. 3.2 Implement recommended EPR program including equipment procurement and installation. 3.3 Implement recommended EMIS program including equipment procurement and installation. 3.4 Implement training program. 3.5 Finalize application for ISO14001 certification by 16th month. 3.6 Submission of draft final report (by 17th month). 3.7 Drafting of one policy note on the EMS subcomponent as a knowledge product (by 17th month). 3.8 EMS component project closing (by January 2017)	**ADB: $430,000** Note: The LMC will provide counterpart support in the form of office space for EMS Center, remuneration and per diem for counterpart staff, local transport, miscellaneous administration and support costs, and other in-kind contributions.

ADB = Asian Development Bank, BPMO = Baiyin Project Management Office, PRC = People's Republic of China
Source: Asian Development Bank.

EMS-APPENDIX 2 - EMS COST AND FINANCING PLAN

Item	Total Cost
Asian Development Bank[a]	
1. Consultants	
a. Remuneration and per diem (inc. fees, international/local travel)	
i. International consultants (3 person-months)	60
ii. National consultants (16 person-months)	96
2. Reports and communications	10
3. Equipment[b]	160
4. Training, seminars, and conferences[d]	84
5. Contingencies	20
Total	**430**

[a] Financed through Component D of the proposed Gansu Baiyin Urban Development II Project.
[b] Equipment to be procured may include portable environment monitoring equipment, emergency preparedness and response equipment, park security and safety monitoring equipment, and EMIS computer and database equipment.
[c] Seminars may include transportation and allowance costs for various staff and meeting participants. Training may include expenses to attend domestic conferences and seminars. This includes expenditures for study tours to be conducted in PRC only.

EMS-APPENDIX 3 – OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. Objectives

1. The EMS component project will have the following four outputs: (i) establishment and support for EMS development and implementation for the EMS Center (within the LIP under LMC) including equipment procurement, and clear EMS management procedures; (ii) development of an emergency preparedness and response (EPR) plan, including EPR management procedures, procurement and installation of emergency response equipment; (iii) establishment of an environmental management information system (EMIS) targeting pollutants of concern; (iv) training program including domestic study tour on all EMS aspects. The EMS component project will be implemented over 18 months, from August 2015 to January 2017.

B. Tasks

2. The EMS subcomponent will be carried out by a consulting firm and require an estimated 19 person-months of consulting services, 3 person-months international and 16 person-months national. The final input of consultants will be detailed in the simplified technical proposals to be submitted by the short-listed firms.

3. The consultants will have expertise in EMS development and implementation for industrial parks, emergency preparedness and response (EPR) planning, and environmental management information systems. The indicative terms of reference for the experts are as follows.

4. **Environmental management specialist and team leader (international, 3 person-months).** The consultant will assist the Lichuan Industrial Park Management Commission (LMC) with the development and initial implementation of the LIP Environmental Management System complying with ISO 14001 requirements. The specialist will have a post-graduate degree in environmental engineering or environmental management and at least 10 years of experience with developing ISO 14001 environmental management systems, with experience in the PRC. Specific tasks will include the following:

(i) Coordinate the development and implementation of an EMS for LMC, in cooperation with the LMC and the LIP EMS Center, with input from the Jingquan County EPB. The EMS shall clearly define: (a) environmental policy, objectives and targets for LIP; (b) institutional responsibilities for EMS implementation and supervision; (c) a program to meet objectives and targets, including resources; (d) an overall environmental monitoring plan for LIP; (e) an emergency response plan, (f) a training plan; (g) a communication plan including reporting procedures;
(ii) Overview the training program on EMS for all important stakeholders;
(iii) Define a detailed workplan including schedule for LMC to obtain ISO14001 certification by 2018;
(iv) Outline a program including workplan and schedule to achieve Eco-Industrial Park (EIP) accreditation under NDRC or MEP systems by 2025;
(v) ensure that the team's work progresses according to schedule and that inception, interim, draft final, and final reports and other outputs are submitted on time and are of a quality acceptable to the BPMO and ADB; and
(vi) prepare a policy note on environment management system establishment and ISO 14001 certification, for dissemination in the PRC and other ADB DMCs.

5. **Environmental management specialist and deputy team leader (national, 9 person-months).** In coordination with, and under the guidance of, the ISO 14001 international specialist, the

environmental management specialist will support LMC to establish an environmental management system (EMS) including environment management information system (EMIS) for LIP and achieve ISP 14001 certification for its EMS. The specialist will have a post graduate degree in environmental engineering or environmental sciences and at least 5 years of experience with developing ISO 14001 environmental management systems for industrial parks in the PRC. Specific tasks will include the following tasks:

(i) Conduct a review of the current EMSs and working procedures in nearby other industrial parks in Baiyin, including the EMS developed and implemented under Phase I of the Gansu Baiyin Urban Development Project; (ii) Develop a detailed work plan to achieve ISO 14001 certification;
(ii) Support the development and implementation of an EMS for LMC, in cooperation with the LMC and the LIP EMS Center. The EMS shall clearly define: (a) environmental policy, objectives and targets for LIP; (b) institutional responsibilities for EMS implementation and supervision; (c) key components (including, but not limited to: environment management information system (EMIS), monitoring plan, emergency preparedness and response system, communication plan including reporting procedures);
(iii) Provide support to team leader in defining a detailed workplan including schedule for LMC to obtain ISO14001 certification by 2018, and in outlining a program including workplan and schedule to achieve Eco-Industrial Park (EIP) accreditation under NDRC or MEP systems by 2025;
(i) Take the lead in developing a detailed proposal for establishing an effective EMIS for LMC, including requirements for (a) hardware, (b) software, (c) monitoring, data acquisition, processing, storage and use (information for decision making); (d) procedures (design, development and documentation);
(ii) Support LMC to develop the tender documents for EMIS facilities (including monitoring equipment, hardware and software); supervise the procurement, installation, and debugging process; and verify the system‘s compliance with the contractual requirements;
(iii) Conduct relevant training, in close cooperation with the training specialist;
(iv) Carry out other related tasks, as reasonably requested by the team leader.

6. **Emergency Preparedness and Response Specialist (national, 5 person-months)**. The specialist will assist the Lichuan Industrial Park Management Commission (LMC) and its EMS Center with the development and initial implementation of the LIP Emergency Preparedness and Response (EPR) System. The Consultant will have a post-graduate degree in industrial production or environmental engineering, and at least 10 years of experience with developing EPR systems for major industrial facilities in the PRC. Specific tasks will include the following:

(i) Conduct a thorough investigation and an overall qualitative risk assessment of the major environment, health, and safety (EHS) risks in the LIP area;
(ii) Analyze and determine the EHS risk management capacity of the LMC and its EMS Center, and identify main vulnerabilities and risk management requirements;
(iii) Help LMC in developing a proposal for a EPR system as a key component of the LIP-EMS in accordance with national and/or international best practice; including (a) definition of potential hazards; (b) development of systems for preventing accidents; (c) provision of appropriate mechanisms for minimizing risk, loss and damage resulting from such incidents (i.e. reduce exposures to communities); (d) definition of an incident management structure and procedure to guide response activities; (e) identification of emergency response equipment needs; (g) communication strategy; and (h) budget.
(iv) In cooperation with the training specialist, conduct training needs assessment (TNA) for EPR system implementation and operation, and participate as expert in trainings;

(v) Supervise the EPR equipment procurement and installation process;
(vi) Carry out other related tasks, as reasonably requested by the team leader.

7. **Training Specialist (national, 2 person-months).** The specialist will assist the Lichuan Industrial Park Management Commission (LMC) and its EMS Center in developing and implementing a training program to fit the EMS subcomponent specificities and staff needs. The specialist will have a post graduate degree, or equivalent qualification, and at least 7 years of work experience in capacity development for environmental management. The specialist will do the following:

(i) Conduct a trainings needs assessment (TNA) together with LMC, BPMO, and the technical specialists on environment management systems, ISO 14001, and other issues of relevance for implementing the EMS subcomponent;
(ii) Compile and finalize a detailed training plan, in close cooperation with the technical specialists and the LMC and the county EPB, to be endorsed by BPMO and ADB before training is conducted;
(iii) Support the technical specialists in strengthening on-the-job training activities;
(iv) Identify and organize at least one domestic study tour to share and study lessons on environment management systems for industrial parks, ISO 14001 certification and eco-industrial park (EIP) accreditation;
(v) Undertake any other work assigned by the team leader.

8. The consultants will submit the following reports: (i) an inception report within 2 months of mobilization; (ii) an interim report submitted 8 months after mobilization; (iii) a draft final report 16 months after the mobilization; and (iv) a final report submitted 1 month after receiving comments on the draft final report from BPMO, LMC and ADB. The consultants will submit all reports in English and Chinese. The reports will be published in Chinese and English and made available online.

EMS-APPENDIX 4 –STANDARD FOR SECTOR-INTEGRATED ECO-INDUSTRIAL PARKS (HJ 274-2009, MINISTRY OF ENVIRONMENT PROTECTION, PRC)

Basic for requirements for EIP

1. The IP has effectively implemented the relevant national and local legislation, regulation and policies. No significant pollution accident in the recent three years;
2. The environmental quality satisfied the environmental function zone standards; all pollutant emitters in the park satisfied the discharge standards; the total discharge amounts are within the total amount control targets;
3. The' Eco-industry park Construction Plan' has been approved by MEP/State EIP Demonstration Leading Group Office and local government;
4. The IP has dedicated environment unit and staff, and clear responsibilities. Separate environmental protection agency dedicated for the IP is encouraged; environmental protection is one performance indicator to assess the performance of IP leaders;
5. The IP has ISO 14001 certification;
6. The new buildings in the industry park can satisfy energy saving standards for building;
7. The IP has formed major industry cluster and significant eco-industry chain.

Indicators

Item	No	Indicators	Unit	Requirements
Economic growth	1	Per capita industry added value	10,000 CNY/person	>=15
	2	Annual growth of industry added values	%	>=15
Resources reduction and recycle	3	Industry added value /km2 industry land	0.1 billion CNY//km2	>=9
	4	Energy consumption per industrial added value	t/10,000 CNY	<=0.5
	5	Comprehensive energy consumption elastic coefficient		<0.6
	6	Fresh water consumed per industrial added value	m3/10,000 CNY	<=9
	7	Fresh water consumption elastic coefficient		<0.55
	8	Wastewater production per industrial added value	t/10,000 CNY	<=8
	9	Solid waste production per industrial added value	t/10,000 CNY	<=0.1
	10	Industrial water recycle	%	>=75
	11	Solid waste reuse rate	%	>=85
	12	Water reuse	%	(≥12-40) depending on the region the IP located
Pollution control	13	COD emission per industrial added value	Kg/10,000 CNY	≤1
	14	COD emission elastic coefficient		<0.3
	15	SO2 emissions per industrial added value	Kg/10,000 CNY	≤1
	16	SO2 emission elastic coefficient		<0.2
	17	Hazardous waste treatment rate	%	100
	18	Domestic wastewater treatment rate	%	≥85
	19	Domestic garbage treatment rate	%	100
	20	Solid waste collection and centralized treatment capacity		yes

Item	No	Indicators	Unit	Requirements
IP management	21	Environmental management system and capability		complete
	22	Eco-industry information system	%	100
	23	Environmental Management report for the IP	annual	1
	24	Clean production auditing for key enterprises	%	100
	25	Public satisfaction on environment	%	≥90
	26	Public awareness on eco industry	%	≥90

EMS-APPENDIX 5 – LIP PROGRAMMATIC OUTLINE

There are a variety of environmental concerns for the management of the Liuchuan Industrial Park (LIP) which will be under the purview of the LIP EMS:

- Protection of the atmosphere – in addition to more traditional problems of air pollution, the energy use pattern within the LIP is directly related to emissions of carbon dioxide, while industrial activities within the LIP can result in the release of other greenhouse gases or ozone-depleting substances.
- Sustainable management of land – this is associated with the choice of the location of the various tenant industries within the LIP and integration of raw materials and wastes using industrial symbiosis.
- Sustainable agriculture and rural development – ensuring that the development of the LIP does not have a large impact on the local socio-economic framework.
- Conservation of biological diversity – the damage to ecosystems when an LIP is built may result in loss of habitat and affect biodiversity in the region (e.g. the use of reclaimed wetlands or other sensitive areas). Releases into the environment around the LIP of chemicals that are toxic, persistent and bio-accumulative can also have a negative effect on wildlife.
- Protecting and managing fresh water – the release of WWTP effluent to Dasha River could lead to contamination rendering the water unusable for human consumption and leading to loss of aquatic species. In addition, an unsustainable use of freshwater for industrial purposes can lead to water scarcity for the surrounding areas.
- Safer use of toxic chemicals – accidental releases of chemicals can result in exposure in the workplace as well as putting the surrounding communities and environment at risk.
- Managing hazardous wastes – inappropriate treatment and/or storage of waste from an LIP may lead to the accumulation of hazardous substances in the soil and in groundwater, resulting eventually in the transport of toxic substances into the food-chain. For the LIP management, the potential liability to the LIP represents a serious problem to the LIP's long-term economic viability.
- Managing solid wastes and sewage – improperly managed disposal of solid waste by landfill can result in leaching into the soil and groundwater. Landfill sites also have significant impacts on land-use and landscape since they require large amounts of land. Improperly treated wastewater and sewage from LIP could lead to water contamination and eutrophication and result in a scarcity of drinking water.

The LIP will be home to a large number of different companies that value, if not their independence, certainly their interdependence. This could result in there being a **cumulative effect of the environmental aspects** of the individual companies within the LIP, but with each company tending to address its problems on an individual basis.

However, this does not necessarily need to be the case - the proximity of the companies in the LIP could also be used profitably if a way can be found to co-ordinate their activities. A co-operative effort to address some of their, and hence the LIP's, environmental problems by exploiting synergies between the companies can prove to be more effective and less costly than an individual approach.

The role of the manager of the LIP will be very different to that of a company CEO in terms of how to introduce and implement environmental management, and the EMS should assist the LIP management in finding ways to balance the interests of the individual companies with those of the LIP as a whole. This requires a new approach to environmental management that is specifically tailored to the needs of the LIP using the LIP EMS.

The Liuchuan EMS will help the LMC to provide leadership in the area of environmental performance to the industrial sectors and tenants which locate in the LIP:

- The LIP EMS will provide a fertile ground for the introduction of better environmental practices because of their provision of common infrastructure, their close links with government, and the location of a broad spectrum of companies.
- The position of the LIP in the global supply chain will give companies within the LIP an opportunity to influence their local suppliers with respect to environmental performance, such as by requesting that they have ISO 14001 certification.
- The LIP EMS will bring together stakeholders from all parts of society, including manufacturing companies, local and national government, and local communities.

The LIP EMS will function through an administration that assumes the following roles:

- A **managerial role** for enforcing restrictive covenants in leasing agreements, deciding on the entry of new companies into the LIP, collecting rents and ensuring that taxes and charges are paid, and being responsible for maintenance and order on the LIP.
- A **technical role** that covers responsibility for common facilities as well as training or other technical services.
- A **financial role** including overseeing loans to tenant companies on the LIP or arranging bulk purchasing agreements for materials.

The Liuchuan Industrial Park will require the participation of a number of stakeholders to be successful on all fronts - economic, social and environmental. These stakeholders come from four sectors of society:

(a) Government:
Local and central governments may intervene at various stages of the development and operation of the LIP. Firstly government may be the sponsor of the LIP, initiating the project and providing the initial financing. As the sponsor, government's goal is to attract business to locate in the LIP so as to bring investment and employment to the region. However, government has a second role that may prove to be in contradiction with its desire to attract business and investment. This is its responsibility to the community to protect the environment by monitoring and enforcing environmental regulations. It must therefore ensure that its policies, planning and legislation are well-adapted to achieve a balance between the socio-economic role of the LIP and environmental protection.

(b) The Management of the LIP (LMC):
The management of the LIP has three main roles, as previously described. These are - managing the operation of the LIP, maintaining the technical services and arranging financing. The LIP management will also retain a close relationship to government agencies.

(c) Companies:

The tenant companies are present in the LIP because they believe that this is where they can maximize their profits. In addition to their economic goals, they are obliged to comply with the laws of the country in areas such as health, working conditions, worker safety, and environmental impact. In this respect, companies are constrained to find the optimal solution to satisfy both sets of criteria.

(d) Communities:
Local communities are important stakeholders in the LIP since they benefit economically through employment and increased economic activity for the region, but may well suffer from the environmental impacts arising from the development and activities of the LIP. Communities are increasingly demanding to be informed about the activities of nearby industrial complexes.

For the EMS to be relevant the LIP manager must, as a minimum requirement:

1. Be responsible for activities that have a significant environmental impact, such as solid waste treatment and wastewater treatment.
2. Be able to control and influence the outputs of the tenant companies.
3. Be in a position to provide training for tenant companies on EMS.

The LIP Management will initially provide many environmental services to their tenants as an integral part of the overall offer of services and activities:

- Supply of water
- Collection and treatment of wastewater
- Training on environmental issues
- Environmental monitoring
- Environmental auditing
- Provision of services and advice for emergency situations, such as accidents from the emergency response plan.

The LIP Management under the EMS can consider offering other environmental services to their tenants as an integral part of the overall offer of services and activities such as:

- Centralized supply of heating and/or energy
- Waste recovery and valorization (by-product synergies)
- Collection, treatment and disposal of hazardous waste
- Collection and disposal of solid waste
- An information service on environmental issues (environmental regulations
- new technologies, new waste minimization concepts etc)
- Environmental auditing

The LIP EMS should manage the monitoring of the environmental parameters of the LIP as part of the LIP's EMS, such as:

- ambient environmental quality
- emissions to water and air
- solid waste generation (including hazardous waste)
- storage of hazardous goods on site
- accidents and spillages, and
- procedures for the control of safety and pollution

Perhaps the most important feature of being able to introduce an EMS within the LIP is that it allows everybody, both tenant companies and the LIP management, to speak the same environmental language and to work towards similar goals for the LIP. Each company will achieve its goals in its own way – its workers are undoubtedly the most knowledgeable about its processes and how to address the environmental aspects of them. However, this will hopefully open up the possibility of collaboration to solve environmental problems. Such a collaborative approach can lead to the implementation of strategies such as these in the LIP:

1. Maximize energy efficiency in design of LIP through
    a. co-generation and energy cascading within and between firms, and
    b. extensive use of renewable sources.

2. Master material flows and waste management for the LIP site by
    a. emphasizing Pollution Prevention, in particular with respect to toxic materials,
    b. maximizing re-use and recycling of materials between firms in the LIP,
    c. reducing risk from toxic waste materials by integrated waste management within the LIP, and
    d. creating links between firms in the LIP and the surrounding region for exchanges of resources and recycling networks.

3. Conserve water resources and reduce possibilities of water pollution.

4. Entrust the management of the LIP with the following tasks in addition to the traditional functions (maintenance, recruitment)
    a. maintaining the range of companies required to allow the by-product synergies to function efficiently
    b. supporting improvements in environmental performance within companies as well as for the LIP as a whole
    c. supporting efficient communication between companies, informing members of local environmental conditions and providing feedback on the LIP performance.

5. Follow best environmental practices in the selection of materials and building technology when carrying out new construction or rehabilitation of existing buildings.

6. Integrate the LIP into natural ecosystems by
    a. incorporating the LIP into the local landscape and ecosystems, for example the hydrological cycle, so as to minimize local environmental impacts
    b. considering the global environmental impact of the activities of the LIP, such as the production of greenhouse gases.

EMS-APPENDIX 6 – EMS ROLES AND RESPONSIBILITIES

The following is an initial outline of expected roles and responsibilities for the LIP EMS based on international best practices. Some of the monitoring aspects will be revised to account for issues of institutional responsibilities for monitoring in the PRC and problems with data sharing. The technical specialists will refine these initial roles during their work on the EMS.

The EMS for the Liuchuan Industrial Park requires a set of interrelated responsibilities including:

- Liuchuan IP Management and Management Committee (LMC) for EMS Establishment, Planning, and Strategic Oversight
- Individual Enterprises working cooperatively within the framework, policies and procedures of the IP EMS.

Jingyuan County EPB will not be directly involved in the EMS but will provide a technical support and regulatory function on various aspects as shown on the attached table. During operations, other agencies are also involved.

Table 1 – EMS Establishment, Planning and Strategic Oversight

EMS Establishment, Planning and Strategic Oversight Activity	**Liuchuan IP Management and Management Committee**	**Jingyuan County EPB – technical support and regulatory)**
Environmental policy, by top management is the first requirement of ISO 14001 and PRC certification. The policy directs goals, responsibilities and the establishment of performance against which the management must be judged. Top management is responsible for the initiation of the policy and for providing leadership.	Establish Environmental Policy • Reflect an ethical basis for the IP's actions • Account for regulatory requirements • Show commitment to continual improvement • Be in line with other policies used within the IP (quality management) • Be clear and concise and known by all levels within the IP • Be publicly available • Strive towards sustainable development • Set for publication of environmental objectives • Satisfy the requirements of concerned third parties such as Insurance companies, banks, and shareholders • Be updated when needed	Provide technical ideas and suggestions for incorporation into policy.
Environmental objectives and targets, the organization shall establish and maintain documented, at each relevant function and level within the organization.	Establish environmental objectives and targets for IP environmental performance. These objectives and targets must be consistent with and contain the commitments required in the policy. The business plan must be in line with the objectives and targets. Examples could include e a total load control target for wastes or water and energy conservation goals.	Provide technical ideas and suggestions for incorporation into environmental objectives and targets.
Availability of resources, essential to establish, implement, maintain and improve the EMS. Resources include human resources and specialized skills, organizational infrastructure,	The responsibilities for the environmental management must be defined and its roles must be communicated to everybody involved. The standard is clear about the appointment and authority of the management representative. This is seen as top management's commitment. Although operational resources are mainly needed by EPB for operational management, the IP should also	Most of the operational issues outlined in Table 2 will require human resources, skills, equipment and other resources

EMS Establishment, Planning and Strategic Oversight Activity	Liuchuan IP Management and Management Committee	Jingyuan County EPB – technical support and regulatory)
technology and financial resources.	allocate resources and potentially a senior staff member to EMS activities.	
Program for achieving objectives and targets, established and maintained	IP should develop program to include: • Designation of responsibility for achieving objectives and targets at each relevant function and level of the IP. • The means and time frame by which they are to be achieved.	Develop operational management program to work within the goals and timeframes of the strategic program of the IP.
Communication Plan	The organization shall establish and maintain procedures for: • Internal communication between the various levels and functions of the organization,, including individual enterprises in LIP • Receiving, documenting and responding to relevant communication from external interested parties • Interested parties outside the IP may comprise neighbors, community groups, local government, and municipalities, regulatory agencies and emergency responders	Environmental monitoring and other operational activities developed and reported according to EMS communication plan, while being cognizant of EPB policies on release of data and information.
Maintenance of Documents	The IP shall establish and maintain documents describing their programs for achieving its objectives and targets. It shall include: • The environmental policy, objectives and targets • Description of the scope of the EMS • Description of the main elements of the EMS and their interaction, and reference to related documents • Documents, including records, required by ISO 14001 or PRC certification processes • Documents, including records, determined by the IP to be necessary to ensure the effective planning, operation and control of processes that relate to its significant environmental aspects.	Technical support to all aspects of the program including documentation of their operational activities
Operational Control	The IP management will identify those operations and activities associated with the identified significant environmental aspects in line with its policy, objectives and targets in order to ensure that they are carried out under specified conditions.	EPB will also ensure their activities are carried out under specified conditions.
Emergency preparedness and response	IP shall establish and maintain procedures to identify potential emergency situations and potential accidents that can have an impact on the environment and how it will respond to them. Periodically review and test procedures.	Respond to actual emergencies and accidents and prevent or mitigate associated adverse environmental aspects
Industrial enterprise approvals	Ensure that strategic goals for IP enterprises and environmental goals are consistent with proposed operations of enterprise. Ensue that proper approval procedures are followed especially preparation of the required EIA for the enterprise.	Review enterprise EIA and determine appropriate requirements and monitoring regimes required.
Industrial symbiosis, promotion of between existing and proposed enterprises of IP to share resources and waste management planning	Promote and engage traditionally separate industries in a collective approach to competitive advantage involving physical exchanges of materials, energy, water and/or by products together with collaboration on the shared use of assets, logistics, experts and knowledge transfer.	Technical consultation on the wastes and other issues including approval of the proposed systems.

EMS Establishment, Planning and Strategic Oversight Activity	Liuchuan IP Management and Management Committee	Jingyuan County EPB – technical support and regulatory)
Introduction of advanced water and energy conservation and demand management techniques	Provide platforms for training, capacity building, demonstration projects, study tours and other means.	Support programs with technical aspects as possible.
Creating linkages between IP and surrounding region for exchanges of resources and recycling networks.	IP outreach program to achieve win-win approaches between the IP and surrounding region	Technical consultation on the wastes and other issues including approval of the proposed systems.
Enterprise certification, **encourage enterprises to achieve ISO 14001 or comparable PRC certification.**	Incentives for firms achieving ISO14001 certification in rents, utility charges or other means.	Support programs with technical aspects as possible.
Monitoring and Measurement	Regularly work with EPB and operational monitoring program to track environmental performance and status on meeting IP objectives and targets. Consider audits of reporting data to validate results periodically.	Assure that operational monitoring program (Table 2) supplies necessary information at needed intervals for IP reporting system. Also, refer to note on data sharing under the Communication Plan
Evaluate performance	Consistent with its commitment to compliance, the IP shall establish, implement and maintain a procedure for periodically evaluating compliance with applicable legal requirements. Records kept of the results of these periodic evaluations.	Operational monitoring program (Table 2) mainly focused on enterprise performance and compliance but also relates to IP EMS performance.
Management Review	IP management shall review the IP's EMS at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. Reviews shall include assessing opportunities for the improvement and the need for changes to the EMS, including the environmental policy and environmental objectives and targets. Records of the management reviews shall be retained. Management review is an essential portion of the continual improvement of the IP's EMS. Management review is the essential element for systems improvement, along with preventative and corrective action.	Supply summary environmental statistics and other technical data to support the periodic reviews.

Table 2 – Operational Aspects of EMS

Environmentally-related activities	Liuchuan IP Management and Management Committee	Primary Monitoring and Data Storage Systems (Various PRC Govt Institutions)	EMS Center (in LMC)	Individual Enterprises
Water Supply Systems	- Development and operation of centralized raw water collection, transmission, and treatment systems, phased to meet growth of the IP. - Develop training and manuals on water conservation and demand management techniques - Hire and train operational staff	- Monitor treated water quality in final distribution system. - Health and safety of WTP especially chlorination equipment. - Environmental best practices at WTPs including treatment and disposal of solids. - Monitor raw water abstraction quantity and report to Water Affairs Bureau for abstraction permitting and Yellow River quota. - Monitor the distributed quantity per Health Department requirements.	- Track and review treated water quality in final distribution system in conjunction with Health. - Track and review Health and safety of WTP especially chlorination equipment. - Track and review Environmental best practices at WTPs including treatment and disposal of solids. - Track and review raw water abstraction quantity and reports. - Track and review the distributed quantity per Health Department requirements.	- Water use assessments and use of demand management and waste minimization techniques. - Implement staff training on water management and water conservation. - Install additional water treatment facilities where higher quality water supply required - Evaluate potential uses of WWTP effluent as alternative supply for some internal uses
Wastewater Systems	- Development and operation of centralized WWTP receiving pre-treated wastewater from industries and domestic wastewater from residential areas, phased to meet growth of the IP. - Hire and train operational staff - Ensure the security manual for the emergency accident by establishing manual and the training	- Real-time monitoring of performance of enterprise pretreatment systems. - Evaluate monitoring data of enterprise pretreatment facilities - Monitors performance of IP central WWTP relative to standards and effluent quality - Develop training manuals on pollution prevention and waste minimization appropriate to IP enterprises.	- Track and review performance of enterprise pretreatment systems. - Track and review monitoring data of enterprise pretreatment facilities - Take regulatory action as necessary based on performance of IP central WWTP relative to standards and effluent quality - Implement use of training manuals on pollution prevention and waste minimization appropriate to IP enterprises.	- Implement pollution prevention and waste minimization techniques to reduce wastewater volume and concentration - Design and operate appropriate wastewater pretreatment systems - Ensure proper operations of the pretreatment systems -
Wastewater Effluent Reuse	- Development and operation of the wastewater reuse storage and distribution system. - Regular testing of effluent from WWTP operations.	- Develop training manuals on use of WWTP effluent relative to various potential uses. - Utilize reuse water for greening and landscaping within IP as appropriate. - Monitors WWTP effluent for suitability for reuse systems. This includes regular testing.	- Develop training manuals on use of WWTP effluent relative to various potential uses. - Utilize reuse water for greening and landscaping within IP as appropriate. - Monitors WWTP effluent for suitability for reuse systems. This includes regular testing.	- Evaluations of potential for use of treated wastewater effluent.

Environmentally-related activities	Liuchuan IP Management and Management Committee	Primary Monitoring and Data Storage Systems (Various PRC Govt Institutions)	EMS Center (in LMC)	Individual Enterprises
WWTP Sludge	- Development and operation of sludge management system - In conjunction with municipal and county officials, ensure development of adequate disposal site for the sludge. - Develop appropriate sludge vehicles for transport of sludge from WWTP to disposal site.	- Monitors WWTP sludge for suitability for reuse systems. This includes regular validation of the WWTP testing results. - Monitor sludge reuse or disposal sites for proper operations.	- Track and review data on WWTP sludge for suitability for reuse systems. This includes regular validation of the WWTP testing results. - Review data on sludge reuse or disposal sites for proper operations.	- Not applicable for central WWTP sludge. - Manage pretreatment facility sludge in accordance with local regulations.
Solid waste	- Organize proper collection systems from municipal areas and/or industrial zones - In conjunction with municipal and county officials, ensure development of adequate capacity and operations of disposal site for the solid waste.	- Develop appropriate solid waste vehicles for transport of solid waste from enterprises to disposal site. - Municipal and county officials ensure proper operations of disposal site for the solid waste.	- Ensure appropriate solid waste vehicles for transport of solid waste from enterprises to disposal site. - Track and review proper operations of disposal site for the solid waste.	- Implement waste minimization and recycle systems to reduce quantity of conventional waste - Organize proper waste collection systems
Hazardous waste	- Regulate types of industries and processes to minimize hazardous waste generation in the IP. - Develop appropriate hazardous waste vehicles for transport of hazardous waste from enterprises to reclamation/recycle or treatment facilities. - With municipal/county officials, ensure development of adequate capacity and operations of hazardous waste treatment and disposal facilities.	- Municipal and county officials ensure operations of adequate capacity and operations of hazardous waste treatment and disposal facilities. - Develop training manuals on pollution prevention and waste minimization appropriate to IP enterprises.	- Track and review operations of adequate capacity and operations of hazardous waste treatment and disposal facilities. - Implement use of training manuals on pollution prevention and waste minimization appropriate to IP enterprises.	- Implement waste minimization and recycle systems to reduce quantity of hazardous waste - Organize proper hazardous waste storage and collection systems
Air pollution	- Regulate types of industries and processes to minimize air pollution generation in the IP. - Develop training manuals on air pollution control appropriate to IP enterprises.	- Real-time monitoring of enterprise air pollution equipment for operating status and simple parameters. - Evaluate monitoring data of enterprise facilities	- Track and review data results of enterprise air pollution equipment for operating status and simple parameters. - Take necessary regulatory action based on monitoring data of enterprise facilities	- Implement air pollution control techniques to reduce air quality emissions to meet standards - Design and operate appropriate air pollution control systems - Ensure proper operations of the air pollution control systems

PAM Attachment 2 - Environmental Management Plan (EMP)

A. Objectives

1. This environmental management plan (EMP) was prepared for the proposed Gansu Baiyin Integrated Urban Development Project (the Project) in Baiyin Municipality of Gansu Province, the People's Republic of China (PRC). The EMP is prepared in accordance with the requirements of Asian Development Bank's (ADB's) Safeguard Policy Statement (SPS 2009) on the basis of the domestic environmental impact assessment (DEIA) prepared by Lanzhou University (the EIA Institute), a planning EIA for the Liuchuan Industry Park (LIP), and the initial environment examination (IEE) conducted for the Project.

2. The EMP defines appropriate mitigation measures for the anticipated environmental impacts, and defines the institutional responsibilities and mechanisms to monitor and ensure the compliance with PRC's environmental laws, standards and regulations, and ADB's Safeguard Policy Statement (SPS 2009). The EMP specifies (i) objectives; (ii) mitigation measures; (iii) implementing organization and responsibilities; (iv) inspection, monitoring, and reporting arrangements; (v) training and institutional strengthening; (v) a feedback and adjustment mechanism; and (vi) the grievance redress mechanism. The EMP will be reviewed and updated at the end of the detailed designs, as needed, in order to be consistent with the final technical design. The EMP (or its updated version) will be included as a separate annex in all bidding and contract documents. The contractors will be made aware of their obligations to implement the EMP, and to budget EMP implementation costs in their proposals.

3. EMP supervision and monitoring results will be used to evaluate (i) the extent and severity of actual environmental impacts against the predicted impacts, (ii) the performance of the environmental protection measures or compliance with related rules and regulations, (iii) trends of impacts, and (iv) overall effectiveness of the mitigation measures.

B. Organizations and Their Responsibilities for EMP Implementation

4. The overall EMP implementation arrangements and responsibilities of governmental organizations are summarized in **Table EMP-1**.

5. Baiyin Municipal Government (BMG) is the project **Executing Agency (EA)**. The EA is responsible for communication with ADB, loan on-lending and repayment, as well as supervision and guidance of the Baiyin Project Management Office (BPMO) and implementing agencies (IAs) during the project implementation. A **Project Leading Group (PLG)** has been established, chaired by the mayor and comprises senior officials from relevant government agencies, to facilitate inter-agency coordination, and resolve any institutional problems affecting project implementation at municipal level.

6. The **Baiyin Project Management Office (BPMO)** established under the BMG and based on Baiyin Development and Reform Commission will be in charge of project coordination. The BPMO will (i) ensure provision of counterpart funding, (ii) engage and supervise engineering design institutes, tendering company and the project management consulting service during project implementation, and (iii) report on progress. With regard to environment, BPMO will appoint an environmental management lead (EML) to coordinate environmental issues associated with each infrastructure component, subcomponent and contract package. The EML will take charge of (i) coordinating the implementation of the EMP and developing implementation details; (ii) supervising the implementation of mitigation measures during project construction and operation; (iii) ensuring that environmental management, monitoring, and mitigation measures are incorporated into bidding documents, construction contracts and operation management plans; (iv) submitting annual EMP monitoring and progress reports to ADB;

(v) coordinating the local grievance redress mechanism (GRM); and (vi) responding to any unforeseen adverse impact beyond those mentioned in the DEIA, the project IEE and the EMP. The EML will be technically supported by the loan implementation environment consultant (LIEC) and they will jointly check the overall implementation of environmental management provisions of the EMP.

7. **Liuchuan Industrial Park Management Committee (LMC)** will be the Implementing Agency (IA) of Project component 1 (basic infrastructure in LIP) and the Environmental Management System (EMS) subcomponent. LMC will (i) establish an environment management unit (EMU) to coordinate EMP implementation. The EMU will also coordinate EMS subcomponent implementation; (ii) contract the Baiyin environmental monitoring center (EMC) to conduct regular environment monitoring during project implementation in accordance with the monitoring plan defined in **Table EMP-5**; (iii) engage the construction supervision companies (CSCs) including environment supervision staff to supervise civil works contractors. Both the Baiyin Transport Police Department and the Baiyin Transport Management Company will be the IAs for the ITS component, while the Jingyuan county human resource and social security bureau will be the IA for the TVET component.

8. **Construction contractors** contracted by the LMC will be responsible for implementing the mitigation measures during construction under supervision of the CSCs, LMC and BPMO. In their bids, contractors will be required to respond to the environmental management requirements defined in the EMP. Each contractor will be required to develop site specific EMPs and will assign a person responsible for environment, construction site health and safety. After project completion, environmental management responsibilities will be handed over to operators of WWTP, WTP and roads.

9. **Construction Supervision Companies (CSCs)** will be selected through the PRC bidding procedure by the LMC. The CSCs will be responsible for supervising construction progress and quality, and EMP implementation on construction sites. Each CSC shall have at least one environmental engineer on each construction site to: (i) conduct regular site inspection; (ii) supervise the contractor's EMP implementation performance; and (iii) prepare the contractor's environmental management performance section in monthly project progress reports submitted to the LMC.

10. **Community environment supervisors (CES).** Three community representatives from Nanchuan Village, Nanshanwei Village and Xinmin Village near the project sites have been determined as community environment supervisors (CES) to perform regular site inspections. The CES will accompany the LIEC during construction site visits, and will participate in public consultation meetings.

11. **Loan Implementation Environmental Consultant (LIEC).** Under the loan implementation consultancy services (LIC), a national environmental specialist (10 man-months) will be engaged under the project management and capacity building component. The LIEC will advise the BPMO, LMC, CSCs and contractors on all aspects of environmental management and monitoring for the project. The LIEC will:

(i) assess the project components' environmental readiness prior to implementation based on the readiness indicators defined in **Table EMP-4**;
(ii) assist BPMO and LMC to update the EMP and environmental monitoring program;
(iii) review the site-specific EMPs prepared by contractors;
(iv) assist the BPMO and LMC to establish a Grievance Redress Mechanism (GRM), and provide training for the PPCU and GRM access points;
(v) Conduct regular EMP compliance assessments, undertake site visits as required (together with CES), identify any environment-related implementation issues, propose necessary corrective actions, reflect these in a corrective action plan;

(vi) assist the BPMO to prepare annual environmental monitoring and progress reports to ADB;

(vii) provide training to BPMO, LMC and contractors on environmental laws, regulations and policies, SPS 2009, EMP implementation, and GRM in accordance with the training plan defined in the EMP (**Table EMP-7**); and

(viii) assist the BPMO and LMC in conducting consultation meetings with relevant stakeholders as required, informing them of imminent construction works, updating them on the latest project development activities, GRM.

Table EMP-1: Institutional Responsibilities for EMP Implementation

Phase	Responsible Agency	Environmental Responsibility
Project preparation	Design Institutes (Dis) on behalf of BPMO	Prepare project FSRs, EIA and EMP, RPs, conduct public consultation
	Gansu Province EPD	Review and approve the domestic EIA and planning EIA for LIP
	PPTA consultant	Provide technical assistance, review domestic EIA, prepare IEE report
	ADB	Review and approve the IEE and EMP, including disclosure
Engineering detail design	Design Institutes on behalf of Ias	Incorporate mitigation measures defined in the EMP into engineering detail designs
	BPMO, LMC	Review the design and confirm that mitigation measures have been included in engineering detail design
	BPMO, LMC, Dis	Update EMP before the start of construction according to the detailed design if necessary
	ADB	Review and approve the updated EMP, including disclosure
Tender & contracting	BPMO, LMC and contractors	Incorporate EMP clauses in tender documents and contracts
	LMC	Engage CSCs and ensure the CSCs have dedicated and qualified staff
Construction	ADB, LIEC	Review bidding documents; confirm project's readiness
	LMC	Establish EMU and ensure the EMU has dedicated, trained, and qualified environment staff; supervise contractors and ensure compliance with the EMP; coordinate periodic environmental impact monitoring in compliance with the approved monitoring plan; coordinate construction supervision and quality control; act as local entry point for the project grievance redress mechanism (GRM).
	Contractors	Assign EMP implementation responsibilities; ensure health and safety; implement mitigation measures;
	EMC (contracted by LMC)	Undertake environmental impact monitoring; submit quarterly monitoring results to BPMO, LMC, BEPB.
	CSCs	Prepare environment supervision plan (CSC-ESP); conduct regular site inspections and regular noise and dust monitoring; supervise the contractor's EMP implementation performance; and prepare the contractor's environmental management performance section in monthly project progress reports submitted to the LMC.
	LIEC	Advise on the mitigation measures; provide comprehensive technical support to BPMO and LMC for environmental management; conduct training; conduct site visits (with involvement of CES); conduct annual EMP compliance review; support BPMO in preparing annual environmental progress reports.
	BEPB	Conduct periodic inspections of all construction projects in compliance with PRC regulations and standards.
	CES	Participate in regular construction site visits; participate in community consultation activities; provide feedback to BEPB, LMC, BPMO on observed non-compliances with the EMP.
Operation	BEPB	Undertake periodic and random environmental monitoring and inspect environmental compliance
	BPMO, LIEC	Conduct EMP compliance review, instruct LMC and O&M units on environmental management requirements; coordinate environmental impact monitoring (during first year of operation); prepare annual environmental progress report for first year of operation; draft project completion report (PCR)

Phase	Responsible Agency	Environmental Responsibility
	ADB	Review and approve environmental progress report, disclose on ADB project website

C. Summary of Potential Impacts and Mitigation Measures

12. **Tables EMP2 and EMP-3** summarize the potential impacts and environment safeguard issues of the sub-components during pre-construction, construction and operation as identified by the environmental impact assessments and set out in this IEE, as well as corresponding mitigation measures designated to minimize those impacts and address these issues.

13. Those that will permanently become part of the infrastructure such as noise reduction materials for WTPs and WWTP will need to be included in the design of the facility by the design institutes, otherwise they won't be built. The costs of building and maintaining these systems is included in the infrastructure construction and operating costs and therefore are not be double-counted as part of the EMP costs. Those that are temporary measures particularly during the construction stage, such as dust suppression, use of quiet / low noise powered mechanical equipment, etc will need to be included in the tender documents, otherwise they are not budgeted by the contractor and they won't be done. The costs for implementing these measures are included in the EMP. The budgets for implementing these measures in this project add up to the amount of $ 400,000.

14. The mitigation measures defined in the EMP will be (i) checked and where necessary re-designed by the design institutes; (ii) incorporated into tender documents (where appropriate), construction contracts, and operational management plans; and (iii) implemented by contractors and LMC under supervision of the BPMO. The effectiveness of these measures will be evaluated based on the results of the environmental impact monitoring conducted by the EMC, and through EMP compliance verification conducted by the BPMO and LIEC.

Table EMP-2: Potential Impacts and Mitigation Measures during Design, Preconstruction and Construction Phases

Item	Impact Factor	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Implem. Agency	Superv. Agency	Source of Funds
Detailed Design Stage						
Design of Water Supply Infrastructure			·			
	Treatment Efficiency	Inadequate treatment	· Technical design of the WTPs must achieve the desired PRC supply standards with dual power supply to avoid interruption to plant operation due to power failure	DI	BPMO,LMC, local EPB	Included in design contract
	Noise	Noise from WTPs	· Technical design of the WTPs must be able to contain the operational noises from pumps and other noisy equipment with proper acoustic design of these facilities	DI	BPMO,LMC	Included in design contract
	Primary WTP sludge disposal	Inadequate sludge processing and drying	· Ensure proper sludge processing facilities to meet PRC sludge quality and moisture level standards	DI	BPMO,LMC, local EPB	Included in design contract
		Land use agreement and design features of sludge disposal site	· Finalize plans and protection measures for the proposed land disposal site near the primary WTP	DI	BPMO,LMC, local EPB, local WAB	Included in design contract
	Secondary WTP sludge disposal	Inadequate sludge processing and drying	· Ensure proper sludge processing facilities to meet PRC sludge quality and moisture level standards	DI	BPMO,LMC, local EPB	Included in design contract
		Suitable disposal arrangements	· Ensure that Jingyuan County Landfill No. 2 is ready to receive secondary WTP sludge	DI	BPMO,LMC, local EPB	Included in design contract
	Climate change	GHG Emissions	· Take into account energy efficiency, energy conservation and low GHG emissions in all building and systems designs and equipment selection	DI	BPMO,LMC, local EPB	Included in design contract
Design of Wastewater Treatment System	Air quality	Odor from WWTP	· WWTP design to include odor removal equipment	DI	BPMO,LMC, local EPB	Included in design contract
	Treatment Efficiency	Inadequate treatment for reuse	· Technical design of the WWTP must achieve the desired treatment to meet Class 1A standard and safety of plant operation, with dual power supply to avoid interruption to plant operation due to power failure, and with emergency storage tank	DI	BPMO,LMC, local EPB	Included in design contract
	Noise	Noise from WWTP	· Technical design of the WWTP must be able to contain the operational noises from pumps, blowers and other noisy equipment with proper acoustic design of these facilities	DI	BPMO,LMC, local EPB	Included in design contract
	Sludge disposal	Inadequate sludge processing and quality concerns	· Ensure proper design of pretreatment facilities in tributary industries and proper sludge processing facilities to meet PRC sludge quality and moisture level standards	DI	BPMO,LMC, local EPB	Included in design contract
		Suitable disposal arrangements	· Ensure that Jingyuan County Landfill No. 2 is ready to receive WWTP sludge if reuse cannot be achieved due to quality issues.	DI	BPMO,LMC, local EPB	Included in design contract
	Climate change	GHG Emissions	· Take into account energy efficiency, energy conservation and low GHG emissions in all building and systems designs and equipment selection	DI	BPMO,LMC	Included in design contract

Item	Impact Factor	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Implem. Agency	Superv. Agency	Source of Funds
Design of Wastewater Reuse System	Water quality	Quality of treated effluent relative to various reuse systems	· Technical design of the WWTP must achieve the desired treatment to meet Class 1A standard as well as the treatment requirements of landscape irrigation and various industrial users	DI	BPMO,LMC, local EPB, local WAB	Included in design contract
	Treated effluent storage system	Sufficient storage of treated effluent to allow for balancing the needs of reuse systems	· Technical design of the WWTP must ensure sufficient storage volume of the treated effluent storage tank to balance the confirmed reuse needs and schedules	DI	BPMO,LMC, local EPB, local WAB	Included in design contract
	Irrigation Distribution System	Design of landscape distribution systems	· Confirm preliminary layout and sizing of the required distribution network as well as trucked distribution system	DI	BPMO,LMC, local EPB, local WAB	Included in design contract
	Industrial distribution system	Inadequate reserved interface for the potential industrial users of treated wastewater	· Identify the potential users of the treated wastewater and consider the usage during design	DI	BPMO,LMC, local EPB	Included in design contract
Road Design Drainage and Safety Features	Extreme weather event due to climate change	Road surface cracking due to extreme cold weather and flooding due to torrential rainfall	· Consider potential impacts from extreme weather events due to climate change in designing road surface and drainage system	DI	BPMO,LMC, local EPB	Included in design contract
	Bridge design	Inadequate bridge design could affect river hydrology, morphology and sediment transport	· No piers shall be constructed in the Dasha River; · Bored grouting for the abutment shall be conducted during low-flow season.	DI	Local EPB, local WAB	Included in design contract
	Health and Safety	Protection of vulnerable road users	· Design must ensure public health and safety and ensure barrier-free design for disabled people.	DI	BPMO,LMC	Included in design contract
Construction Preparation Phase						
EMP implementation capacities	Institutional arrangements	Lack of environmental management capacities within BPMO, LMC	· Appoint qualified environment specialist within the BPMO (environment management lead, EML); · Contract loan implementation environment consultant (LIEC) within loan administration consultant services; · Conduct environment management training · Establish EMU under LMC; · Contracting of environmental monitoring center to conduct environment impact monitoring; · Conduct environment management training · Contract CSCs	BPMO, LMC	ADB, LIEC	BMG, Loan implementation TA
	Updating EMP	EMP does not reflect final detailed design	· Updated mitigation measures defined in this EMP based on the detailed design, including disclosure on ADB website;	DI, BPMO, LMC	ADB	Included in the design contract
Contract Documents	EMP clauses in civil works contracts	EMP requirements are not reflected in civil works	· Prepare environment section in the terms of reference for bidders;	Tendering company, LMC	BPMO	Included in tendering agency

Item	Impact Factor	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Implem. Agency	Superv. Agency	Source of Funds
		contracts	· Prepare environmental contract clauses for contractors, namely special conditions (e.g., reference to EMP and monitoring table).			contract
Grievance Redress Mechanism (GRM)	Provide comprehensive and responsive complaints process	Community complaints are not adequately addressed	· Development and implementation of GRM; · Identify GRM entry points and brief them of their role.	BPMO, LMC, LIEC	BMG, ADB	Loan implementation TA

Construction site planning	Construction site EMPs (CS-EMP)	Lack of construction site environment management planning	· Develop CS-EMPs, responding to all clauses and requirements of this EMP, and including sub-plans such as:
			  · Site Drainage and Soil Erosion Management Plan
			  · Spill Management Plan;
			  · Waste Management Plan;
			  · Temporary Traffic Management Plan;
			  · Occupational Health and Safety Plan;
			· Nomination of an Environmental Health and Safety officer in contractor's team
				Head contractor for each civil work contract (RD-C01/02; WW-C01 – C05; WS-C01 – C08)	LIEC, BPMO,LMC	Included in construction contracts (RD-C01/02; WW-C01 – C05; WS-C01 – C08)

During Construction						
Impact on physical resources	Impact on soil	Excessive earthwork, inadequate spoil management	· Manage earthwork and spoil in accordance with the water and soil conservation plan (2013); · Use surplus soil within LIP for land leveling; · Dispose excess spoil at designated spoil disposal site, at K4+870 of the water transmission line.	Contractors (RD-C01/02; WW-C01 – C05; WS-C01 – C08)	CSCs, LMC, LIEC, certified soil erosion monitoring station, CES.	Included in construction contracts (RD-C01/02; WW-C01 – C05; WS-C01 – C08)
		Soil erosion *(these measures shall be defined in the Site Drainage and Soil Erosion Management Plan as part of the CS-EMP)*	· Minimize trench width and depth to reduce spoil generation; · Minimize duration of open trenches, and backfill immediately following pipe laying; · Use settling ponds, silt fences and screens to prevent sediment transport; · Construct intercepting ditches and drains to prevent runoff entering construction sites, and divert runoff from sites to existing drainage; · Strip and stockpile topsoil, and cover or seed temporary soil stockpiles; graded soil must be separately stockpiled from other materials and be readily recoverable for reinstatement; · Limit construction and material handling during periods of rains and high winds; · Properly slope or re-vegetate disturbed surfaces, such as compacted pipeline trenches and cut banks; · Slope stability must be undertaken and drains and sediment barriers must be installed as necessary and maintained until final reinstatement is	Contractors (RD-C01/02; WW-C01 – C05; WS-C01 – C08)	CSCs, LMC, LIEC, certified soil erosion monitoring station, CES.	Included in construction contracts (RD-C01/02; WW-C01 – C05; WS-C01 – C08)

Item	Impact Factor	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Implem. Agency	Superv. Agency	Source of Funds
			completed; and · Appropriately set up temporary construction camps and storage areas to minimize the land area required and impact on soil erosion.			
		Soil contamination *(these measures shall be defined in the Spill Management Plan as part of the CS-EMP)*	· Properly store petroleum products, hazardous materials and wastes on impermeable surfaces in secured and covered areas, and use the best management practice to avoid soil contamination; · Remove all construction wastes from the site to approved waste disposal sites; · Establish emergency preparedness and response plan; and · Provide spill cleanup measures and equipment at each construction site and require contractors to conduct training in emergency spill response procedures.	Contractors (RD-C01/02; WW-C01 – C05; WS-C01 – C08)	CSCs, LMC, LIEC, local EPB, CES.	Included in construction contracts (RD-C01/02; WW-C01 – C05; WS-C01 – C08)
	Impact on hydrology and water quality	Surface and groundwater pollution caused by excessive siltation (soil erosion), accidental spills, construction wastewater disposal	· During bridge construction, pump slurry to shore and properly dispose cutting materials; · Develop contingency plans to control oil and other dangerous substances (Spill Management Plan) as part of the CS-EMP; · Collect wastewater from construction activities in sedimentation tanks, retention ponds, and filter tanks to remove silts and oil; · Equip all areas where construction equipment is being washed with water collection basins and sediment traps; · Fuel storage, maintenance shop and vehicle cleaning areas must be stationed at least 500 m away from the Dasha River and the Yellow River; · Storage facilities for fuels, oil, and other hazardous materials will be within secured areas on impermeable surfaces, and provided with bunds and cleanup installations; · Contractors' fuel suppliers must be properly licensed. They shall follow proper protocol for transferring fuel and the PRC standard of JT3145-88 (Transportation, Loading and Unloading of Dangerous or Harmful Goods); · Locate labor camps at least 500 m from surface water bodies; · Install mobile toilets and on-site wastewater pre-treatment systems at construction camps along with proper maintenance protocols.	Contractors (RD-C01/02; WW-C01 – C05; WS-C01 – C08)	CSCs, LMC, LIEC, local EPB, CES.	Included in construction contracts (RD-C01/02; WW-C01 – C05; WS-C01 – C08)

Item	Impact Factor	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Implem. Agency	Superv. Agency	Source of Funds
			· Monitor water quality (for pollutants such as SS, CODcr, oil, and grease) in the Dasha River and the Yellow River in accordance with the EMP monitoring program to identify and confirm results of the impact assessment and effectiveness of adopted mitigation measures	Local EMC	LMC, LIEC, local EPB	LMC (counterpart funds)
	Impact on air quality	Dust (TSP) during construction; fumes and PM from asphalt mixing plant, vehicles	· Spray water on construction site and roads to reduce dust from earthwork excavation, transport, loading and uploading and stacking; · Avoid construction activities during strong windy days as possible; · Transport the spoil and other solid waste in a timely manner. Cover the construction materials during temporary stacking and transport to avoid spillage and dust; · The asphalt pavement construction should be done when the weather condition is conducive for pollutant diffusion; · Maintain vehicles and construction machineries to a high standard to ensure efficient running and fuel-burning and compliance with the PRC emission standards (GB18352-2005, GB17691-2005, GB11340-2005, GB2847-2005, and GB18285-2005).	Contractors (RD-C01/02; WW-C01 – C05; WS-C01 – C08)	LIEC, BPMO,LMC, BEPB, CSCs, CES.	Included in construction contracts (RD-C01/02; WW-C01 – C05; WS-C01 – C08)
			· Undertake regular site inspections and air quality monitoring in accordance with the monitoring plan;	CSC, EMC	LMC, LIEC, local EPB	LMC (counterpart funds)
	Noise	Excessive construction noise at sensitive receptors, including Nanshanwei village, Zhanghiachuan village, Xintian village residential houses within LIP,	· Sensibly schedule construction activities, avoid noisy equipment working concurrently; · Select advanced quiet equipment and construction method, and tightly control the use of self-provided generators; · Maintain equipment and machinery in good working order; · Undertake regular equipment maintenance, ensure compliance with PRC standard of GB 12523-2011; · Operate between 06:00H-20:00H only and reach an agreement with LMC and LIP management and nearby residents regarding the timing of heavy machinery work, to avoid any unnecessary disturbances; · Nighttime works should only be conducted in exceptional cases, and a permit should be obtained for that purpose; potentially affected people should be informed in advance; · Control speed of bulldozer, excavator, crusher and	Contractors (RD-C01/02; WW-C01 – C05; WS-C01 – C08)	LIEC, BPMO,LMC, BEPB, CSCs, CES.	Included in construction contracts (RD-C01/02; WW-C01 – C05; WS-C01 – C08).

Item	Impact Factor	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Implem. Agency	Superv. Agency	Source of Funds
			other transport vehicles travelling on site, adopt noise reduction measures on equipment, strengthen equipment repair and maintenance to keep them in good working condition; · Limit the speed of vehicles travelling on site (less than 8 km/h); · Install noise-attenuation windows for 84hh along the project road where non-compliance with Category 2 in Environmental Quality Standards for Noise(GB3096-2008) is anticipated/monitored; · Monitor noise within LIP and at nearby sensitive areas at regular intervals (as defined in the monitoring plan); · (viii) Conduct monthly interviews with residents living adjacent to construction sites to identify community complaints about noise, and seek suggestions from community members to reduce noise annoyance. Community suggestions will be used to adjust work hours of noise-generating machinery.	Local EMC, CSC	LMC, LIEC, local EPB	LMC (counterpart funds)
	Vibration	Excessive vibration, especially at night	· Operate between 06:00H-20:00H only and reach an agreement with LMC and nearby residents regarding the timing of heavy machinery work, to avoid excessive vibration impacts.	Contractors (RD-C01/02; WW-C01 – C05; WS-C01 – C08)	LIEC, BPMO,LMC, BEPB, CSCs, CES.	Included in construction contracts (RD-C01/02; WW-C01 – C05; WS-C01 – C08)
	Solid waste	Municipal solid waste from workers camps, construction solid waste	· Maximize reuse/recycling of construction wastes; · Transport construction waste in enclosed containers; · Establish enclosed waste collection points on site, with separation of domestic waste and construction waste and hazardous wastes; · Set up centralized domestic waste collection point and transport offsite for disposal regularly by sanitation department; · Use licensed contractors to remove wastes from the construction sites; · Dispose spoil at designated disposal site. Backfilled area if not being used must be planted with vegetation to prevent soil erosion; · Prohibit burning of waste.	Contractors (RD-C01/02; WW-C01 – C05; WS-C01 – C08)	LIEC, BPMO,LMC, BEPB, CSCs, CES.	Included in construction contracts (RD-C01/02; WW-C01 – C05; WS-C01 – C08)
Impact on biological resources	Ecology	Damage to flora and fauna resources	· Protect existing vegetation near construction sites; · Properly backfill, compact and re-vegetate pipeline trenches after pipeline installation;	Contractors (RD-C01/02; WW-C01 –	LIEC, BPMO,LMC, BEPB, CSCs, CES.	Included in construction contracts

Item	Impact Factor	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Implem. Agency	Superv. Agency	Source of Funds
			· Protect existing trees and grassland during road, bridge, treatment plant and pipeline construction; where a tree has to be removed or an area of grassland disturbed, replant trees and re-vegetate the area immediately after construction; · Only native plant species of local prevalence will be used for re-vegetation; and · Identify, demarcate and protect sites where small animals, reptiles, and birds of common species live such as vegetated roadside areas, trees, inner areas of bridges and river riparian zones, etc.	C05; WS-C01 – C08)		(RD-C01/02; WW-C01 – C05; WS-C01 – C08)
Impact on socio-economic resources	Physical cultural resources	Damage to unearthed cultural relics	· Contractor must comply with PRC's Cultural Relics Protection Law and Cultural Relics Protection Law Implementation Regulations if such relics are discovered, stop work immediately and notify the relevant authorities, adopt protection measures and notify the Security Bureau to protect the site.	Contractor (RD-C01/02; WW-C01 – C05; WS-C01 – C08)	LIEC, BPMO,LMC, cultural relics bureau.	Included in construction contracts (RD-C01/02; WW-C01 – C05; WS-C01 – C08)
	Occupational health and safety	Safety of workers on construction sites *(these measures shall be defined in the Occupational Health and Safety Plan as part of the CS-EMP)*	· Provide a clean and sufficient supply of fresh water for construction sites and for all camps, offices and workshops; · Provide an adequate number of latrines and other sanitary arrangements at construction sites and work camps, and ensure that they are cleaned and maintained in a hygienic state; · Garbage receptacles at construction sites and camps will be set up, which will be periodically cleared to prevent outbreak of diseases; · Provision of personal protective equipment (PPE) that is fit for the task to prevent injury and maintain hygiene standards. Workers should be trained in the correct selection, use and maintenance of PPE. · An emergency response plan to take actions on accidents and emergencies will be prepared, including environmental and public health emergencies associated with hazardous material spills and similar events; · A fully equipped first-aid base in each construction camp will be organized; · A records management system that will store and maintain easily retrievable records against loss or damage will be established. It will include documenting and reporting of occupational accidents, diseases, and incidents. The records will be reviewed during compliance monitoring and	Contractors (RD-C01/02; WW-C01 – C05; WS-C01 – C08)	LIEC, LMC, BPMO, CSCs.	Included in construction contracts (RD-C01/02; WW-C01 – C05; WS-C01 – C08)

Item	Impact Factor	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Implem. Agency	Superv. Agency	Source of Funds
			audits; · Ensure that occupational health and safety matters are given a high degree of publicity to all persons regularly or occasionally on each construction site. Posters will be displayed prominently in relevant areas of the site; and · Train all construction workers in basic sanitation, general health and safety matters, and on the specific hazards of their work. Implement site HIV/AIDS and other communicable diseases awareness and prevention program to target the local community and construction workers.			
	Community health and safety	Temporary traffic management *(as part of the CS-EMPs)*	· A Temporary Traffic Management Plan shall be developed together with the local traffic management authority prior to any construction, and included in the CS-EMP; · The plan shall include provisions for diverting or scheduling construction traffic to avoid morning and afternoon peak traffic hours, regulating traffic at road crossings with an emphasis on ensuring public safety through clear signs, controls and planning in advance.	Contractors, local traffic police, LMC	LIEC, BPMO, BEPB, CSCs, CES.	BMG (traffic police department)
		Information disclosure, construction site protection	· Residents and businesses shall be informed in advance through media of the construction activities, given the dates and duration of expected disruption; · Clear signs shall be placed at construction sites in view of the public, warning people of potential dangers such as moving vehicles, hazardous materials, excavations etc and raising awareness on safety issues; · All sites shall be made secure, discouraging access by members of the public through appropriate fencing whenever appropriate.	Contractors (RD-C01/02; WW-C01 – C05; WS-C01 – C08)	LIEC, LMC, BPMO, CSCs, CES.	Included in construction contracts (RD-C01/02; WW-C01 – C05; WS-C01 – C08)
		Utility services interruptions	· Assess construction locations in advance for potential disruption to services and identify risks before starting construction; · If temporary disruption is unavoidable, develop a plan to minimize the disruption in collaboration with relevant local authorities such as power company, water supply company and communication company, and communicate the dates and duration in advance to all affected people.	Contractors (RD-C01/02; WW-C01 – C05; WS-C01 – C08)	LIEC, LMC, BPMO, CSCs, CES.	Included in construction contracts (RD-C01/02; WW-C01 – C05; WS-C01 – C08)
Environmental	Environment	Poor environment	· Review, revise and finalize EMS proposal (defined in	LMC and EMS	BPMO, ADB	LMC, loan

Item	Impact Factor	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Implem. Agency	Superv. Agency	Source of Funds
sustainability	management system (EMS) subcomponent implementation	management of industrial park	IEE, Appendix 2); · Develop the EMS for LIP according to the design framework including policies, standards practices, budget, monitoring etc. · Submit to ADB and BPMO for review and approval.	Consultants of loan implementation consulting services		implementation TA

Notes: People's Republic of China (PRC), Asian Development Bank (ADB), Community Environment Supervisors (CES), Safeguard Policy Statement (SPS 2009), Gansu Provincial Government (GPG), Baiyin Municipal Government (BMG), Project Preparation Technical Assistance (PPTA), Environmental Management Plan (EMP), BMG is Executing Agency (EA), Baiyin Project Management Office (BPMO), Implementing Agency (IA), Liuchuan Industrial Park Management Commission (LMC), Loan Implementation Environment Consultant (LIEC), Construction Supervision Company (CSC), Environmental Monitoring Center (EMC), Grievance Redress Mechanism (GRM), Environmental Management System (EMS), Environmental Monitoring Report (EMR), Baiyin Environmental Protection Bureau (BEPB), Water Affairs Bureau (WAB), Design Institute (DI), operation and maintenance (O&M), wastewater treatment plant (WWTP), water treatment plant (WTP).

Table EMP-3: Potential Impacts and Mitigation Measures during Operation for Infrastructure Components

Item	Potential Impacts and Issues	Location	Mitigation Measures and/or Safeguards	Implementation Agency	Supervision Agency	Source of funds
Environmental Management System (EMS)	Implementation of EMS	LIP	· Ensure implementation of the EMS and achieve proposed milestones of ISO 14001 certification (by 2018) and EIP accreditation (by 2025)	LMC with EMS consulting team	BPMO, LIEC	LMC operational budget, loan implementation TA
Wastewater collection and treatment subcomponent	Failure to control influent quality of wastewater at the new WWTP	WWTP and contributing industries	· Ensure proper monitoring of pre-treatment systems in place at all wastewater contributing industries; · Integrate monitoring results into environment management information system (EMIS); · Take action to enforce pre-treatment standards on all LIP industries.	Connected companies, EMS Unit; BEPB	LMC, BEPB	Connected companies, BEPB budget (monitoring)
	Failure to operate the new WWTP to meet design and discharge standards	WWTP	· Ensure proper O&M systems are in place and equipment in good working order and also ensure backup power system available; · Provide operational training to WWTP staff.	WWTP operator	LMC, BEPB	WWTP operation budget
	Odor at WWTP	WWTP	· Ensure that the WWTP deodorization facilities are operating properly; · Strengthen management, reduce chlorine fugitive emissions.	WWTP operator	LMC, BEPB	WWTP operation budget
	Improper sludge management	WWTP, nearby areas	· WWTP sludge should be regularly tested for heavy metals and other hazardous constituents as well as moisture content; · If sludge is non-hazardous, beneficial reuse will be explored. Until reuse plan can be developed, sludge that is non-hazardous and meeting PRC standards for moisture content will be disposed at Jingyuan County landfill No. 2. · Ensure moisture content of the sludge complies with PRC's Disposal of Sludge from Municipal Wastewater Treatment Plant – Quality of Sludge for Co-landfilling (GB/T 23485-2009); · If the sludge is identified as hazardous waste sludge, it should be shipped to hazardous waste	WWTP operator	LMC, BEPB	WWTP operation budget

Item	Potential Impacts and Issues	Location	Mitigation Measures and/or Safeguards	Implementation Agency	Supervision Agency	Source of funds
			disposal center in Gansu Province for centralized disposal.			
	Risks of accidental discharge, overload, emergency preparedness and response	WWTP, Dasha River	· Provision of an emergency holding tank of 3,000 m3; · Provision of dual power supply; · Spare parts for key components; · Regular inspection and proper maintenance of the WWTP; · Automated on-line, real-time monitoring of influent and effluent quality; and an in-house analytical lab will be established prior to operation of the WWTP. · The major analytical equipment will include the following: wastewater sampler, pH meter, flow meter, conductivity meter, UV/VIS spectrophotometer, DO meter, COD speedy tester, thermostat incubator, electric balance, and centrifuge; · Install warning signs and alarms near outfall to Dasha River to notify residents of emergency discharges; · Develop and implement an emergency preparedness and response plan for the WWTP, to be linked to the EP&R plan of LIP. · *The EMS supported by the project will also include various training and reporting systems to help ensure that the WWTP is operated properly and meets its performance targets.*	WWTP operator, EMS Unit	LMC, BEPB	WWTP operation budget
	Wastewater reuse	WWTP, LIP	· Ensure 100% wastewater reuse by project completion; · Disinfect effluent prior to reuse (Chlorine dioxide);	LMC, WWTP operator, industries	LMC, BEPB	LMC and WWTP operation budget
	Occupational health and safety	Safety of WWTP staff	· Use safety shoes or boots with non-slip soles; · wear personal protective equipment and chemical resistant clothing to avoid exposure of skin or eyes to corrosive and/or polluted solids,	WWTP operator, EMS Unit	LMC, BEPB	WWTP operation budget

Item	Potential Impacts and Issues	Location	Mitigation Measures and/or Safeguards	Implementation Agency	Supervision Agency	Source of funds
			liquids, gases or vapors; · post safety instructions in each workshop regarding the storage, transport, handling or pouring of chemicals; · check electrical equipment for safety before use; verify that all electric cables are properly insulated; take faulty or suspect electrical equipment to a qualified electricity technician for testing and repair; · wear safety goggles in all cases where the eyes may be exposed to dust, flying particles, or splashes of harmful liquids; · wear respiratory mask in the sludge dewatering and de-odor workshops and when moving and transporting sludge; · obey all safety instructions concerning entry into confined spaces, e.g., check atmosphere for oxygen or for poisonous gases, use respiratory protection equipment if needed, have a co-worker stand guard in case of need for help, etc; · all workers will undergo periodic examinations by occupational physician to reveal early symptoms of possible chronic effects or allergies; and · health and safety will be incorporated into the regular staff training programs.			
Water supply component	Water Source Protection Zone	Inability to develop and ensure compliance with water source protection zone at Yellow River intake location	· Protection measures will be formally delineated for water source protection zones, including: (i) a Prohibited Zone (Grade I Zone), closest to the water source; and (ii) a Protection Zone (Grade II Zone), adjoining the Prohibited Zone. · Unauthorized personnel will be forbidden from entering the	LMC, local WAB	Local WAB	Local WAB

Item	Potential Impacts and Issues	Location	Mitigation Measures and/or Safeguards	Implementation Agency	Supervision Agency	Source of funds
			prohibited zone (to be achieved by fencing the zone (surrounding the water intake on the source water body, and providing signage notifying the public of water source protection zone). · In the Grade II zone, no new buildings or construction projects will be allowed that may drain pollutants to the water body.			
	Sediments from primary treatment	Primary treatment plant, Yellow River	· The sediment from the preliminary WTP will be transported to the barren area 100-200 meters above the primary WTP, designated by the local Land Resources Bureau; · The area shall be protected from public access and routine soil conservation and protection measures taken to ensure that the material does not impact surrounding land. · Regular monitoring of material to confirm absence of environment, health and safety risk.	WTP operator	LMC, BEPB	WTP operation budget
	Sludge from secondary WTP	Secondary WTP, LIP	· Sludge from Secondary WTP will be shipped to Jingyuan county solid waste landfill site for disposal.	WTP operator	LMC, BEPB	WTP operation budget
	Occupational health and safety	Risk of hydrochloric acid, sodium chlorite and chlorine dioxide leakage	· Chemicals will be transported and managed in compliance with relevant state regulations on hazardous chemical substance management; · The chlorination room and chemical storage area will be equipped with automatic alarms, which will be triggered by chlorine dioxide leakage; · The duty room will be equipped with gas masks, oxygen breathing apparatus and other rescue materials; · An emergency response plan will be	WTP operator, EMS Unit	LMC, BEPB	WTP operation budget

Item	Potential Impacts and Issues	Location	Mitigation Measures and/or Safeguards	Implementation Agency	Supervision Agency	Source of funds
			developed and implemented. The plan will inform staff about the characteristics of chlorine dioxide and hydrochloric acid, describe potential health hazards, and define accident prevention measures and an evacuation plan. · The plan will be linked to the LIC-wide emergency preparedness and response plan (EP&R) developed under the EMS subcomponent of the project.			
Road component	Vehicle emissions	Roads in LIP	· Strict implementation of vehicle emission inspection system to avoid vehicles that cannot satisfy exhausted gas discharge standard on the road.	Traffic police	LMC, BEPB	BMG budget for vehicle inspections
	Noise	Roads in LIP	· Enforce speed limits on Xihuan Road (50km/h); · Maintain noise-mitigation measures at sensitive receptors (84 hh).	LMC, traffic police	LMC, BEPB	LMC budget
	Water pollution	Road runoff, drainage	· Routinely collect and properly dispose litter and debris from sidewalks, driveways, and parking lots; · Clean the roadside catch basins before rains to avoid surface water pollution by storm water runoff flushing debris and silt.	Road maintenance	LMC, BEPB	LMC budget
	Road safety	Motorized and non-motorized traffic safety	· LIP road section shall include separate pedestrian sidewalks and separate lanes for non-motorized traffic; · Pedestrian-priority traffic lights, safety islands, crosswalks (zebra lines), and boarding bays/islands shall be established at all intersections; · Road maintenance vehicles shall be equipped with warning lights; · *Park safety, which covers traffic safety, will be an important*	LMC, EMS Unit, traffic police	LMC, BEPB	LMC budget

Item	Potential Impacts and Issues	Location	Mitigation Measures and/or Safeguards	Implementation Agency	Supervision Agency	Source of funds
			component of the EMS subproject. ·			
	Road accidents and spillage of hazardous materials	Roads in LIP	· Strict enforcement of road speed limits, trucking regulations including hauling and placarding of hazardous materials; · Implement emergency planning and response plan in LIP · *Emergency preparedness and response, which covers road accidents and spills, will be an important component of the EMS subproject.*	LMC, EMS Unit, traffic police	LMC, BEPB	LMC budget
Climate Variability and Change	Adaptation to Climate Variability and Change	LIP	· The effluent from the LIP WWTP will be used for landscape irrigation and industrial reuse. This will raise resilience to climate variability by reducing demand for potable water. · Qualification criteria for new industries as well as for EIP accreditation (which is targeted by LIP and supported by the project) include targets and indicators which clearly aim at increasing the LIP's resilience to climate variability, including but not limited to: (i) limiting fresh water consumption per industrial added value (less than 9 m3/10,000 CNY) [1] ; (ii) defining minimal water reuse rate (at least 40%) and industrial water recycling rate (at least 75%). Climate change resilience will also be increased through improved irrigation practices.	LMC	LMC, BPMO, ADB	LMC budget
	Greenhouse Gas Emission Reduction	LIP	· This project will support BMG and LMC to develop a comprehensive environmental management system (EMS) for the LIP, and assist LIP moving toward eco-industrial park (EIP) accreditation under national	LMC	LMC, BPMO, ADB	LMC budget

[1] EIP indicator as defined in the PRC standard for sector-integrated eco-industrial parks (HJ 274-2009).

Item	Potential Impacts and Issues	Location	Mitigation Measures and/or Safeguards	Implementation Agency	Supervision Agency	Source of funds
			CE and EIP promotion programs coordinated by MEP and NDRC. Qualification criteria for EIP accreditation include production-related emission targets, such as: (i) energy consumption per industrial added value; (ii) industrial water recycling rate; (iii) water reuse rate; (iv) SO2 emissions per industrial added value, as well as total SO2 emissions (5,120 tons per year).			

Notes: Asian Development Bank (ADB), Safeguard Policy Statement (SPS 2009), Baiyin Municipal Government (BMG), Project Preparation Technical Assistance (PPTA), Environmental Management Plan (EMP), BMG is Executing Agency (EA), Baiyin Project Management Office (BPMO), Implementing Agency (IA), Liuchuan Industrial Park Management Commission (LMC), Loan Implementation Environment Consultant (LIEC), Construction Supervision Company (CSC), Environmental Monitoring Center (EMC), Grievance Redress Mechanism (GRM), Environmental Management System (EMS), Baiyin Environmental Protection Bureau (BEPB), Water Affairs Bureau (WAB), Design Institute (DI), operation and maintenance (O&M), wastewater treatment plant (WWTP), water treatment plant (WTP).

D. Environmental Inspection, Monitoring and Reporting

15. Monitoring will include project readiness monitoring (to be conducted by the LIEC), environmental impact monitoring (to be conducted by a licensed entity), as well as EMP compliance verification during project implementation and the first year of project operation (to be conducted by BPMO and LIEC). Monitoring and reporting arrangements defined for this project are described below.

16. **Assessment of project readiness.** Before construction, the LIEC will assess the project's readiness in terms of environmental management based on a set of indicators (***Table EMP-4***) and report it to ADB and the BPMO. This assessment will demonstrate that environmental commitments are being carried out and environmental management systems are in place before construction starts, or suggest corrective actions to ensure that all requirements are met.

Table EMP-4: Project Readiness Assessment Indicators

Indicator	Criteria	Assessment
EMP update	• The EMP was updated after technical detail design, and approved by ADB	Yes No
Compliance with loan covenants	• The borrower complies with loan covenants related to project design and environmental management planning	Yes No
Public involvement effectiveness	• Meaningful consultation completed • GRM established with entry points	Yes No Yes No
Environmental Supervision in place	• LIEC is in place • Environmental Management Unit established by LMC • Environment specialist appointed by BPMO • Environment monitoring center (EMC) and CSCs contracted by LMC • Community environment supervisors (CES) confirmed and informed	Yes No Yes No Yes No Yes No Yes No
Bidding documents and contracts with environmental safeguards	• Bidding documents and contracts incorporating the environmental activities and safeguards listed as loan assurances • Bidding documents and contracts incorporating the impact mitigation and environmental management provisions of the EMP • Environmental requirements of EMP included in contract documents for construction contracts	Yes No Yes No Yes No
EMP financial support	• The required funds have been set aside by contractors, LMC and BPMO to support the EMP implementation	Yes No

17. **Environmental impact monitoring**. **Table EMP-5** shows the environmental impact monitoring program specifically designed for this project, defining the requirements on the scope, location, parameter, duration and frequency of monitoring during the construction and operational stages.

18. During construction, regular environmental impact monitoring will be conducted by the environment monitoring center of Baiyin (EMC), contracted by LMC. In addition, CSCs will be required to conduct frequent internal noise and air quality monitoring around construction sites and to report monitoring results in the framework of their monthly progress reports to BPMO and LMC. During operation, daily monitoring of water treatment and wastewater treatment performance will be conducted by the operator of the facilities in compliance with PRC regulation.[2] In addition, to comply with ADB

[2] For water supply, this includes weekly monitoring of 42 regular parameters defined in the standard of GB5749-2006 (Total coliform, Thermotolerant coliform, Escherichia coliform, Total plate count, As, Cd, Cr^{+6}, Pb, Hg, Se, Cyanide, NO3-N, Chloroform, Tetrachloromethane (CCl4), Fluoride, Bromate, Formaldehyde, NH3-N, Chlorite, Chlorate, Chromaticity, Turbidity, odor & taste, Lookable (appearance), pH, Al, Fe, Mn, Cu, Zn, Chloride, Sulfate, TDS, Total hardness, CODmn, Volatile phenol,

requirements, the LMC will contract the EMC to conduct environmental impact monitoring during the first year of operation. The budget for environmental impact monitoring by the EMC has been estimated at $25,000. The cost for monitoring conducted by the CSCs will be included in CSCs' contracts.

19. Monitoring will also be periodically conducted by the local environmental authorities in the framework of their legal mandate to check compliance with applicable environmental regulations. They will be responsible for undertaking regular and random environmental monitoring and inspection activities before, during, and after construction as well as in the event of emergencies. The wastewater treatment plant will install an on-line monitoring system and the data will be transmitted to Baiyin Municipal EPB automatically. In addition, Baiyin Municipal EPB will conduct quarterly inspection.

20. Three community representatives from Nanchuan Village, Nanshanwei Village and Xinmin Village near the project sites are determined as independent supervisors to perform regular site inspections. The cost will be beard by the LMC.

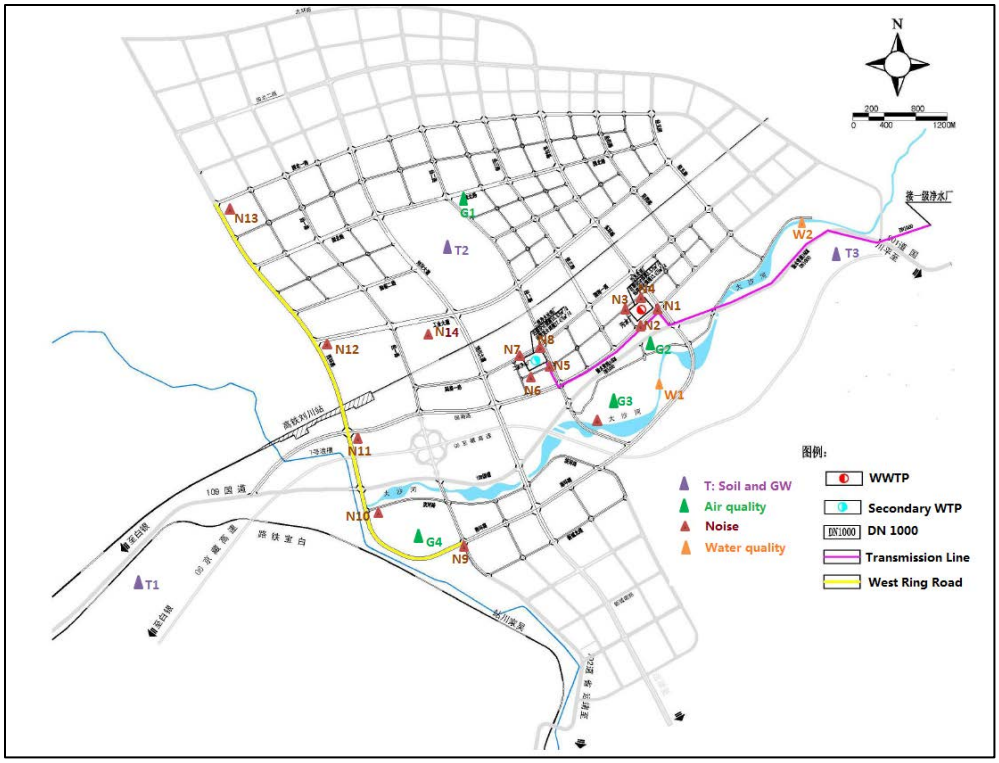
Table EMP-5: Environment monitoring plan

Item	Monitoring Parameter	Monitoring Location	Monitoring Frequency & Duration, Standard	Implem. Entity	Superv. Entity	Cost
Construction Stage						
Dust and noise	TSP, L_{Aeq}	At boundaries of all construction sites and at baseline monitoring points N1-N19, G1-G5 (Figure EMP-1 and EMP-2).	Once per month during construction period *GB3095-2012 (TSP) GB12523-2011, GB3096-2008 (Noise)*	CSCs	LMC, BPMO, LIEC	$4,000
Ambient air quality	TSP, SO2, NO2, PM10	At boundaries of all construction sites and at baseline monitoring points G1-G5 (Figure EMP-1 and EMP-2).	1 day (24-hr continuous sampling), quarterly during construction period. *GB3095-2012*	EMC	LMC, BPMO; BEPB	$5,000
Noise	L_{Aeq}	At boundaries of all construction sites and at baseline noise monitoring points N1-N19 (Figure EMP-1 and EMP-2).	2 times per day (day time and night time); quarterly during construction period *GB12523-2011, GB3096-2008*	EMC	LMC, BPMO; BEPB	$2,000
Surface water quality	pH, COD, BOD5, TP, TN, SS, TPH	At baseline water monitoring points W1 and W2 (Dasha River), W3 and W4 (Yellow River) (Figure EMP-1 and EMP-2).	1 time per day; quarterly during construction period *GB3838-2002 (class III)*	EMC	LMC, BPMO; BEPB	$5,000
Soil quality	TPH, selected heavy metals	At baseline soil monitoring points T1-T3 (LIP, Figure EMP-1).	Quarterly during construction period *GB15618-1995 (class II)*	EMC	LMC, BPMO; BEPB	$5,000
Soil erosion	Soil erosion protection measures, soil erosion intensity	12 locations as defined in the water and soil erosion control plan, including: raw water intake pump, preliminarily WTP, secondary WTP, WWTP, Xihuan road (2), spoil disposal sites (2), work camp, undisturbed sites with original topographical features (3).	Quarterly during construction period	licensed soil erosion monitoring unit	LMC, BPMO; BWAB	$5,000

LAS, Total α-radioactivity, Total β-radioactivity, ClO_2, Residual Cl_2).

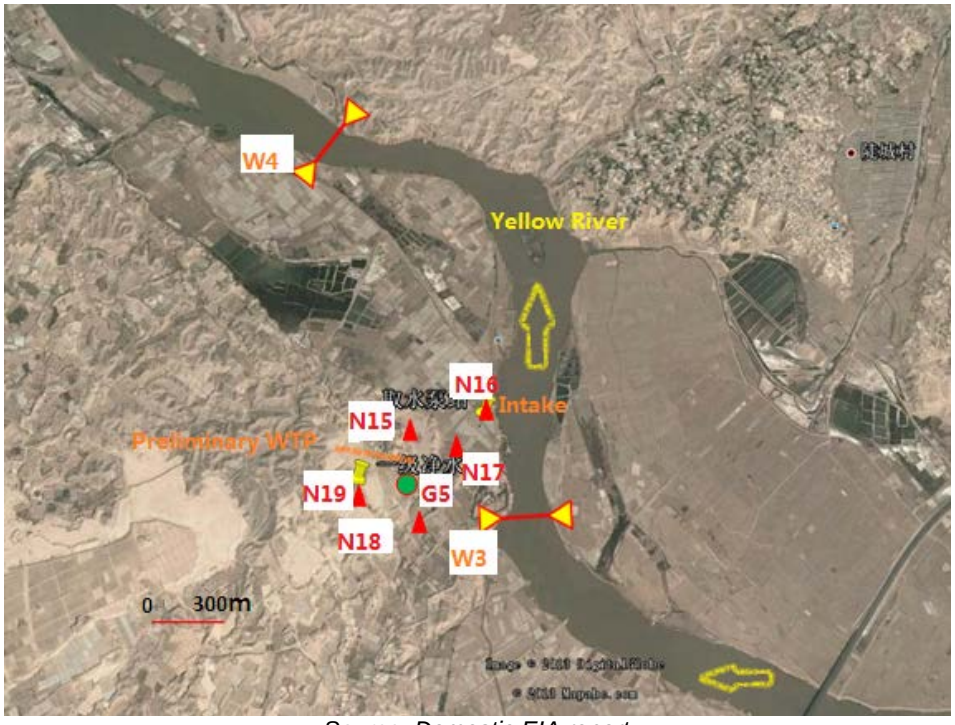
Item	Monitoring Parameter	Monitoring Location	Monitoring Frequency & Duration, Standard	Implem. Entity	Superv. Entity	Cost
Operational Stage (the first year)						
Ambient air quality	TSP, NO_2, CO, PM_{10}	4 locations within LIP (G1-G4, Figure EMP-1), 1 location at primary WTP (G5, Figure EMP-2). Points #1 to #6 (sensitive receptors along project road, IEE Table V-28).	1 day (24-hr continuous sampling), quarterly. *GB3095-2012*	EMC	LMC, BPMO; BEPB	$2,000
	Odor (SO_2, NH_3, H_2S)	At each of the 4 boundaries of the WWTP (N1-N4, Figure EMP-1)	1 time per day, quarterly	EMC	LMC, BPMO; BEPB	
	Cl^-	At chlorination rooms of WTP and WWTP (indoor and outdoor)	1 time per day, quarterly	EMC	LMC, BPMO; BEPB	
Noise	L_{Aeq}	At baseline monitoring points N1-N4 (WWTP); N5-N8 (secondary WTP); N9-N14 (road); and N15-N19 (primary WTP), (Figure EMP-1 and EMP-2) Points 1-84 (sensitive receptors along project road, IEE V-19)	2 times per day (day time and night time); quarterly *GB12348-2008, GB12523-2011, (boundary noise);* *GB3096-2008 (Grade 4a, Grade II, ambient noise)*	EMC	LMC, BPMO; BEPB	$5,000
Surface water quality	Temp, pH, COD, BOD5, TP, TN, SS, TPH, surfactants, fecal coliforms	At baseline water monitoring points W1 and W2, plus at KM1, KM2, KM3, KM4 downstream of discharge point (Dasha River), W3 and W4 (Yellow River) (Figure EMP-1 and EMP-2).	1 time per day; quarterly *GB3838-2002 (class III)*	EMC	LMC, BPMO; BEPB	$2,000
WWTP influent and effluent	Volume, Temp, pH, COD, BOD5, TP, TN, NH3-N, SS, TPH, surfactants, fecal coliforms	At WWTP inlet and outlet.	Volume, Temp, pH, COD and NH3-N: continuous (online monitoring) BOD5, TP, TN, SS, TPH, surfactants, fecal coliforms: once per month *CJ3082-1999 (influent)* *GB18918-2002 (effluent, Class 1A)*	EMC	LMC, BPMO; BEPB	$6,000
WWTP sludge quality	Moisture content (%), N, P, K, Cd, Pb, As, Cr	At WWTP sludge dewatering facility	Quarterly *GB/T 23485-2009* *CJ/T 309-2009*	EMC	LMC, BPMO; BEPB	$2,000
WTP sludge quality	Moisture content (%)	Primary and secondary WTP, primary sludge storage facility (N15/N19, Figure EMP-2)	Quarterly *GB/T 23485-2009* *CJ/T 309-2009*	EMC	LMC, BPMO; BEPB	$500
WTP water quality	106 parameters of GB5749-2006	Clear water tank, WTP	Semi-annual *GB5749-2006*	Baiyin EMC	LMC, BPMO; BEPB	$4000
Soil quality	TPH, selected heavy metals	At baseline soil monitoring points T1-T3 (LIP, Figure EMP-1).	Semi-annual *GB15618-1995 (class II)*	EMC	LMC, BPMO; BEPB	$2,000
Total estimated monitoring costs:						***$49,500***

Notes: Asian Development Bank (ADB), Gansu Provincial Government (GPG), Baiyin Project Management Office (BPMO), Liuchuan Industrial Park Management Commission (LMC), Environmental Monitoring Center of BEPB (EMC), Baiyin Environmental Protection Bureau (BEPB), OWWTP = wastewater treatment plant, WTP = water treatment plant.



Source: Domestic EIA report, PPTA consultant

Figure EMP-1: Monitoring locations within LIP



Source: *Domestic EIA report*

Figure EMP-2: Monitoring locations at water intake and preliminary WTP

21. **EMP compliance verification and reporting**. EMP compliance monitoring will be undertaken by the BPMO, with support of the loan implementation environment consultant (LIEC). The BPMO will report to ADB the project's adherence to the EMP, information on project implementation, environmental performance of the contactors, and environmental compliance through the quarterly project progress reports and annual EMP progress and monitoring reports (**Table EMP-6**). Quarterly progress reports by the BPMO to ADB will include a summary of EMP implementation progress. The LIEC will support the BPMO in developing the annual EMP progress and monitoring reports. The reports should confirm the project's compliance with the EMP, local legislation such as PRC EIA requirements, and identify any environment related implementation issues and necessary corrective actions, and reflect these in a corrective action plan. The performance of the contractors will also be reported on with respect to environmental protection and impact mitigation. The operation and performance of the project GRM, environmental institutional strengthening and training, and compliance with all covenants under the project will also be included in the report.

22. **Environmental acceptance monitoring and reporting**. Within three months after each component completion, or no later than 1 year with permission of the BEPB, environmental acceptance monitoring and audit reports of completion of each subcomponent under project component 1 shall be: (i) prepared by a licensed environmental monitoring institute in accordance with the PRC Regulation on Project Completion Environmental Audit (MEP, 2001), (ii) reviewed for approval of the official commence of individual component operation by environmental authorities, and (iii) finally reported to ADB (**Table EMP-6**). The environmental acceptance reports of the component completions will indicate the timing, extent, effectiveness of completed mitigation and of maintenance, and the needs for additional mitigation measures and monitoring during operations.

23. **Project Design and Monitoring Framework**. At the outset of project implementation, the BPMO and LMC will develop (i) comprehensive project design and monitoring framework (DMF) procedures to systematically generate data on inputs and outputs of the project components, and (ii) detailed environmental and related social economic indicators to measure project impacts. The DMF indicators for the project may include (i) public satisfaction with the living environment; (ii) increased employment; (iii) water supply delivery and wastewater collection and treatment rates; (iv) increased or decreased traffic accidents; and (v) increased local GDP. Under the DMF, baseline and progress data will be reported at the requisite time intervals by LMC. LMC will be responsible for analyzing and consolidating the data through its management information system, as part of the project EMS. The DMF will be designed to permit adequate flexibility to adopt remedial action regarding project design, schedules, activities, and development impacts. The BPMO and LMC will refine the DMF, confirm achievable goals, firm up monitoring and recording arrangements, and establish systems and procedures no later than 6 months after loan effectiveness.

Table EMP-6: Reporting plan

Reports		From	To	Reporting Frequency
Construction Phase				
Internal progress reports by contractors	Internal project progress report by construction contractors, including monitoring results by CSCs	Contractors, CSCs	LMC	Monthly (during construction season)
Environmental impact monitoring	Environmental impact monitoring report	EMC	BEPB, BPMO, LMC, LIEC	Quarterly (during construction season)
Reports to ADB	Project progress report (including section on EMP implementation and monitoring)	BPMO	ADB	Quarterly
	Environment progress and monitoring reports	BPMO	ADB	Annually
Acceptance report	Environmental acceptance monitoring and audit report	Licensed institute	BEPB	Once, not later than one year after completion of physical works
Operational Phase				
Environmental impact monitoring	Environmental impact monitoring report (during first year of operation)	EMC	BEPB, BPMO, LMC	Quarterly
Reports to ADB	Project progress report (including section on EMP implementation and monitoring)	BPMO	ADB	Quarterly
	Environment progress and monitoring report	BPMO	ADB	Annually (until PCR is issued)
Notes: Baiyin Project Management Office (BPMO), Implementing Agency (IA), Liuchuan Industrial Park Management Commission (LMC), Loan Implementation Environment Consultant (LIEC), Construction Supervision Company (CSC), Environmental Monitoring Center (EMC), Baiyin Environmental Protection Bureau (BEPB)				

E. Institutional Strengthening and Training

24. The capacity of the BPMO, LMC and contractors' staff responsible for EMP implementation and supervision will be strengthened. All parties involved in implementing and supervising the EMP must have an understanding of the goals, methods, and practices of project environmental management. The project will address the lack of capacities and expertise in environmental management through (i) institutional capacity building, and (ii) training.

25. **Institutional strengthening.** The capacities of the BPMO and LMC to coordinate environmental management will be strengthened through a set of measures:

(i) The assignment of a BPMO staff in charge of EMP coordination, including GRM;
(ii) The appointment of a national environmental specialist under the loan implementation consultant services to guide BPMO and LMC in implementing the EMP and ensure compliance with ADB's Safeguard Policy Statement (SPS 2009); and
(iii) The creation of an environmental management unit (EMU) by the LMC to conduct regular site inspections and coordinate environmental impact monitoring.

26. **Training.** The BPMO, LMC, contractors and facility operator (WWTP, WTP) will receive training in EMP implementation, supervision, and reporting, and on the Grievance Redress Mechanism (**Table EMP-7**). Training will be facilitated by the LIEC with support of other experts under the loan implementation consultant services.

Table EMP-7: Training Program

Training	Attendees	Contents	Times	Period (days)	No. of persons	Cost ($/person /day)	Total Cost
EMP adjustment and implementation	BPMO, LMC, contractors, CSCs, BEPB	Development and adjustment of the EMP, roles and responsibilities, monitoring, supervision and reporting procedures, review of experience (after 12 months)	Twice - Once prior to, and once after one year of project implementation	2x0.5	15	60	$ 900
Grievance Redress Mechanism	BPMO, LMC, contractors, CSCs, BEPB	Roles and responsibilities, Procedures, review of experience (after 12 months)	Twice - Once prior to, and once after one year of project implementation	2x0.5	10	60	$ 900
Environmental aspects of facilities operation	LMC, O&M unit	Environmental housekeeping; Sludge treatment and disposal process; Safety operation regulations Emergency preparedness and breakdown response procedures	Once during project operation	1	15	60	$ 900
Total estimated cost:							**$ 2,700**
Notes: Baiyin Project Management Office (BPMO), Liuchuan Industrial Park Management Commission (LMC), Loan Implementation Environment Consultant (LIEC), Construction Supervision Company (CSC), Environmental Monitoring Stations (EMC), Environmental Management System (EMS), Baiyin Environmental Protection Bureau (BEPB),							

F. Consultation, Participation and Information Disclosure

27. Section VII of the project IEE report has described the meaningful public participation and consultation implemented during project preparation. Plans for public involvement during construction and operation stages have been developed during project preparation. The BPMO and LMC are responsible for public participation during project implementation.

28. These plans include public participation in (i) monitoring impacts and mitigation measures during the construction and operation stages; (ii) evaluating environmental and economic benefits and social impacts; and (iii) interviewing the public after the project is completed. These plans will include several types of public involvement, including site visits, workshops, investigation of specific issues, interviews, and public hearings, as indicated in **Table EMP-8**. Three community representatives from Nanchuan Village, Nanshanwei Village and Xinmin Village near the project sites are determined as community environment supervisors (CES) to perform regular site inspections. The cost for public consultation and participation during project implementation will be beard by the LMC. The budget for public consultation is estimated at approximately $4,400.

Table EMP-8: Public consultation plan

Organizer	Format	No. of Times	Subject	Attendees	Budget
Construction Stage					
BPMO	Public consultation & site visits	4 times: 1 time before construction commences and 1 time each year during construction	Adjusting of mitigation measures, if necessary; construction impact; comments and suggestions	Residents adjacent to components; CES	$2,400
BPMO,LMC	Expert workshop	As needed based on public consultation	Comments and suggestions on mitigation measures, public opinions	Experts of various sectors, CES	$ 800
Operational Stage					
LMC	Public consultation and site visits	Once in the first year	Effectiveness of mitigation measures, impacts of operation, comments and suggestions	Residents adjacent to component sites; CES.	$ 400
LMC	Public workshop	As needed based on public consultation	Effects of mitigation measures, impacts of operation, comments and suggestions	Representatives of residents and social sectors	$ 400
	Public satisfaction survey	At least once	Comments and suggestions	Project beneficiaries	$ 400
Total budget:					**$4,400**
Notes: Baiyin Project Management Office (BPMO), Community Environment Supervisors (CES), Liuchuan Industrial Park Management Commission (LMC), Loan Implementation Environment Consultant (LIEC), Construction Supervision Company (CSC), Environmental Monitoring Stations (EMC), Baiyin Environmental Protection Bureau (BEPB)					

F. Grievance Redress Mechanism

29. A grievance redress mechanism (GRM) will be established to address community concerns and complaints related to safeguards issues. Besides issues related to land acquisition and resettlement, grievances will most likely include disturbance of traffic; dust emissions; construction noise; soil erosion; inappropriate disposal of waste materials; damage to private property; safety measures for the protection of the general public and construction workers; or water quality deterioration. The GRM will be accessible to diverse members of the community and stakeholders. Multiple points of entry, including face-to-face meetings, written complaints, telephone conversations, or e-mail, will be available.

30. The BPMO will establish a single Project Public Complaint Unit (PPCU). The PPCU will instruct contractors and construction supervision companies (CSCs) if people complain about the project. The PPCU will coordinate with the county EPB and municipal EPB and other government divisions, if necessary, and will be supported by the Loan Implementation Environmental Consultant (LIEC), hired under the Project Implementation Consultant Support (PIC). The PPCU will establish a GRM tracking and documentation system, including procedures to retrieve data for reporting purposes to the BPMO and ADB.

31. The contact persons for different GRM entry points, including contractors, CSC, LMC, county and municipal EPB, will be identified prior to construction. The contact details for the entry points (phone numbers, addresses, e-mail addresses) will be publicly disclosed on information boards at construction sites and on the website of the county and municipal EPBs. The chart of proposed GRM is shown in **Figure EMP-3.**

32. Once a complaint is received and filed, the PPCU will identify if complaints are eligible. Eligible complaints include those where (i) the complaint pertains to the project; and (ii) the issues arising in the complaint fall within the scope of environmental issues that the GRM is authorized to address. Ineligible complaints include those where: (i) the complaint is clearly not project-related; (ii) the nature of the issue is outside the mandate of the environmental GRM (such as issues related to resettlement, allegations of fraud or corruption); and (iii) other procedures are more appropriate to address the issue. Complaints illegible to the project or the environmental GRM will be recorded and passed onto relevant authorities. If an eligible complaint is rejected, the complainant will be informed of the decision and the reasons for rejection.

33. The **procedure and timeframe** for the grievance redress mechanism are described as follows (**Figure EMP-3**):

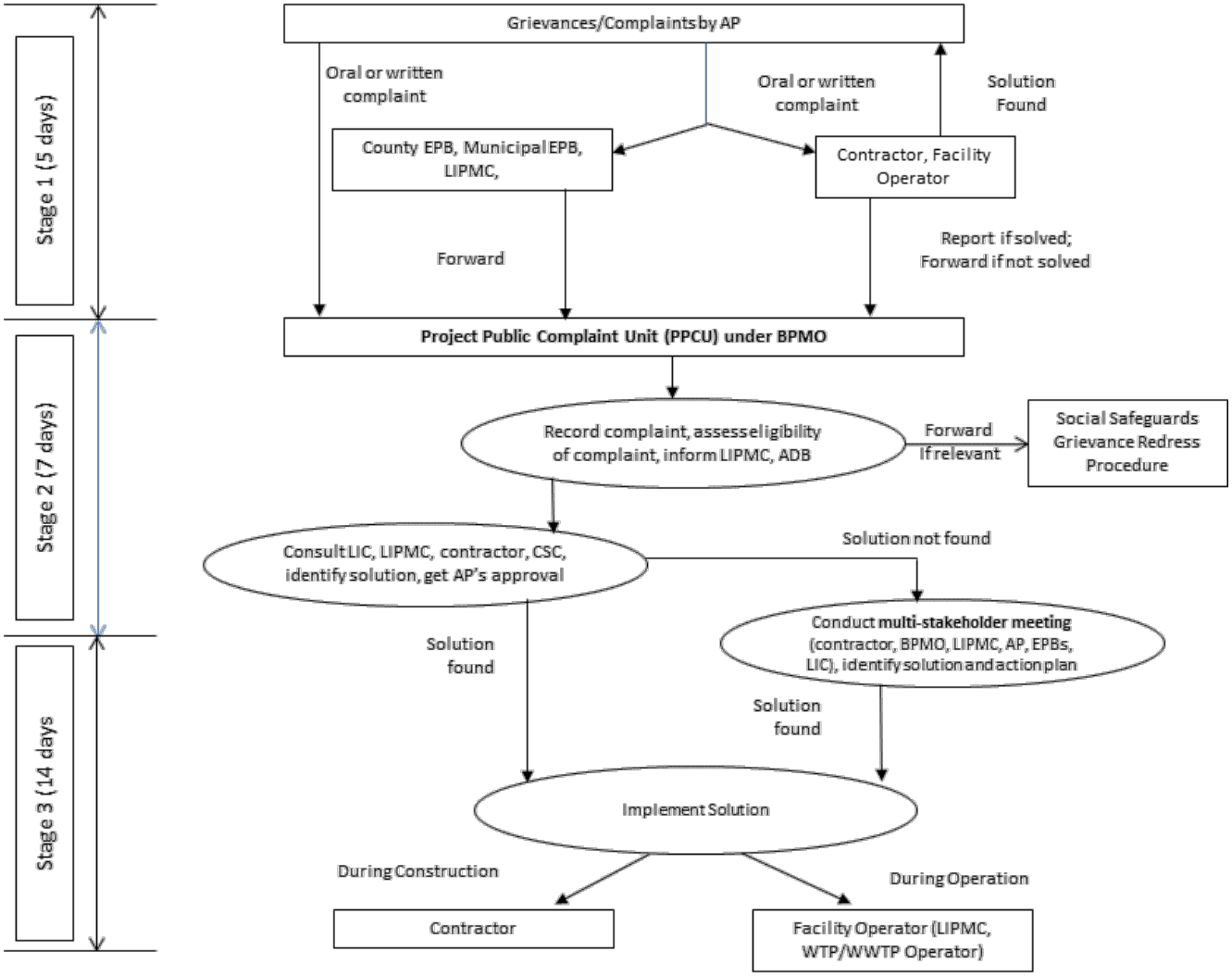
Stage 1: If a concern arises during construction, the affected person (AP) will submit a written or oral complaint to the contractor directly. Whenever possible, the contractor will resolve the issue directly with the AP. The contractor shall give a clear reply within five (5) days. If successful, the contractor will inform the PPCU accordingly.

Stage 2: If no appropriate solution can be found after the Stage 1 process applied (i.e., after 5 days), the contractor has the obligation to forward the complaint to the PPCU. The AP may also decide to submit a written or oral complaint to the PPCU, either directly or via one of the GRM entry points. For an oral complaint, proper written records must be made. The PPCU will assess the eligibility of the complaint, refer complaints related to land acquisition and resettlement to the respective mechanism, identify the solution and provide a clear reply for the complainant within five (5) working days. The LIEC will assist the PPCU in replying to the affected person, if needed. The PPCU will also inform the ADB project manager and submit all relevant documents. Meanwhile, the PPCU will timely convey the complaint/grievance and suggested solution to the contractors or LMC, and facility operator. The contractors during construction and the facility operator during operation will implement the agreed upon redress solution and report the outcome to the PPCU within seven (7) working days.

Stage 3: In case no solution can be identified by the PPCU, or the complainant is not satisfied with the proposed solution, the PPCU will organize, within two (2) weeks, a multi-stakeholder hearing (meeting) involving all relevant stakeholders (including the complainant, contractor, county and municipal EPB, LMC, BPMO). The hearing shall identify a solution acceptable to all, and formulate an action plan. The contractors during construction and the facility operator during operation will implement the agreed-upon redress solution and report the outcome to the PPCU within the agreed upon timeframe.

34. The PPCU shall accept the complaints/grievances lodged by the AP free of charge. Any cost incurred should be covered by the contingency of the project. The grievance procedures will remain valid throughout the duration of project construction and until project closure. This GRM procedure is consistent with the requirements of the RP grievance procedures but there are a few minor differences in methodology.

Figure EMP-3: Proposed Grievance Redress Mechanism (GRM)



Note: AP = affected person; EPB = environmental protection bureau; PPCU = public project complaint unit; LIEC = loan implementation environmental consultant; BPMO = Baiyin municipal project management office; CSC = construction supervision company; LMC = Liuchuan Industrial Park Management Committee.

H. Mechanisms for Feedback and Adjustment

35. The EMP is a live document. The need to update and adjust the EMP will be reviewed when there are design changes, changes in construction methods, unfavorable environmental monitoring results or inappropriate monitoring locations, and ineffective or inadequate mitigation measures. Based on environmental monitoring and reporting systems in place, the BPMO and LMC (with the support of the LIEC) shall assess whether further mitigation measures are required as corrective action, or improvement in environmental management practices are required. BPMO will inform ADB promptly on any changes to the project and needed adjustments to the EMP. The updated EMP will be submitted to ADB for review and approval, and will be disclosed on the project website.

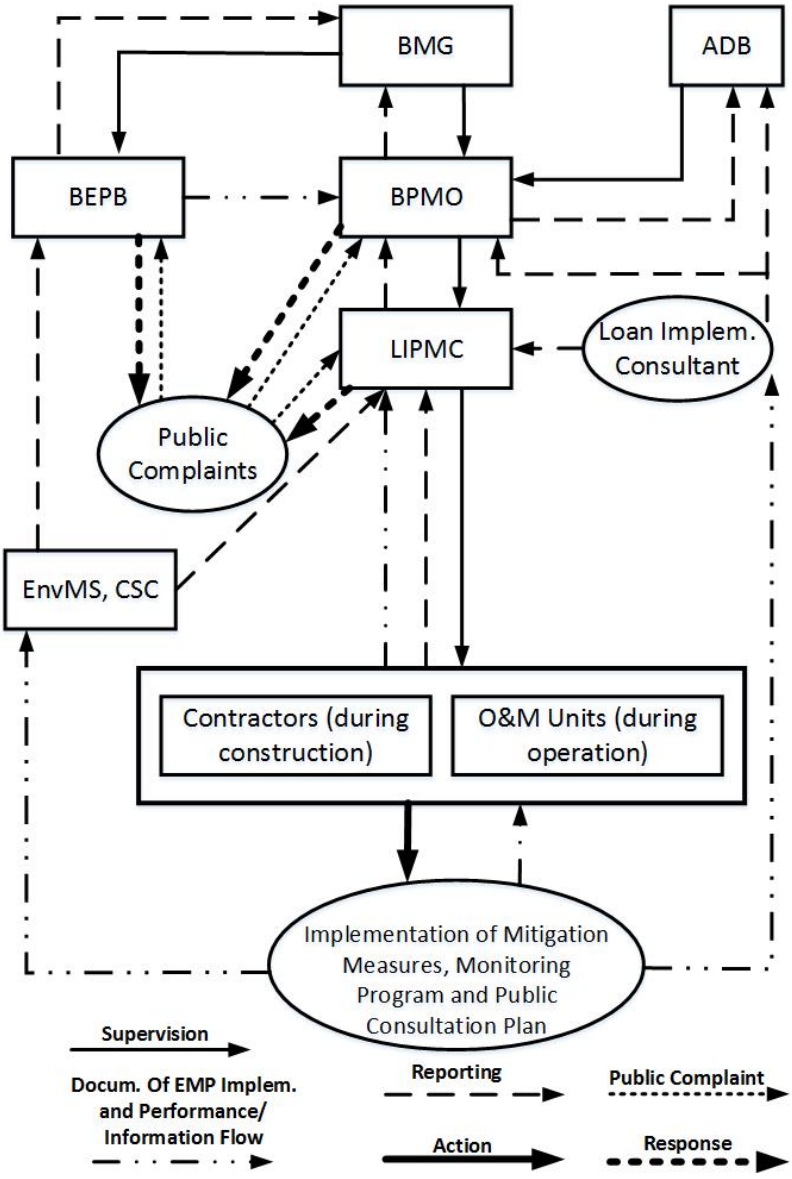


Figure EMP-4: Mechanism for Feedback and Adjustment

Procurement Capacity Assessment Report and Recommendations

Proposed Project Name: Gansu Baiyin Integrated Urban Development Project	**Proposed Amount (US$):** $100 million
Executing Agency: Baiyin Municipal Government (BMG)/Baiyin Development and Reform Commission	**Source of Funding:** Asian Development Bank (ADB)
Assessor: ADB	**Date:** 11 April 2014

Expected Procurement

The project procurement will cover goods and works for a wastewater treatment plant, water supply plant, road construction, intelligent transport system (ITS), and technical and vocational education and training (TVET) components. The project will also engage several consulting service packages for project management and capacity building, external safeguards monitors, TVET consulting service and consulting service for environment management systems (4 packages using ADB fund and 1 package using domestic fund). Roles of the Baiyin project management office (PMO) as an executing agency, for overall project procurement are significant. The Baiyin PMO will take overall responsibility of the procurement process including engaging a tendering agency, and providing review and approval of each tendering process.

General Procurement Environment Assessment

The People's Republic of China (PRC) has promulgated and implemented relevant procurement laws and regulations; these laws and regulations encourage procurement by competitive bidding, and provide appropriate procedures and preventive systemic measures against corruption. According to the requirements of the laws and regulations, the vast majority of projects with foreign investment or government investment need central government or local government approval. The executing agency and implementing agencies need to implement procurement in strict accordance with stipulated procedures and requirements. The relevant provisions of the PRC are consistent with ADB procurement guidelines, with slight differences in the details. An independent department does procurement audit, including the audit of the procurement process and the non-capital contents.

The main differences between domestic procurement guidelines and ADB procurement guidelines are as follows: (i) the domestic procurement laws and regulations are all applicable to all procurement of goods, works, and services, without separate procurement requirements (guidelines) for goods, works, and services; (ii) the domestic procurement regulations do not involve contract management (contract management is governed by “Contract Law” standards), reimbursement and payment and contract claims, etc.; (iii) it is not mandatory in domestic procurement regulations for the contract to be awarded to the lowest evaluated bid; and (iv) there is no mandatory requirement for information disclosure and specific measures.

On the disclosure of tender information, the ways and means of information dissemination in domestic procurement guidelines are more specific than ADB guidelines. Domestic procurement and bidding requirements (including the format of bidding documents) are basically consistent with FIDIC terms.

Risk Assessment:

In accordance with the itemized breakdown in the assessment of individual and overall risks as required by ADB, the results of the assessments with grading are shown in the table below.

Criterion	Risk
Organizational and staff capacity	Low
Information management	Low
Procurement practices	Low to Average
Effectiveness	Low
Accountability measures	Low
Overall risk raking	**Low**

Summary of Findings:
BMG, as the executing agency, and Baiyin PMO just completed the implementation of Gansu Baiyin Urban Development project (Phase I project) in December 2013. Institutional coordination and information sharing procedures have been established and improved during implementation of the Phase I project. The current institutional arrangements and practices of the Baiyin PMO in the procurement process are shown to be effective. Baiyin PMO is familiar with ADB procurement guidelines for goods, works, and consulting services, as well as ADB's various disbursement procedures. They understand potential issues in the procurement process and have good understanding on response measures. The assessment found that the Baiyin PMO's only risk on procurement capacity is mainly attributed to their familiarity to the latest ADB procurement guidelines. The project should ensure the Baiyin PMO's knowledge is always updated. The risk rating of effectiveness and accountability measures are both "low". The PRC's regulations on effectiveness are consistent with the ADB's requirement. For the accountability mechanisms, Baiyin PMO accumulated experience and knowledge on accountability mechanisms required for ADB projects from the Phase I project. Baiyin PMO did not receive any complaints or face accountability issues with bidders and government agencies (e.g., audit offices) during the Phase I project. However, the institutional set-up for procurement will need to be monitored closely as the project will be the first international financial institutes' funded project for all four implementation agencies, who have some roles in the procurement process.

Organizational and Staff Capacity
Risk Assessment:
Low

Summary of Findings:
Baiyin PMO has an experienced PMO director and staff who are familiar with ADB procurement procedure and guidelines. Their English proficiency is good. Baiyin PMO will continue to use its existing procurement manuals, trainings and institutional procedures, but the contents of the materials and trainings must be updated regularly.

Information Management
Risk Assessment:
Low

Summary of Findings:
The information system established under the Phase I project will be used under the project. The records are kept permanently for required examination and clarifications by ADB and/or their government audit offices. The management systems on other issues are in place and meet the requirements.

Procurement Practices
Procurement of Goods and Works

Risk Assessment:
Low to Average

Summary of Findings:
Building on the Phase I project experience, Baiyin PMO became familiar with ADB's procurement guidelines on goods and works, and consulting services as well as various ADB disbursement guidelines. It understands the problems that might be expected in the procurement process, and have good prediction and response measures. The management systems on other issues are in place and meet the requirements. The system of using a third-party expert to check tender documents is considered a good practice. In consulting service procurement, Baiyin PMO does not have its own consulting service procurement manual but it uses the ADB Guidelines on the Use of Consultants (2013, as amended from time to time) and Procurement Guidelines (2013, as amended from time to time) as a reference. Several consulting service contracts were procured under the Phase I project. Baiyin PMO understands potential problems associated with the procurement process (e.g., inadequate qualification criteria). The risk should be mitigated by support from: (i) tendering agency, and (ii) procurement specialists engaged under

the startup consulting service and the project management and capacity building consultants.

Effectiveness

Risk Assessment:

Low

Summary of Findings:

Relevant requirements and details are consistent with the provisions of ADB. The current institutional arrangements and practices of BMG in the procurement process are effective.

Accountability Measures

Risk Assessment:

Low

Summary of Findings:

In the PRC, the local competitive procurement process has strict process control and oversight mechanisms, and these requirements can effectively promote the smooth implementation of ADB's procurement policies. The relevant regulations have detailed provisions on the personnel and institutions responsible in cases of various situations and issues, as well as their responsibility. However, as the executing agency, the Baiyin PMO will have to monitor, guide, and improve its institutional framework on procurement process to ensure its current accountability mechanism works properly, especially with four new implementing agencies.

Summary Assessment

BMG, an executing agency, and its PMO have experience with ADB project as the same PMO processed and administered the Phase I project in 2007–2013. The current institutional arrangement is extended from the Phase I project and is well-established. The BMG assigned the same person for the PMO director for the Phase I project for this project. Under the PMO director's supervision, some staff in the Baiyin PMO have been trained and new staff are being trained for their capacities for procurement.

The project involves procurement of works and goods for wastewater, water, and road infrastructure construction, and goods for ITS and TVET, and consulting services. Although a procurement process of works and goods related to infrastructure construction, ITS and consulting services are standard for an urban infrastructure construction project, the TVET component will have a number of small procurement packages. The risk can be offset by the help of comprehensive support from the consulting service. As risk mitigation measures, the Baiyin PMO will engage a tendering agency and procurement experts under packages of the startup individual consulting service, and the project management and capacity development consulting service. These procurement specialists will help the Baiyin PMO and four implementing agencies check their tendering documents, supervise tendering process, bid evaluation, and contract award process, and assist in the implementation of procurement training and capacity strengthening. Based on their experience on the Phase I project, Baiyin PMO's capacity is adequate for advance contracting actions. Baiyin PMO has committed to engage a tendering agency before the loan negotiations. The assessment concluded that the overall risk rating is low. BMG and Baiyin PMO have adequate capacity to (i) implement the project based on the recent ADB project experience, (ii) increase their knowledge on the latest ADB procurement guidelines through trainings provided by project preparatory technical assistance, and (iii) gain strong consulting service support to ensure the quality of the bidding process.

Specific Recommendations, Project Implementation

Risks	Recommended Action	Responsibility and comment
Contents of procurement process manuals and internal procurement training for implementing agencies are not updated regularly.	Provide training on ADB procurement guidelines is necessary to ensure that Baiyin PMO's knowledge and the contents of their internal training are up-to-date.	Procurement specialists from startup consulting service and project management consulting service

Risks	Recommended Action	Responsibility and comment
Some winning tenderers do not have adequate capability or cash flow to complete the work.	Set appropriate qualification criteria for works contractors and goods suppliers to avoid firms with insufficient capacity to participate in the bidding process. This risk can be mitigated by capacity building through the procurement training and ensuring strict review and approval process by Baiyin PMO and implementing agencies (and ADB for prior review contract).	Baiyin PMO will organize a systematic review process among the tendering agency and procurement specialists from the startup consulting service and the project management consulting service.
Unfamiliarity with use of direct payment method with letters of credit.	All equipment under the project can be manufactured in the PRC and import of any equipment from outside PRC is not foreseen under the project. However, the risk can be mitigated by support from procurement specialists under startup consultant and project management consulting service in case such transaction becomes necessary.	Procurement specialists from startup consulting service and project management consulting service

Procurement Capacity Assessment Questionnaire
Project Management Office

Risk Ratings	Extremely High	High	Average	Low

I. Specific Assessment and Ratings

Question	Answer/Finding	Risk
A. Organizational and Staff Capacity		
A.1. How many years' experience does the head of the procurement department/unit have in a direct procurement role?	4 years	Low
A.2. How many staff in the procurement department/unit are:	4	Low
(i) Fulltime?	2	
(ii) Part-time?	2	
(iii) Seconded?	N/A	
A.3. Does the procurement staff have English language proficiency?	Yes	Low
A.4. Are the number and qualifications of the staff sufficient to undertake the additional procurement that will be required under the proposed project?	Yes	Low
A.5. Does the unit have adequate facilities, such as PCs, internet connections, photocopy facilities, printers, etc., to undertake the planned procurement?	Yes	Low
A.6. Does the agency have a procurement training program?	Yes. Baiyin PMO organizes the internal training for implementing agencies. But the contents may not be updated regularly.	Average
A.7. Does the agency have a Procurement Committee that is independent from the head of the agency?	Yes	Low
A.8. Does the agency have a procurement	Yes, not a unit but a person will	Average

Question	Answer/Finding	Risk
department/unit, including a permanent office that performs the function of a Secretariat for the Procurement Unit, and which serves as the main support unit of the Procurement Committee?	be assigned to provide support to the procurement committee.	
A.9. If yes, what type of procurement does it undertake?	Works and goods, and consulting services	Low
A.10. At what level does the department/unit report (to the head of agency, deputy etc.)?	Director of Baiyin PMO and ADB	Low
A.11. Do the procurement positions in the agency have job descriptions, which outline specific roles, minimum technical requirements and career routes?	Yes	Low
A.12. Is there a procurement process manual for goods and works?	Yes	Low
A.13. If there is a manual, is it up to date and does it cover foreign-assisted projects?	Up-to-date, it covers foreign-assisted projects.	Low
A.14. Is there a procurement process manual for consulting services?	Yes. Baiyin PMO has the manual. But the contents are not updated regularly.	Average
A.15. If there is a manual, is it up to date and does it cover foreign-assisted projects?	Up-to-date; it covers foreign-assisted projects.	Low
A.16. Are there standard documents in use, such as Standard Procurement Documents/Forms, and have they been approved for use on ADB funded projects?	Yes	Low
A.17. Does the ToR follow a standard format such as background, tasks, inputs, objectives and outputs?	Yes	Low
A.18. Who drafts the procurement specifications?	Tendering agent	Low
A.19. Who approves the procurement specifications?	Baiyin PMO	Low
A.20. Who drafts the bidding documents?	The technical part by the design institute and the financial part by the tendering agent.	Low
A.21. Who manages the sale of the bidding documents?	Tendering agent or Baiyin PMO	Low
A.22. Who identifies the need for consulting services requirements?	Baiyin PMO	Low
A.23. Who drafts the terms of reference (ToR)?	Baiyin PMO	Low
A.24. Who prepares the request for proposals (RFPs)?	Tendering agent	Low
B. Information Management		
B.1. Is there a referencing system for procurement files?	Yes	Low
B.2. Are there adequate resources allocated to record keeping infrastructure, which includes the record keeping system, space, equipment and personnel to administer the procurement records management functions within the agency?	Yes	Low
B.3. For what period are records kept?	Permanent	Low
B.4. Are copies of bids or proposals retained with the evaluation?	Yes	Low
B.5. Are copies of the original advertisements retained with the pre-contract papers?	Yes	Low
B.6. Is there a single contract file with a copy of the contract and all subsequent contractual correspondence?	Yes	Low
B.7. Are copies of invoices included with the contract	Yes	Low

Question	Answer/Finding	Risk
papers?		
C. Procurement Practices		
Goods and Works		
C.1. Has the agency undertaken foreign-assisted procurement of goods or works recently (last 12 months, or last 36 months)? (If yes, please indicate the names of the development partner/s and the Project/s.)	Procurement based on ADB requirements were done until 2012 under Gansu Baiyin Urban Development Project (Phase I project).	Low / Average
C.2. If the above answer is yes, what were the major challenges?	Because the lowest bidder is the winner, some winning tenderers do not have adequate capability or cash flow.	
C.3. Is there a systematic process to identify procurement requirements (for a period of one year or more)?	Yes	Low
C.4. Is there a minimum period for preparation of bids and if yes how long?	Yes, 50 days, according to the Chinese legal requirements.	Low
C.5. Are all queries from bidders replied to in writing?	Yes	Low
C.6. Does the bidding document state the date and time of bid opening?	Yes	Low
C.7. Is the opening of bids done in public?	Yes	Low
C.8. Can late bids be accepted?	No	Low
C.9. Can bids be rejected at bid opening?	Non-compliant bids will be rejected	Low
C.10. Are minutes of the bid opening taken?	Yes	Low
C.11. Who may have a copy of the minutes?	PMO and the tendering agent	Low
C.12. Are the minutes free of charge?	Yes	Low
C.13. Who undertakes the evaluation of bids (individual(s), permanent committee, ad-hoc committee)?	Ad-hoc committee: specific departments and professionals that meet the requirements of the tender procedures under the PRC regulation.	Low
C.14. What are the qualifications of the evaluators with respect to procurement and the goods and/or works under evaluation?	With PRC domestically recognized senior professional titles	Low
C.15. Is the decision of the evaluators final or is the evaluation subject to additional approvals?	Yes	Low
C.16. Using at least three real examples, how long does it normally take from the issuance of the invitation for bids up to contract effectiveness?	2.5 months (based on the PRC general procurement process)	Low
C.17. Are there processes in place for the collection and clearance of cargo through ports of entry?	Yes	Low
C.18. Are there established goods receiving procedures?	Yes	Low
C.19. Are all goods that are received recorded as assets or inventory in a register?	Yes	Low
C.20. Is the agency/procurement department familiar with letters of credit?	Yes. Baiyin PMO understands the basic of direct payment method using the letters of credit but they do not have much actual experience of such transaction.	Average
C.21. Does the procurement department register and track warranty and latent defects liability periods?	Yes	Low

Question	Answer/Finding	Risk
Consulting Services		
C.22. Has the agency undertaken foreign-assisted procurement of consulting services recently (last 12 months, or last 36 months)? (If yes, please indicate the names of the development partner/s and the Project/s.)	No, but the consulting service procurement based on ADB requirement was conducted in 2009 under Gansu Baiyin Urban Development Project (Phase I project).	Average
C.23. If the above answer is yes, what were the major challenges?	How to prepare documentations to meet ADB requirement and obtain smooth ADB approval.	
C.24. Are assignments and requests for expressions of interest (EOIs) advertised?	Yes	Low
C.25. Is a consultants' selection committee formed with appropriate individuals, and what is its composition (if any)?	Yes, formed by tendering agent, and experts randomly selected from expert database.	Low
C.26. What criteria is used to evaluate EOIs?	ADB's consultant procurement guidelines	Low
C.27. Historically, what is the most common method used (QCBS, QBS, etc.) to select consultants?	QCBS	Low
C.28. Do firms have to pay for the RFP document?	Yes, collected by tendering agent, in accordance with national regulations.	Low
C.29. Does the proposal evaluation criteria follow a pre-determined structure and is it detailed in the RFP?	Yes	Low
C.30. Are pre-proposal visits and meetings arranged?	Yes	Low
C.31. Are minutes prepared and circulated after pre-proposal meetings?	Yes	
C.32. To who are the minutes distributed?	All shortlisted tenderers	
C.33. Are all queries from consultants answered/addressed in writing?	Yes	Low
C.34. Are the technical and financial proposals required to be in separate envelopes?	Yes	Low
C.35. Are proposal securities required?	Yes	Low
C.36. Are technical proposals opened in public?	No to the general public but in front of all bidders and bid evaluation committee.	Low
C.37. Are minutes of the technical opening distributed?	No	Average
C.38. Do the financial proposals remain sealed until technical evaluation is completed?	Yes	Low
C.39. Who determines the final technical ranking and how?	The bid evaluation committee, according to the provisions of the tender documents.	Low
C.40. Are the technical scores sent to all firms?	Yes	Low
C.41. Are the financial proposal opened in public?	No to the general public, but in front of all bidders and bid evaluation committee.	Low
C.42. Are minutes of the financial opening distributed?	Yes	Low
C.43. How is the financial evaluation completed?	The lowest evaluated bid will get the highest score. The scores of the other bids will be determined in accordance with the bid evaluation criteria in the tender documents, according to requirements.	Low

Question	Answer/Finding	Risk
C.44. Are face to face contract negotiations held?	Yes	Low
C.45. How long after financial evaluation is negotiation held with the selected firm?	Announcement of the final evaluation results is usually released immediately after ADB's no-objection is obtained.	Low
C.46. What is the usual basis for negotiation?	Technical terms and price quotes attached to the tender documents.	Low
C.47. Are minutes of negotiation taken and signed?	Yes	Low
C.48. How long after negotiation is the contract signed?	Immediately after consensus is reached in negotiations.	Low
C.49. Is there an evaluation system for measuring the outputs of consultants?	Yes	Low
Payments		
C.50. Are advance payments made?	Yes. The advance payment is generally agreed and made to contractors, suppliers, consulting firms and individuals. However, it also depends on the first-ranked bidder's financial capacity and contract negotiation.	Average
C.51. What is the standard period for payment included in contracts?	Based on the ADB–PRC standard bidding documents	Average
C.52. On average, how long is it between receiving a firm's invoice and making payment?	According to the contract stipulations and ADB requirements.	
C.53. When late payment is made, are the beneficiaries paid interest?	No	
D. Effectiveness		
D.1. Is contractual performance systematically monitored and reported?	Yes	Low
D.2. Does the agency monitor and track its contractual payment obligations?	Yes	Low
D.3. Is a complaints resolution mechanism described in national procurement documents?	Yes	Low
D.4. Is there a formal non-judicial mechanism for dealing with complaints?	Yes, an arbitral institution according to the PRC state regulations.	Low
D.5. Are procurement decisions and disputes supported by written narratives such as minutes of evaluation, minutes of negotiation, notices of default/withheld payment?	Yes	Low
E. Accountability measures		
E.1. Is there a standard statement of ethics and are those involved in procurement required to formally commit to it?	Yes	Low
E.2. Are those involved with procurement required to declare any potential conflict of interest and remove themselves from the procurement process?	Yes	Low
E.3. Is the commencement of procurement dependent on external approvals (formal or de-facto) that are outside of the budgeting process?	No.	Low
E.4. Who approves procurement transactions, and do they have procurement experience and	Baiyin PMO. Yes Baiyin PMO has ADB project experience from	Low

Question	Answer/Finding	Risk
qualifications?	the Gansu Baiyin Urban Development Project.	
E.5. Which of the following actions require approvals outside the procurement unit or the evaluation committee, as the case may be, and who grants the approval?		Low
a) Bidding document, invitation to pre-qualify or RFP	Baiyin PMO (ADB in case of ADB project's prior review contract)	
b) Advertisement of an invitation for bids, pre-qualification or call for EOIs	Baiyin PMO (ADB in case of ADB project's prior review contract)	
c) Evaluation reports	Baiyin PMO (ADB in case of ADB project's prior review contract)	
d) Notice of award	Baiyin PMO (ADB in case of ADB project's prior review contract)	
e) Invitation to consultants to negotiate	Baiyin PMO	
f) Contracts	Baiyin PMO (ADB in case of ADB project's prior review contract)	
E.6. Is the same official responsible for: (i) authorizing procurement transactions, procurement invitations, documents, evaluations and contracts; (ii) authorizing payments; (iii) recording procurement transactions and events; and (iv) the custody of assets?	No. Baiyin PMO director, a procurement committee and an implementing agency will be responsible for these items.	Low
E.7. Is there a written auditable trail of procurement decisions attributable to individuals and committees?	Yes	Low

II. General Ratings

Criterion	Risk
Organizational and staff capacity	Low
Information management	Low
Procurement practices	Low to Average
Effectiveness	Low
Accountability measures	Low
Overall Risk Rating	**Low**

Procurement Capacity Assessment Report and Recommendations

Proposed Project Name: Gansu Baiyin Integrated Urban Development Project	**Proposed Amount (US$):** $100 million
Implementing Agency: Liuchuan Industrial Park Management Committee	**Source of Funding:** Asian Development Bank (ADB)
Assessor: ADB	**Date:** 10 January 2014

Expected Procurement

Liuchuan Industrial Park Management Committee (LMC) is an implementation agency of the Liuchuan industrial park infrastructure development subproject. Project's procurement activity of LIPMC will cover goods and works for a wastewater treatment plant, water supply plant, and road construction. Although it is not ADB financed, the LIPMC will also engage a consulting service for civil works supervision consulting and management.

General Procurement Environment Assessment

The People's Republic of China (PRC) has promulgated and implemented relevant procurement laws and regulations; these laws and regulations encourage procurement by competitive bidding, and provide appropriate procedures and preventive systemic measures against corruption. According to the requirements of the laws and regulations, the vast majority of projects with foreign investment or government investment need central government or local government approval. Implementing agencies including the LMC need to implement procurement in strict accordance with stipulated procedures and requirements. The relevant provisions of the PRC are consistent with ADB procurement guidelines, with slight differences in the details. An independent department does procurement audit, including the audit of the procurement process and the non-capital contents.

The main differences between domestic procurement guidelines and ADB procurement guidelines are as follows: (i) the domestic procurement laws and regulations are all applicable to all procurement of goods, works, and services, without separate procurement requirements (guidelines) for goods, works, and services; (ii) the domestic procurement regulations do not involve contract management (contract management is governed by "Contract Law" standards), reimbursement and payment and contract claims, etc.; (iii) it is not mandatory in domestic procurement regulations for the contract to be awarded to the lowest evaluated bid; and (iv) there is no mandatory requirement for information disclosure and specific measures.

On the disclosure of tender information, the ways and means of information dissemination in domestic procurement guidelines are more specific than ADB guidelines. Domestic procurement and bidding requirements (including the format of bidding documents) are basically consistent with FIDIC terms.

Risk Assessment:

In accordance with the itemized breakdown in the assessment of individual and overall risks as required by ADB, the results of the assessments with grading are shown in the table below.

Criterion	Risk
Organizational and staff Capacity	Average
Information Management	Low
Procurement Practices	Average
Effectiveness	Low
Accountability Measures	Average
Overall Risk Assessment	**Average**

Summary of Findings:

LMC is one of implementing agencies of the project. It is responsible for implementing wastewater, water supply and road subcomponents in Liuchuan industrial park infrastructure development subproject. LMC has no experience with ADB projects. The current institutional arrangement needs to be strengthened in procurement capacity. LMC has a procurement department/unit, including a permanent office that performs the function of a secretariat for the procurement unit and three procurement staffs work fulltime.

Comprehensive support from consultants will be necessary especially the first 1–2 years of project implementation when a number of procurement activities will take place. An effective information management system for procurement is in place, but it has to be improved to accommodate the ADB project. The current institutional arrangements and practices of the LMC in the procurement process are generally effective. LMC will have to familiarize itself with the ADB procurement guidelines for goods, works, and services, as well as reimbursement and payment procedures. Through the knowledge sharing from the experienced Baiyin project management office (PMO), the executing agency of the project, LMC will need to learn issues in the ADB procurement process that might be expected, and to be prepared for response measures. A program of procurement training by the startup consulting service and project implementation consulting service will assist to develop their institutional capacity. LMC has experience with PRC domestic procurement of similar size of civil works and is familiar with the PRC domestic procedure in engaging a construction supervision and management consulting service. LMC needs to coordinate closely with the tendering agency (engaged by the Baiyin PMO) and the Baiyin PMO so that lack of English language proficiency of the procurement staff will not be a major constraint for smooth procurement process and communication. There is low risk in procurement of consulting service as LMC will not be in charge of the ADB funded consulting service packages.

Organizational and Staff Capacity

Risk Assessment:
Average

Summary of Findings:
LMC has no project experience with ADB and other international financial institutes. Although the three fulltime staff of LMC are familiar with PRC domestic procurement procedure, its procurement capacity needs to be upgraded to cover gaps between domestic procurement guidelines and ADB procurement guidelines. A potential risk also may be lack of English proficiency of the procurement staff. This must be addressed and mitigated through close coordination with the tendering agency engaged by Baiyin PMO. In terms of project implementation, there is little risk in consulting service engagement as LMC will not be in charge of any consulting service engagement using the ADB funds.

Information Management

Risk Assessment:
Low

Summary of Findings:
LMC has its own procurement management information system, which complies with the PRC regulation. Under the institutional regulation, bidding documents and all bid related records are required to be kept for at least 30 years for examinations. The management systems on other issues are basically in place and meet the requirements.

Procurement Practices

Procurement of Goods and Works

Risk Assessment:
Average

Summary of Findings:
LMC demonstrated its familiarity and capacity to the PRC domestic procurement process. Potential risks are associated with its unfamiliarity with ADB's procurement guidelines on goods and works. LMC will need to understand potential risks and problems from procurement process under the ADB-financed project. Those experiences and knowledge can be transferred to LMC from the Baiyin PMO, the executing agency, and a tendering agency engaged by the Baiyin PMO. It is important for the startup consulting service and the project management consulting service to develop the capacity of LMC through hands-on training as well as periodic training workshops.

LMC will not engage any consulting service financed by the ADB loan and therefore its roles in consulting service engagement will be limited. However, it will engage a construction supervision and management consulting service to ensure progress and quality of the construction. This will be processed through the PRC domestic procedure and the LMC's existing procurement capacity can adequately manage contracting and implementation.

Effectiveness

Risk Assessment:

Low

Summary of Findings:

The relevant requirements and details for the PRC procedures are consistent with the provisions of ADB. The current institutional arrangements and practices of LMC in the procurement process are effective.

Accountability Measures

Risk Assessment:

Average

Summary of Findings:

In the PRC, the local competitive procurement process has strict process control and oversight mechanisms, and these requirements can effectively promote the smooth implementation of ADB's procurement policies. The relevant regulations have detailed provisions on the personnel and institutions responsible in cases of various situations and issues, as well as their responsibility. LMC has been following the regulation. Different roles are assigned to (i) Baiyin PMO who authorizes procurement transactions, procurement invitations, documents, and contracts and payments; (ii) a procurement committee who evaluates bids; and (iii) LMC who will record procurement transactions and events and be the custody of assets. Since the LMC is politically supervised under Baiyin PMO, the lower-level agency, e.g., LMC, may be unable to hold accountability of higher-level agency staffs, e.g., Baiyin PMO. Transparency is therefore important to ensure sound management of the procurement system.

Summary Assessment

LMC is responsible for day-to-day implementation of the Liuchaun industrial park infrastructure development subproject and it has the institutional framework to handle procurement process under the subproject. The procurement capacity assessment found that LMC accumulated experience in procurement and contract management under its domestically funded infrastructure construction projects, and is familiar with the details of the PRC project procurement process. Capacity of LMC has also increased through training on ADB's procurement guidelines and disbursement by ADB during the project preparatory technical assistance.

Roles of LMC in procurement under the ADB funded portion are to prepare bidding document for civil works and goods, and to participate in bid evaluation and contracting. The consulting service engagement is limited to a domestically financed construction supervision and management consulting service. Although this is the first time for LMC to implement an ADB project, its lack of experience can be offset by strong institutional setup under the project. LMC will conduct the procurement under the guidance of the experienced Baiyin PMO. The tendering agency and teams of startup consulting service and project management consulting service will help LMC ensure quality, transparency, and implementation of the procurement process, and provide solutions and recommendations to resolve problems arising in the execution of the contract. The overall risk rating, therefore, is average in procurement.

Specific Recommendations, Project Implementation

Risks	Recommended Action	Responsibility and Comment
Unfamiliarity with ADB funded project's procurement procedure and disbursement guidelines	Engage a tendering agency and a startup consulting service to ensure that LMC will develop the capacity to understand and handle ADB's procurement process.	Baiyin PMO, the tendering agency, and the procurement specialist will be jointly responsible for LMC's capacity building.

Risks	Recommended Action	Responsibility and Comment
Difficulty to hold accountability of higher-level agency, e.g. Baiyin PMO.	Transparency in tendering process should be ensured, e.g., ad hoc independent committee is called for bid evaluation.	Baiyin PMO who leads the procurement process will report regularly on post review procurement process in its quarterly progress report.

Procurement Capacity Assessment Questionnaire
IA – Liuchuan Industrial Park Management Committee

Risk Ratings	Extremely High	High	Average	Low

I. Specific Assessment and Ratings

Question	Answer/Finding	Risk
A. Organizational and Staff Capacity		
A.1. How many years' experience does the head of the procurement department/unit have in a direct procurement role?	Over 5 years of direct procurement work experience.	Low
A.2. How many staff in the procurement department/unit are:		Average
(i) Fulltime?	3	
(ii) Part-time?		
(iii) Seconded?		
A.3. Does the procurement staff have English language proficiency?	No	High
A.4. Are the number and qualifications of the staff sufficient to undertake the additional procurement that will be required under the proposed project?	Yes	Average
A.5. Does the unit have adequate facilities, such as PCs, internet connections, photocopy facilities, printers, etc., to undertake the planned procurement?	Yes	Low
A.6. Does the agency have a procurement training program?	Yes	Low
A.7. Does the agency have a Procurement Committee that is independent from the head of the agency?	This is being established.	Low
A.8. Does the agency have a procurement department/unit, including a permanent office that performs the function of a Secretariat for the Procurement Unit, and which serves as the main support unit of the Procurement Committee?	Yes	Low
A.9. If yes, what type of procurement does it undertake?	Works, goods, and consulting services	
A.10. At what level does the department/unit report (to the head of agency, deputy etc.)?	Baiyin PMO (municipal government level)	Low
A.11. Do the procurement positions in the agency have job descriptions, which outline specific roles, minimum technical requirements and career routes?	Yes	Low
A.12. Is there a procurement process manual for goods and works?	Yes	Average
A.13. If there is a manual, is it up to date and does it cover foreign-assisted projects?	Yes but it does not cover foreign financial institutes-assisted projects.	
A.14. Is there a procurement process manual for consulting services?	Yes	

Question	Answer/Finding	Risk
A.15. If there is a manual, is it up to date and does it cover foreign-assisted projects?	Yes but it does not cover foreign financial institutes -assisted projects.	
A.16. Are there standard documents in use, such as Standard Procurement Documents/Forms, and have they been approved for use on ADB funded projects?	Yes	
A.17. Does the ToR follow a standard format such as background, tasks, inputs, objectives and outputs?	Yes	
A.18. Who drafts the procurement specifications?	Tendering agency for commercial and legal parts and the engineering design institute for technical specifications.	Low/Average
A.19. Who approves the procurement specifications?	Baiyin PMO and LMC	
A.20. Who drafts the bidding documents?	Tendering agency drafts them, with assistance from the project owner and the design institute.	
A.21. Who manages the sale of the bidding documents?	Tendering agency	
A.22. Who identifies the need for consulting services requirements?	Baiyin PMO and LMC	Low
A.23. Who drafts the terms of reference (ToR)?	Baiyin PMO and LMC	
A.24. Who prepares the request for proposals (RFPs)?	Baiyin PMO and LMC	
B. Information Management		
B.1. Is there a referencing system for procurement files?	Yes	Low
B.2. Are there adequate resources allocated to record keeping infrastructure, which includes the record keeping system, space, equipment and personnel to administer the procurement records management functions within the agency?	Yes	Low
B.3. For what period are records kept?	30 years	Low
B.4. Are copies of bids or proposals retained with the evaluation?	Yes	Low
B.5. Are copies of the original advertisements retained with the pre-contract papers?	Yes	Low
B.6. Is there a single contract file with a copy of the contract and all subsequent contractual correspondence?	Yes	Low
B.7. Are copies of invoices included with the contract papers?	Yes	Low
C. Procurement Practices		
C.1. Has the agency undertaken foreign-assisted procurement of goods or works recently (last 12 months, or last 36 months)? (If yes, please indicate the names of the development partner/s and the Project/s.)	No	High
C.2. If the above answer is yes, what were the major challenges?	N/A	
C.3. Is there a systematic process to identify procurement requirements (for a period of one year or more)?	Yes	Low
C.4. Is there a minimum period for preparation of bids and if yes how long?	Yes, 15 days	Low

Question	Answer/Finding	Risk
C.5. Are all queries from bidders replied to in writing?	Yes	
C.6. Does the bidding document state the date and time of bid opening?	Yes	Low
C.7. Is the opening of bids done in public?	Yes	Low
C.8. Can late bids be accepted?	Do not accept	
C.9. Can bids be rejected at bid opening?	Yes	
C.10. Are minutes of the bid opening taken?	Yes	Low
C.11. Who may have a copy of the minutes?	The tender committee	
C.12. Are the minutes free of charge?	Yes	
C.13. Who undertakes the evaluation of bids (individual(s), permanent committee, ad-hoc committee)?	An ad hoc committee	Low
C.14. What are the qualifications of the evaluators with respect to procurement and the goods and/or works under evaluation?	They must have senior professional titles and are domestically recognized.	Average
C.15. Is the decision of the evaluators final or is the evaluation subject to additional approvals?	The evaluation result is the final result.	Low
C.16. Using at least three real examples, how long does it normally take from the issuance of the invitation for bids up to contact effectiveness?	Generally at least three months, but may also be less.	Low
C.17. Are there processes in place for the collection and clearance of cargo through ports of entry?	Yes	Low
C.18. Are there established goods receiving procedures?	Yes	Low
C.19. Are all goods that are received recorded as assets or inventory in a register?	Yes	Low
C.20. Is the agency/procurement department familiar with letters of credit?	Yes	Low
C.21. Does the procurement department register and track warranty and latent defects liability periods?	Yes	Low
C.22. Has the agency undertaken foreign-assisted procurement of consulting services recently (last 12 months, or last 36 months)? (If yes, please indicate the names of the development partner/s and the Project/s.)	No	Average
C.23. If the above answer is yes, what were the major challenges?	N/A	
C.24. Are assignments and requests for expressions of interest (EOIs) advertised?	Yes	Low
C.25. Is a consultants' selection committee formed with appropriate individuals, and what is its composition (if any)?	Yes. They are randomly selected from an expert database.	Low
C.26. What criteria is used to evaluate EOIs?	ADB project guidelines	Average
C.27. Historically, what is the most common method used (QCBS, QBS, etc.) to select consultants?	Based on consideration of both quality and cost	Low
C.28. Do firms have to pay for the RFP document?	Yes	Average
C.29. Does the proposal evaluation criteria follow a pre-determined structure and is it detailed in the RFP?	Yes	Low
C.30. Are pre-proposal visits and meetings arranged?	Yes	Low
C.31. Are minutes prepared and circulated after pre-proposal meetings?	Yes	
C.32. To whom are the minutes distributed?	The tender committee	
C.33. Are all queries from consultants answered/addressed in writing?	Yes	Low
C.34. Are the technical and financial proposals required to be	Yes	Low

Question	Answer/Finding	Risk
in separate envelopes?		
C.35. Are proposal securities required?	Yes	Low
C.36. Are technical proposals opened in public?	Yes	Low
C.37. Are minutes of the technical opening distributed?	Yes	
C.38. Do the financial proposals remain sealed until technical evaluation is completed?	Yes	Low
C.39. Who determines the final technical ranking and how?	The bid assessment committee	
C.40. Are the technical scores sent to all firms?	Yes	
C.41. Are the financial proposal opened in public?	Yes	Low
C.42. Are minutes of the financial opening distributed?	Yes	
C.43. How is the financial evaluation completed?	The lowest evaluation price or the highest score, and other bidders' scores are evaluated from the bid evaluation criteria in the document.	Average
C.44. Are face to face contract negotiations held?	Yes	
C.45. How long after financial evaluation is negotiation held with the selected firm?	The evaluation results are usually issued within 15 days after the end of the bid assessment.	
C.46. What is the usual basis for negotiation?	The special provisions attached to the bidding documents and the financial offer prices.	
C.47. Are minutes of negotiation taken and signed?	Yes	
C.48. How long after negotiation is the contract signed?	Within ten days	Low
C.49. Is there an evaluation system for measuring the outputs of consultants?	Yes	Low
C.50. Are advance payments made?	Yes	Low
C.51. What is the standard period for payment included in contracts?	Agreed in the contract	Low
C.52. On average, how long is it between receiving a firm's invoice and making payment?	Agreed in the contract	
C.53. When late payment is made, are the beneficiaries paid interest?	Yes	
D. Effectiveness		
D.1. Is contractual performance systematically monitored and reported?	Yes	Low
D.2. Does the agency monitor and track its contractual payment obligations?	Yes	Low
D.3. Is a complaints resolution mechanism described in national procurement documents?	Yes	Low
D.4. Is there a formal non-judicial mechanism for dealing with complaints?	Yes	Low
D.5. Are procurement decisions and disputes supported by written narratives such as minutes of evaluation, minutes of negotiation, notices of default/withheld payment?	Yes	Low
E. Accountability Measures		
E.1. Is there a standard statement of ethics and are those	Yes	Low

Question		Answer/Finding	Risk
	involved in procurement required to formally commit to it?		
E.2.	Are those involved with procurement required to declare any potential conflict of interest and remove themselves from the procurement process?	Yes	Low
E.3.	Is the commencement of procurement dependent on external approvals (formal or de-facto) that are outside of the budgeting process?	Yes	Average
E.4.	Who approves procurement transactions, and do they have procurement experience and qualifications?	Baiyin PMO. Before its approval specific departments and experts are consulted for advice.	Average
E.5.	Which of the following actions require approvals outside the procurement unit or the evaluation committee, as the case may be, and who grants the approval?		Average
	(i) Bidding document, invitation to pre-qualify or RFP	Baiyin PMO	
	(ii) Advertisement of an invitation for bids, pre-qualification or call for EOIs	Baiyin PMO	
	(iii) Evaluation reports	Baiyin PMO	
	(iv) Notice of award	Baiyin PMO	
	(v) Invitation to consultants to negotiate	Baiyin PMO	
	(vi) Contracts	Baiyin PMO	
E.6.	Is the same official responsible for: (i) authorizing procurement transactions, procurement invitations, documents, evaluations and contracts; (ii) authorizing payments; (iii) recording procurement transactions and events; and (iv) the custody of assets?	No. Baiyin PMO director, a procurement committee and the LMC will be responsible for these items.	Low
E.7.	Is there a written auditable trail of procurement decisions attributable to individuals and committees?	Yes	Average

II. General Ratings

Criterion	Risk
Organizational and staff capacity	Average
Information management	Low
Procurement practices	Low to Average
Effectiveness	Low
Accountability measures	Average
Overall risk rating	**Low to Average**

Procurement Capacity Assessment Report and Recommendations

Proposed Project Name: Gansu Baiyin Integrated Urban Development Project	**Proposed Amount (US$):** $100 million
Implementing Agency: Baiyin Municipal Public Security Bureau Traffic Police Detachment	**Source of Funding:** Asian Development Bank (ADB)
Assessor: ADB	**Date:** 10 April 2014

Expected Procurement

Baiyin Municipal Public Security Bureau Traffic Police Detachment (TPD) is an implementing agency of the intelligent transportation system subproject. Procurement activity under the project will involve procurement of goods for the traffic security management system including command center system; air traffic control system; electronic police system; traffic video monitoring system; and induction systems, including installation of the above equipment and materials and associated civil works. The whole system will be procured under an international competitive bidding (ICB) goods package. TPD is not expected to be involved with any consulting service engagement.

General Procurement Environment Assessment

The People's Republic of China (PRC) has promulgated and implemented relevant procurement laws and regulations; these laws and regulations encourage procurement by competitive bidding, and provide appropriate procedures and preventive systemic measures against corruption. According to the requirements of the laws and regulations, the vast majority of projects with foreign investment or government investment need central government or local government approval. Implementing agencies need to implement procurement in strict accordance with stipulated procedures and requirements. The relevant provisions of the PRC are consistent with ADB procurement guidelines, with slight differences in the details. An independent department does procurement audit, including the audit of the procurement process and the non-capital contents.

The main differences between domestic procurement guidelines and ADB procurement guidelines are as follows: (i) the domestic procurement laws and regulations are all applicable to all procurement of goods, works, and services, without separate procurement requirements (guidelines) for goods, works, and services; (ii) the domestic procurement regulations do not involve contract management (contract management is governed by “Contract Law” standards), reimbursement and payment and contract claims, etc.; (iii) it is not mandatory in domestic procurement regulations for the contract to be awarded to the lowest evaluated bid; and (iv) there is no mandatory requirement for information disclosure and specific measures.

On the disclosure of tender information, the ways and means of information dissemination in domestic procurement guidelines are more specific than ADB guidelines. Domestic procurement and bidding requirements (including the format of bidding documents) are basically consistent with FIDIC terms.

Risk Assessment:

In accordance with the itemized breakdown in the assessment of individual and overall risks as required by ADB, the results of the assessments with grading are shown in the table below.

Criterion	Risk
Organizational and staff capacity	Average
Information management	Low
Procurement practices	Average
Effectiveness	Low to Average
Accountability measures	Low
Overall risk rating	**Low to Average**

Summary of Findings:

TPD is one of implementing agencies responsible for procuring and installing the intelligent transport system in Baiyin District. TPD has no experience with ADB funded projects and therefore is not familiar with the ADB procurement guidelines for goods, works, and services, as well as reimbursement and payment procedures. The current institutional arrangement is adequate in procurement capacity and procurement staff. An information system is in place but can be improved to carry out procurement under the ADB funded project. There is no formal non-judicial mechanism for dealing with complaints. The current institutional arrangements

and practices of TPD in the procurement process are effective. Since TPD has no experience with ADB funded projects, they may not be familiar with the issues related to ICB for goods. In the TPD's normal practice, an engineering design institute prepares technical specification and bills of quantities for any bidding documents. The same approach will be applied in the ICB goods procurement under the project. TPD participated in preparing an engineering feasibility study for the transport security management system and demonstrated enough capacity to advice and check its design and operational qualities.

Organizational and Staff Capacity

Risk Assessment:
Average

Summary of Findings:
TPD has no project experience with ADB and other international financial institutes. However, there are comprehensive PRC rules and regulations and they are familiar with those domestic procurement procedures. Its procurement capacity and human resources are adequate. Weaknesses of the organizational and staff capacity are weak English proficiency of the procurement staffs and lack of provision of regular procurement training. TPD's capacity has also been strengthened to procure goods under the ADB procurement guidelines, such as to establish a procurement committee that is independent from the head of the agency. Since their baseline capacity to carry out procurement process is adequate, the project should provide appropriate support on procurement process and capacity building training for goods procurement the ADB procurement guidelines.

Information Management

Risk Assessment:
Low

Summary of Findings:
TPD has its own procurement information management system. Bidding documents and other records are required to be held permanently for examination. The management systems on other issues are basically in place and meet the requirements.

Procurement Practices

Procurement of Goods and Works

Risk Assessment:
Average

Summary of Findings:
TPD is not yet familiar with ADB procurement guidelines for goods, including the separation of technical and financial proposals, as well as reimbursement and payment procedures. TPD generally follows the goods procurement under PRC laws and regulations but its capacity has to be upgraded to foresee and address issues that might be arise from ICB goods procurement. TPD has no experience in disbursement process using letters of credit. However, it is less likely that a transport security management system procured under the project would require any import as all equipment are generally manufactured in the PRC.

Effectiveness

Risk Assessment:
Low to Average

Summary of Findings:
The relevant requirements and details for the PRC procedures are basically consistent with the provisions of ADB. The current institutional arrangements and practices of TPD in the procurement process are shown to be generally effective. There may be a risk related to the fact that there is no formal non-judicial mechanism to deal with complaints. However, the TPD confirmed that there was no such case in the past.

Accountability Measures

Risk Assessment:

Low

Summary of Findings:

TPD follows the PRC's local competitive procurement process which has strict process control and oversight mechanisms, and these requirements can effectively promote the smooth implementation of ADB's procurement policies. The relevant regulations have detailed provisions on the personnel and institutions responsible in cases of various situations and issues, as well as their responsibility. TPD has been following the regulation. The assessment found that commencement and approval of procurement transaction is subject to State Asset Commission. This indicates that TPD's procurement process is subject to review and approval of another government body. This is considered to strengthen its procurement accountability.

Summary Assessment

TPD has ownership of the project component and ought to be held accountable for the procurement. For the goods procurement, a tendering agency engaged by Baiyin PMO will draft commercial and legal parts of the bidding document. TPD will be involved with bidding document preparation and bid evaluation especially to draft and finalize technical specifications. As TPD is responsible for installation, and operation and maintenance, TPD has a capacity to provide technical advice and therefore, a risk of low quality bidding document may be avoided.

TPD will only be involved with ICB goods package under the project. TPD strictly follows the PRC procurement laws and regulation. Since this is the first time for TPD to be involved with a project financed by ADB and international financial institutes, TPD should develop their capacity to learn ADB's procurement guidelines and principles. In particular, through support of the startup consulting service and project management consulting service, TPD should learn that the lowest price bid for goods and works shall be selected and awarded the contract. Given TPD's capacity to conduct procurement in accordance with the PRC laws and regulations, overall risk rating is low to average. A lack of experience can be offset with guidance of the experienced Baiyin PMO, the tendering agency, and the consulting services under the project.

Specific Recommendations, Project Implementation

Risks	Recommended Action	Responsibility and comment
Unfamiliarity with ADB procurement guidelines for international competitive bidding of goods	Baiyin PMO, the executing agency, a tendering agency, and consulting service will provide procurement training to ensure that TPD will gain understanding of ADB guidelines.	Baiyin PMO, the tendering agency and the procurement specialist will be jointly responsible for TPD's capacity building.
Differences between TPD's past procurement practices and the ADB procurement guidelines (e.g. bid evaluation).	The Baiyin PMO and a tendering agency will guide TPD to comply with ADB procurement rules and regulations.	The Baiyin PMO will lead the procurement process. The procurement specialist and the tendering agent will also provide guidance and inputs for bidding.

Procurement Capacity Assessment Questionnaire
IA – Baiyin Municipal Traffic Police

Risk Ratings	Extremely High	High	Average	Low

I. Specific Assessment and Ratings

Question	Answer/Finding	Risk
A. Organizational and Staff Capacity		
A.1. How many years' experience does the head of the procurement department/unit have in a direct procurement role?	Leader in-charge of equipment finance has over 10-year experience.	Low
A.2. How many staff in the procurement department/unit are:		Low
(i) Fulltime?	2	
(ii) Part-time?	2	
(iii) Seconded?	0	
A.3. Does the procurement staff have English language proficiency?	No	High
A.4. Are the number and qualifications of the staff sufficient to undertake the additional procurement that will be required under the proposed project?	Yes	Low
A.5. Does the unit have adequate facilities, such as PCs, internet connections, photocopy facilities, printers, etc., to undertake the planned procurement?	Yes	Low
A.6. Does the agency have a procurement training program?	No	Average
A.7. Does the agency have a Procurement Committee that is independent from the head of the agency?	No	High
A.8. Does the agency have a procurement department/unit, including a permanent office that performs the function of a Secretariat for the Procurement Unit, and which serves as the main support unit of the Procurement Committee?	Yes	Average
A.9. If yes, what type of procurement does it undertake?	Vehicles, automotive systems, and equipment for daily law enforcement of traffic police system	
A.10. At what level does the department/unit report (to the head of agency, deputy etc.)?	Report to the legal person, and then report to Baiyin Municipal Public Security Bureau and Baiyin Municipal State Assets Commission.	Low
A.11. Do the procurement positions in the agency have job descriptions, which outline specific roles, minimum technical requirements and career routes?	Yes	Low
A.12. Is there a procurement process manual for goods and works?	Yes, procurement management process	Average
A.13. If there is a manual, is it up to date and does it cover foreign-assisted projects?	Up to date, but not cover foreign assisted procurement	
A.14. Is there a procurement process manual for consulting services?	No	
A.15. If there is a manual, is it up to date and does it cover foreign-assisted projects?	No	
A.16. Are there standard documents in use, such as	Yes. Use standard vehicle	

Question	Answer/Finding	Risk
Standard Procurement Documents/Forms, and have they been approved for use on ADB funded projects?	purchase contract and equipment purchase contract documents.	
A.17. Does the ToR follow a standard format such as background, tasks, inputs, objectives and outputs?	Yes	
A.18. Who drafts the procurement specifications?	Employer	Low
A.19. Who approves the procurement specifications?	Department in charge of the project employer.	
A.20. Who drafts the bidding documents?	Project employer, sometimes with the assistance of a design institute and a tendering agency.	
A.21. Who manages the sale of the bidding documents?	Tendering agency	
A.22. Who identifies the need for consulting services requirements?	Relevant department in accordance with the technical requirements.	Low
A.23. Who drafts the terms of reference (ToR)?	Relevant department in accordance with the technical requirements.	
A.24. Who prepares the request for proposals (RFPs)?	Project employer, sometimes with the assistance of a design institute and a tendering agent.	
B. Information Management		
B.1. Is there a referencing system for procurement files?	Yes	Low
B.2. Are there adequate resources allocated to record keeping infrastructure, which includes the record keeping system, space, equipment and personnel to administer the procurement records management functions within the agency?	Yes	Low
B.3. For what period are records kept?	Permanent	Low
B.4. Are copies of bids or proposals retained with the evaluation?	Yes	Low
B.5. Are copies of the original advertisements retained with the pre-contract papers?	Yes	Low
B.6. Is there a single contract file with a copy of the contract and all subsequent contractual correspondence?	No	Low
B.7. Are copies of invoices included with the contract papers?	Yes	Low
C. Procurement Practices		
Goods and Works		
C.1. Has the agency undertaken foreign-assisted procurement of goods or works recently (last 12 months, or last 36 months)? (If yes, please indicate the names of the development partner/s and the Project/s.)	No	Average
C.2. If the above answer is yes, what were the major challenges?	-	
C.3. Is there a systematic process to identify procurement requirements (for a period of one year or more)?	Yes. There is an annual vehicle and law enforcement equipment update and procurement need.	Low
C.4. Is there a minimum period for preparation of bids and if yes how long?	Yes, 7 days	Average
C.5. Are all queries from bidders replied to in writing?	Yes	
C.6. Does the bidding document state the date and time of bid opening?	Yes	Low
C.7. Is the opening of bids done in public?	Yes	Low

Question	Answer/Finding	Risk
C.8. Can late bids be accepted?	No	
C.9. Can bids be rejected at bid opening?	Non-compliant bids will be rejected.	
C.10. Are minutes of the bid opening taken?	Yes	Low
C.11. Who may have a copy of the minutes?	The project employer, the tenderers, and the tender oversight agency (State Assets Commission).	
C.12. Are the minutes free of charge?	Yes	
C.13. Who undertakes the evaluation of bids (individual(s), permanent committee, ad-hoc committee)?	Establish a bid evaluation committee (4 permanent members from the management level, and 2 relevant specialists invited as necessary).	Average
C.14. What are the qualifications of the evaluators with respect to procurement and the goods and/or works under evaluation?	Relevant titles recognized in the industries.	Average
C.15. Is the decision of the evaluators final or is the evaluation subject to additional approvals?	It is final.	Low
C.16. Using at least three real examples, how long does it normally take from the issuance of the invitation for bids up to contract effectiveness?	Generally at most 2 months, but may be shorter.	Low
C.17. Are there processes in place for the collection and clearance of cargo through ports of entry?	No. (all goods will be manufactured domestically)	Low
C.18. Are there established goods receiving procedures?	Yes	Low
C.19. Are all goods that are received recorded as assets or inventory in a register?	Yes	Low
C.20. Is the agency/procurement department familiar with letters of credit?	No	Average
C.21. Does the procurement department register and track warranty and latent defects liability periods?	Yes	Low
Consulting Services		
C.22. Has the agency undertaken foreign-assisted procurement of consulting services recently (last 12 months, or last 36 months)? (If yes, please indicate the names of the development partner/s and the Project/s.)	No	Average
C.23. If the above answer is yes, what were the major challenges?	N/A	
C.24. Are assignments and requests for expressions of interest (EOIs) advertised?	Yes	Low
C.25. Is a consultants' selection committee formed with appropriate individuals, and what is its composition (if any)?	Yes, via a meeting of the office.	Average
C.26. What criteria is used to evaluate EOIs?	National standards in line with the company's procurement criteria.	Average
C.27. Historically, what is the most common method used (QCBS, QBS, etc.) to select consultants?	QCBS	Low
C.28. Do firms have to pay for the RFP document?	Yes	Low
C.29. Does the proposal evaluation criteria follow a pre-determined structure and is it detailed in the RFP?	Yes	Low
C.30. Are pre-proposal visits and meetings arranged?	Yes	Low
C.31. Are minutes prepared and circulated after pre-proposal meetings?	Yes	

Question	Answer/Finding	Risk
C.32. To who are the minutes distributed?	All shortlisted tenderers	
C.33. Are all queries from consultants answered/addressed in writing?	Yes	Low
C.34. Are the technical and financial proposals required to be in separate envelopes?	No	Average
C.35. Are proposal securities required?	Yes	Low
C.36. Are technical proposals opened in public?	No	Low
C.37. Are minutes of the technical opening distributed?	No	
C.38. Do the financial proposals remain sealed until technical evaluation is completed?	No	Average
C.39. Who determines the final technical ranking and how?	Via a meeting of the office	
C.40. Are the technical scores sent to all firms?	No	
C.41. Are the financial proposal opened in public?	No	Average
C.42. Are minutes of the financial opening distributed?	No	
C.43. How is the financial evaluation completed?	Via a meeting of the office	Average
C.44. Are face to face contract negotiations held?	Yes	
C.45. How long after financial evaluation is negotiation held with the selected firm?	Within a week	
C.46. What is the usual basis for negotiation?	Technical terms and price quotes attached to the tender documents.	
C.47. Are minutes of negotiation taken and signed?	Yes	
C.48. How long after negotiation is the contract signed?	Within 7 days	Average
C.49. Is there an evaluation system for measuring the outputs of consultants?	No	Average
Payments		
C.50. Are advance payments made?	Yes	Average
C.51. What is the standard period for payment included in contracts?	First payment after contract signing, next payment after acceptance of the goods (payment to 85% or 90%), and balance of payment after the expiry of the one-year warranty.	Average
C.52. On average, how long is it between receiving a firm's invoice and making payment?	According to the contract stipulations.	
C.53. When late payment is made, are the beneficiaries paid interest?	No	
D. Effectiveness		
D.1. Is contractual performance systematically monitored and reported?	Yes	Low
D.2. Does the agency monitor and track its contractual payment obligations?	Yes	Low
D.3. Is a complaints resolution mechanism described in national procurement documents?	Yes	Low
D.4. Is there a formal non-judicial mechanism for dealing with complaints?	By negotiation between representatives of both parties; judicial resolution if no result from negotiation, but this has not happened yet.	Average
D.5. Are procurement decisions and disputes supported by written narratives such as minutes of evaluation, minutes of negotiation, notices of default/withheld payment?	Yes	Low

Question	Answer/Finding	Risk
E. Accountability measures		
E.1. Is there a standard statement of ethics and are those involved in procurement required to formally commit to it?	Yes, clean governance warranty	Low
E.2. Are those involved with procurement required to declare any potential conflict of interest and remove themselves from the procurement process?	Yes	Low
E.3. Is the commencement of procurement dependent on external approvals (formal or de-facto) that are outside of the budgeting process?	Yes, to apply to State Assets Commission.	Average
E.4. Who approves procurement transactions, and do they have procurement experience and qualifications?	State Assets Commission	Average
E.5. Which of the following actions require approvals outside the procurement unit or the evaluation committee, as the case may be, and who grants the approval?		Low
(i) Bidding document, invitation to pre-qualify or RFP	No	
(ii) Advertisement of an invitation for bids, pre-qualification or call for EOIs	No	
(iii) Evaluation reports	No	
(iv) Notice of award	No	
(v) Invitation to consultants to negotiate	No	
(vi) Contracts	No	
E.6. Is the same official responsible for: (i) authorizing procurement transactions, procurement invitations, documents, evaluations and contracts; (ii) authorizing payments; (iii) recording procurement transactions and events; and (iv) the custody of assets?	No	Low
E.7. Is there a written auditable trail of procurement decisions attributable to individuals and committees?	Yes	Low

II. General Ratings

Criterion	Risk
Organizational and staff capacity	Average
Information management	Low
Procurement practices	Average
Effectiveness	Low to average
Accountability measures	Average
Overall risk rating	**Average**

Procurement Capacity Assessment Report and Recommendations

Proposed Project Name: Gansu Baiyin Integrated Urban Development Project	**Proposed Amount (US$):** $100 million
Implementing Agency: Baiyin Public Transportation Company	**Source of Funding:** Asian Development Bank (ADB)
Assessor: ADB	**Date:** 20 April 2014

Expected Procurement

Baiyin Public Transportation Company (BPT) is the implementing agency of intelligent transportation system subproject. Procurement activity under the project will cover goods procurement for the Baiyin intelligent bus dispatching operation management system: automotive equipment and terminal equipment (construction of three centers, software support platform, system integration installation service, including installation of above equipment and materials). The whole system will be procured under an international competitive bidding (ICB) goods package. BPT is not expected to be involved with any consulting service engagements.

General Procurement Environment Assessment

The People's Republic of China (PRC) has promulgated and implemented relevant procurement laws and regulations; these laws and regulations encourage procurement by competitive bidding, and provide appropriate procedures and preventive systemic measures against corruption. According to the requirements of the laws and regulations, the vast majority of projects with foreign investment or government investment need central government or local government approval. Implementing agencies need to implement procurement in strict accordance with stipulated procedures and requirements. The relevant provisions of the PRC are consistent with ADB procurement guidelines, with slight differences in the details. The BPT as a state-owned company needs to follow the PRC procurement laws and regulations. Procurement audit is done by an independent department, including the audit of the procurement process and the non-capital contents.

The main differences between domestic procurement guidelines and ADB procurement guidelines are as follows: (i) the domestic procurement laws and regulations are all applicable to all procurement of goods, works, and services, without separate procurement requirements (guidelines) for goods, works, and services; (ii) the domestic procurement regulations do not involve contract management (contract management is governed by “Contract Law” standards), reimbursement and payment and contract claims, etc.; (iii) it is not mandatory in domestic procurement regulations for the contract to be awarded to the lowest evaluated bid; and (iv) there is no mandatory requirement for information disclosure and specific measures.

On the disclosure of tender information, the ways and means of information dissemination in domestic procurement guidelines are more specific than ADB guidelines. Domestic procurement and bidding requirements (including the format of bidding documents) are basically consistent with FIDIC terms.

Risk Assessment:

In accordance with the itemized breakdown in the assessment of individual and overall risks as required by ADB, the results of the assessments with grading are shown in the table below.

Criterion	Risk
Organizational and staff capacity	Low
Information management	Low
Procurement practices	Average
Effectiveness	Low to Average
Accountability measures	Average
Overall Risk Rating	**Low to Average**

Summary of Findings:

BPT is the implementing agency responsible for installing the intelligent public transport system in Baiyin

District. BPT has no experience with ADB funded projects. The current institutional arrangement is adequate to conduct procurement process complying with the PRC laws and regulations. An information system is in place but can be improved to accommodate the ADB project. There is no formal non-judicial mechanism for dealing with complaints. Other than this, the current institutional arrangements and practices of the implementing agency in the procurement process are effective. Since BPT has no experience with ADB funded projects, it is may not be familiar with the issues related to ICB for goods. In BPT's normal practice, an engineering design institute prepares technical specification and bills of quantities for any bidding documents. The same approach will be applied in the ICB goods procurement under the project. BPT participated in preparing an engineering feasibility study for the transport security management system and demonstrated enough capacity to advice and check its design and operational qualities.

Organizational and Staff Capacity

Risk Assessment:
Low

Summary of Findings:
Although BPT has no experience with ADB or other international financial institutes' funded project, it is familiar with PRC domestic procurement procedures. BTP demonstrated that its procurement capacity and human resources are adequate in terms of experience and number of staff. The assessment identified that since BPT has a strong institutional capacity, the project should provide adequate support and training for goods procurement by following the ADB procurement guidelines.

Information Management

Risk Assessment:
Low

Summary of Findings:
BPT has its own information system in place. According to the regulation, bidding documents and other records are required to be held permanently for examination. The management systems on other issues are basically in place and meet the requirements.

Procurement Practices

Procurement of Goods and Works

Risk Assessment:
Average

Summary of Findings:
BPT is not familiar with ADB procurement guidelines for goods, including various procedures for technical and financial proposals (e.g., 1 envelope, 2 envelopes, etc.), as well as reimbursement and payment procedures. Unfamiliarity with ADB procurement guideline means that BPT's capacity has to be upgraded to foresee and address issues that might arise from ICB goods procurement. BPT has no experience in letters of credit procedure. However, it is less likely that a public transport management system procured under the project would require any import as all equipment are generally manufactured in the PRC.

Effectiveness

Risk Assessment:
Low to Average

Summary of Findings:
BPT does not have formal non-judicial mechanism for dealing with complaints. Other than this, the relevant requirements and details are basically consistent with the provisions of ADB. The current institutional arrangements and practices of BPT in the procurement process are shown to be generally effective.

Accountability Measures

Risk Assessment:

Average

Summary of Findings:

The competitive procurement process adopted by BPT has strict process control and oversight mechanisms, and these requirements can effectively promote the smooth implementation of ADB's procurement policies. The relevant regulations have detailed provisions on the personnel and institutions responsible in cases of various situations and issues, as well as their responsibility. Same as Baiyin Municipal Public Security Bureau Traffic Police Detachment, commencement and approval of procurement transaction is subject to State Asset Commission. This indicates that BPT's procurement process is subject to review and approval of another government body. This is considered to strengthen its procurement accountability.

Summary Assessment

BPT's general procurement capacity is high. All risks are associated with the gaps between PRC procurement guidelines and ADB procurement guidelines and also the level of English proficiency to conduct ICB goods procurement for their public transportation system under the project. The risk can be addressed by developing its capacity to learn ADB's procurement guidelines and principles. In particular, through support of the startup consulting service and project management consulting service, BPT should learn that the lowest price bid for goods and works shall be selected and awarded the contract.

Similar to TPD, the overall risk rating of BPT is low to average due to its capacity to conduct procurement in accordance with the PRC laws and regulations. A lack of experience can be offset with guidance of the experienced Baiyin PMO, the tendering agency, and the consulting services under the project.

Procurement Capacity Assessment Questionnaire
IA - Baiyin Public Transportation Company

Risk Ratings	Extremely High	High	Average	Low

I. Specific Assessment and Ratings

Question	Answer/Finding	Risk
A. Organizational and Staff Capacity		
A.1. How many years' experience does the head of the procurement department/unit have in a direct procurement role?	Deputy General Manager 20 years	Low
A.2. How many staff in the procurement department/unit are:		Low
(i) Fulltime?	6	
(ii) Part-time?	3	
(iii) Seconded?	0	
A.3. Does the procurement staff have English language proficiency?	No	High
A.4. Are the number and qualifications of the staff sufficient to undertake the additional procurement that will be required under the proposed project?	Yes	Low
A.5. Does the unit have adequate facilities, such as PCs, internet connections, photocopy facilities, printers, etc., to undertake the planned procurement?	Yes	Low
A.6. Does the agency have a procurement training program?	No	High
A.7. Does the agency have a Procurement Committee that is independent from the head of the agency?	No	Average
A.8. Does the agency have a procurement department/unit, including a permanent office that performs the function of a Secretariat for the Procurement Unit, and which serves as the main support unit of the Procurement Committee?	Yes	Average
A.9. If yes, what type of procurement does it undertake?	Vehicles and automotive systems for the public transportation system	
A.10. At what level does the department/unit report (to the head of agency, deputy etc.)?	Report to the legal person, then to Baiyin Municipal Transport Bureau, and Baiyin Municipal State Assets Commission.	Average
A.11. Do the procurement positions in the agency have job descriptions, which outline specific roles, minimum technical requirements and career routes?	Yes	Low
A.12. Is there a procurement process manual for goods and works?	Yes	Average
A.13. If there is a manual, is it up to date and does it cover foreign-assisted projects?	Up to date, but not cover foreign-assisted procurement.	
A.14. Is there a procurement process manual for consulting services?	Yes, procurement management process	
A.15. If there is a manual, is it up to date and does it cover foreign-assisted projects?	Up to date, but not cover foreign-assisted procurement.	
A.16. Are there standard documents in use, such as	Use standard vehicle	

Question	Answer/Finding	Risk
Standard Procurement Documents/Forms, and have they been approved for use on ADB funded projects?	purchase contract and equipment purchase contract documents. They have not been approved for use on ADB funded projects.	
A.17. Does the ToR follow a standard format such as background, tasks, inputs, objectives and outputs?	Yes	
A.18. Who drafts the procurement specifications?	Employer	Low
A.19. Who approves the procurement specifications?	Department in charge of the project employer	
A.20. Who drafts the bidding documents?	Project employer, sometimes with the assistance of a design institute and a tendering agency.	
A.21. Who manages the sale of the bidding documents?	Tendering agency	
A.22. Who identifies the need for consulting services requirements?	The relevant department in accordance with the technical requirements.	Low
A.23. Who drafts the terms of reference (ToR)?	The relevant department in accordance with the technical requirements.	
A.24. Who prepares the request for proposals (RFPs)?	Project employer, sometimes with the assistance of a design institute and a tendering agent.	
B. Information Management		
B.1. Is there a referencing system for procurement files?	Yes	Low
B.2. Are there adequate resources allocated to record keeping infrastructure, which includes the record keeping system, space, equipment and personnel to administer the procurement records management functions within the agency?	Yes	Low
B.3. For what period are records kept?	Permanent	Low
B.4. Are copies of bids or proposals retained with the evaluation?	Yes	Low
B.5. Are copies of the original advertisements retained with the pre-contract papers?	Yes	Low
B.6. Is there a single contract file with a copy of the contract and all subsequent contractual correspondence?	No	Low
B.7. Are copies of invoices included with the contract papers?	Yes	Low
C. Procurement Practices		
Goods and Works		
C.1. Has the agency undertaken foreign-assisted procurement of goods or works recently (last 12 months, or last 36 months)? (If yes, please indicate the names of the development partner/s and the Project/s.)	No	High
C.2. If the above answer is yes, what were the major challenges?	Not clear	
C.3. Is there a systematic process to identify procurement requirements (for a period of one year or more)	Yes. There is a vehicle update procurement need each year.	Low
C.4. Is there a minimum period for preparation of bids and	Yes, 7 days	Average

Question	Answer/Finding	Risk
if yes how long?		
C.5. Are all queries from bidders replied to in writing?	Yes	
C.6. Does the bidding document state the date and time of bid opening?	Yes	Low
C.7. Is the opening of bids done in public?	Yes	Low
C.8. Can late bids be accepted?	No	
C.9. Can bids be rejected at bid opening?	Non-compliant bids will be rejected.	
C.10. Are minutes of the bid opening taken?	Yes	Low
C.11. Who may have a copy of the minutes?	The project employer, the tenderers, and the tender oversight agency (State Assets Commission).	
C.12. Are the minutes free of charge?	Yes	
C.13. Who undertakes the evaluation of bids (individual(s), permanent committee, ad-hoc committee)?	Establish a bid evaluation committee (3 permanent members from the management level, and 2 relevant specialists invited as necessary)	Average
C.14. What are the qualifications of the evaluators with respect to procurement and the goods and/or works under evaluation?	Relevant titles recognized in the industries.	Average
C.15. Is the decision of the evaluators final or is the evaluation subject to additional approvals?	It is final.	Low
C.16. Using at least three real examples, how long does it normally take from the issuance of the invitation for bids up to contract effectiveness?	Generally at most 2 months, but may be shorter.	Low
C.17. Are there processes in place for the collection and clearance of cargo through ports of entry?	No, because all are domestics goods.	Average
C.18. Are there established goods receiving procedures?	Yes	Low
C.19. Are all goods that are received recorded as assets or inventory in a register?	Yes	Low
C.20. Is the agency/procurement department familiar with letters of credit?	No	Average
C.21. Does the procurement department register and track warranty and latent defects liability periods?	Yes	Low
Consulting Services		
C.22. Has the agency undertaken foreign-assisted procurement of consulting services recently (last 12 months, or last 36 months)? (If yes, please indicate the names of the development partner/s and the Project/s.)	No	High
C.23. If the above answer is yes, what were the major challenges?	N/A	
C.24. Are assignments and requests for expressions of interest (EOIs) advertised?	Yes	Average
C.25. Is a consultants' selection committee formed with appropriate individuals, and what is its composition (if any)?	Yes, via a meeting of the office.	Average
C.26. What criteria is used to evaluate EOIs?	National standards in line with the company's procurement criteria.	Average
C.27. Historically, what is the most common method used	QCBS	Low

Question	Answer/Finding	Risk
(QCBS, QBS, etc.) to select consultants?		
C.28. Do firms have to pay for the RFP document?	Yes	Low
C.29. Does the proposal evaluation criteria follow a pre-determined structure and is it detailed in the RFP?	Yes	Low
C.30. Are pre-proposal visits and meetings arranged?	Yes	Low
C.31. Are minutes prepared and circulated after pre-proposal meetings?	Yes	
C.32. To who are the minutes distributed?	All shortlisted tenderers	
C.33. Are all queries from consultants answered/addressed in writing?	Yes	Low
C.34. Are the technical and financial proposals required to be in separate envelopes?	No	High
C.35. Are proposal securities required?	Yes	Low
C.36. Are technical proposals opened in public?	No	Low
C.37. Are minutes of the technical opening distributed?	No	
C.38. Do the financial proposals remain sealed until technical evaluation is completed?	No	High
C.39. Who determines the final technical ranking and how?	Via a meeting of the office	
C.40. Are the technical scores sent to all firms?	No	
C.41. Are the financial proposal opened in public?	No	High
C.42. Are minutes of the financial opening distributed?	No	
C.43. How is the financial evaluation completed?	Via a meeting of the office	Average
C.44. Are face to face contract negotiations held?	Yes	
C.45. How long after financial evaluation is negotiation held with the selected firm?	Within a week	
C.46. What is the usual basis for negotiation?	Technical terms and price quotes attached to the tender documents.	
C.47. Are minutes of negotiation taken and signed?	Yes	
C.48. How long after negotiation is the contract signed?	Within 7 days	Average
C.49. Is there an evaluation system for measuring the outputs of consultants?	No	High
Payments		
C.50. Are advance payments made?	Yes	Average
C.51. What is the standard period for payment included in contracts?	First payment after contract signing, next payment after acceptance of the goods (payment to 85% or 90%), and balance of payment after the expiry of the one-year warranty.	Average
C.52. On average, how long is it between receiving a firm's invoice and making payment?	According to the contract stipulations.	
C.53. When late payment is made, are the beneficiaries paid interest?	No	
D. Effectiveness		
D.1. Is contractual performance systematically monitored and reported?	Yes	Low
D.2. Does the agency monitor and track its contractual payment obligations?	Yes	Low
D.3. Is a complaints resolution mechanism described in national procurement documents?	Yes	Low

Question	Answer/Finding	Risk
D.4. Is there a formal non-judicial mechanism for dealing with complaints?	By negotiation between representatives of both parties; judicial resolution if no result from negotiation, but this has not happened yet.	Average
D.5. Are procurement decisions and disputes supported by written narratives such as minutes of evaluation, minutes of negotiation, notices of default/withheld payment?	Yes	Low
E. Accountability measures		
E.1. Is there a standard statement of ethics and are those involved in procurement required to formally commit to it?	Yes, clean governance warranty.	Low
E.2. Are those involved with procurement required to declare any potential conflict of interest and remove themselves from the procurement process?	Yes	Low
E.3. Is the commencement of procurement dependent on external approvals (formal or de-facto) that are outside of the budgeting process?	Yes, to apply to State Assets Commission.	Average
E.4. Who approves procurement transactions, and do they have procurement experience and qualifications?	State Assets Commission	Average
E.5. Which of the following actions require approvals outside the procurement unit or the evaluation committee, as the case may be, and who grants the approval?		Low
(i) Bidding document, invitation to pre-qualify or RFP	No	
(ii) Advertisement of an invitation for bids, pre-qualification or call for EOIs	No	
(iii) Evaluation reports	No	
(iv) Notice of award	No	
(v) Invitation to consultants to negotiate	No	
(vi) Contracts	No	
E.6. Is the same official responsible for: (i) authorizing procurement transactions, procurement invitations, documents, evaluations and contracts; (ii) authorizing payments; (iii) recording procurement transactions and events; and (iv) the custody of assets?	No	Low
E.7. Is there a written auditable trail of procurement decisions attributable to individuals and committees?	Yes	Average

II. General Ratings

Criterion	Risk
Organizational and staff capacity	Low
Information management	Low
Procurement practices	Average
Effectiveness	Low to Average
Accountability measures	Average
Overall risk rating	**Low to Average**

Procurement Capacity Assessment Report and Recommendations

Proposed Project Name: Gansu Baiyin Integrated Urban Development Project	**Proposed Amount (US$):** $100 million
Implementing Agency: Jingyuan County Bureau of Human Resources and Social Security	**Source of Funding:** Asian Development Bank (ADB)
Assessor: ADB	**Date:** 10 January 2014

Expected Procurement

Jingyuan County Bureau of Human Resources and Social Security (JHRSS) is an implementing agency of technical and vocational education and training (TVET) component. Procurement activities of JHRSS will cover a small civil works (less than $1.0 million), equipment for training and testing, printing and information communication technology including software for labor market database. Although a consulting service for TVET component is engaged separately by the Baiyin project management office (Baiyin PMO), the executing agency of the project, JHRSS will involve closely with its tendering and selection process. Procurement methods under the TVET subproject are national competitive bidding (NCB) and shopping.

General Procurement Environment Assessment

The People's Republic of China (PRC) has promulgated and implemented relevant procurement laws and regulations; these laws and regulations encourage procurement by competitive bidding, and provide appropriate procedures and preventive systemic measures against corruption. According to PRC laws and regulations, the majority of projects with foreign or government investment need central or local government approval. Implementing agencies including JHRSS need to implement procurement in strict accordance with stipulated procedures and requirements. The relevant provisions are consistent with ADB procurement guidelines with minor differences. An independent department does procurement audit, including audit of the procurement process and non-capital contents.

The main differences between domestic procurement guidelines and ADB procurement guidelines are as follows: (i) the domestic procurement laws and regulations are all applicable to all procurement of goods, works, and services, without separate procurement requirements (guidelines) for goods, works, and services; (ii) the domestic procurement regulations do not involve contract management (contract management is governed by “Contract Law” standards), reimbursement and payment and contract claims, etc.; (iii) it is not mandatory in domestic procurement regulations for the contract to be awarded to the lowest evaluated bid; and (iv) there is no mandatory requirement for information disclosure and specific measures.

On the disclosure of tender information, the ways and means of information dissemination in domestic procurement guidelines are more specific than ADB guidelines. Domestic procurement and bidding requirements (including the format of bidding documents) are basically consistent with FIDIC terms.

Risk Assessment:

In accordance with the itemized breakdown in the assessment of individual and overall risks as required by ADB, the results of the assessments with grading are shown in the table below.

Criterion	**Risk**
Organizational and staff capacity	Low
Information management	Low
Procurement practices	Average
Effectiveness	Low
Accountability measures	Average
Overall risk rating	**Average**

Summary of Findings:

JHRSS is one of implementing agencies responsible for implementing the TVET subproject under the project. JHRSS has no project experience with ADB or other international financial institutes. The current institutional arrangement was found adequate in capacity and number of staff to handle procurement activities. An effective information system is in place but it has to be improved to accommodate the standard ADB procurement procedure. There is no formal non-judicial mechanism for dealing with complaints. Through the knowledge sharing from the experienced Baiyin PMO and training provided by project’s consulting services, JHRSS needs to develop capacity to learn the ADB procurement guidelines for goods, works, and services,

as well as reimbursement and payment procedures to understand potential procurement issues that might be expected during the project

Organizational and Staff Capacity

Risk Assessment:
Low

Summary of Findings:
JHRSS is familiar with the PRC domestic procurement procedures. Its procurement capacity and human resources are adequate. Although English proficiency of the staff is not adequate, this will pose only an average risk as JHRSS will only be involved with NCB and Shopping procedure. The risk can be mitigated by support from a tendering agency engaged by the Baiyin PMO and supervision from the Baiyin PMO, the experienced executing agency. There is little risk for its capacity to handle consulting service engagement as JHRSS will only take a supporting role in engaging the TVET consulting service.

Information Management

Risk Assessment:
Low

Summary of Findings:
JHRSS has its own information system in place. Bidding documents and other records are required to be held for at least 30 years for examination. The basic management systems on other issues are in place and meet the requirements.

Procurement Practices

Risk Assessment:
Average

Summary of Findings:
JHRSS's risk is only attributed to its unfamiliarity with ADB procurement guidelines for goods and works, as well as payment procedures. JHRSS has good experience in the PRC domestic procurement but its understanding of ADB procurement process and guidelines need to be enhanced to process several small contracts under the TVET component. JHRSS is not expected to engage any consulting service but through the Baiyin PMO, a TVET consulting service will be engaged under the project. The outline terms of reference has been drafted and agreed among Baiyin PMO, JHRSS and ADB during the project designing stage. But JHRSS should work closely with the Baiyin PMO to manage the TVET consulting service contract. .

Effectiveness

Risk Assessment:
Low

Summary of Findings:
There is no formal non-judicial mechanism for dealing with complaints. The relevant requirements and details are generally consistent with the provisions of PRC's domestic procurement. The current institutional arrangements and practices of JHRSS in the procurement process are shown to be effective.

Accountability Measures

Risk Assessment:
Average

Summary of Findings:
In the PRC, the local competitive procurement process has strict process control and oversight mechanisms, and these requirements can effectively promote the smooth implementation of ADB's procurement policies. The relevant regulations have detailed provisions on personnel and institutions responsible for the various procurement activities. The assessment confirmed that different roles are assigned to the bid process: (i) Baiyin PMO who authorizes procurement transactions, procurement invitations, documents, and contracts and payments; (ii) a procurement committee who evaluates bids; and (iii) JHRSS will be responsible for

custody of assets. Since JHRSS is politically supervised under Jingyuan County Government and the Baiyin PMO, JHRSS may be unable to hold accountability of higher-level agency staffs, e.g., Baiyin PMO. Transparency is therefore important to ensure sound management of the procurement system.

Summary Assessment

JHRSS will implement the TVET subproject under the project. The TVET subproject will involve several small contract packages and the procurement activities mainly include NCB for goods and shopping for works and goods. Since all ADB financed consulting service will be engaged by Baiyin PMO, JHRSS will only contribute to provide inputs to the outline terms of reference and monitor the consultant's activities. JHRSS has experience in PRC domestic procurement procedure and its institutional capacity is good for implementing procurement under ADB financed project. JHRSS also has regular training and manual for procurement. The assessment identified that procurement risks are mainly associated with its unfamiliarity with the ADB procurement procedure and its guidelines. Capacity of JHRSS is also increasing through the training on the ADB's procurement guidelines and disbursement by ADB during the project preparatory technical assistance.

JHRSS will conduct the procurement under the guidance of the experienced Baiyin PMO. The tendering agency and the teams of startup consulting service and project management consulting service will help JHRSS to ensure quality, transparency, and implementation of the procurement process, and provide solutions and recommendations to resolve problems arising in the execution of the contract. The overall risk rating is average in procurement.

Specific Recommendations, Project Implementation

Risks	Recommended Action	Responsibility and comment
Unfamiliarity with ADB procurement and disbursement guidelines	Baiyin PMO, will engage a tendering agency and a startup consulting service to ensure that JHRSS will develop capacity to understand and handle ADB's procurement process	Baiyin PMO, tendering agent, and the procurement specialist will be jointly responsible for JHRSS's capacity building.
JHRSS' procurement manual and guidelines are not updated.	Update contents of training as well as its procurement manuals	The tendering agency will be engaged in July 2014 and startup consulting service will be responsible for the update.
Difficulty to hold accountability of higher-level agency, e.g., Jingyuan County and Baiyin PMO.	Transparency in tendering process should be ensured, e.g., ad hoc independent committee is called for bid evaluation.	Baiyin PMO who leads the procurement process will report regularly on post review procurement process in its quarterly progress report.

Procurement Capacity Assessment Questionnaire
IA – Jingyuan County Bureau of Human Resources and Social Security

Risk Ratings	Extremely High	High	Average	Low

I. Specific Assessment and Ratings

Question	Answer/Finding	Risk
A. Organizational and Staff Capacity		
A.1. How many years' experience does the head of the procurement department/unit have in a direct procurement role?	Have direct procurement work experience for a number of years	Average
A.2. How many staff in the procurement department/unit are:		Low
(i) Fulltime?	3	
(ii) Part-time?		
(iii) Seconded?		
A.3. Does the procurement staff have English language proficiency?	No	Average
A.4. Are the number and qualifications of the staff sufficient to undertake the additional procurement that will be required under the proposed project?	Yes	Low
A.5. Does the unit have adequate facilities, such as PCs, internet connections, photocopy facilities, printers, etc., to undertake the planned procurement?	Yes	Low
A.6. Does the agency have a procurement training program?	Yes	Low
A.7. Does the agency have a Procurement Committee that is independent from the head of the agency?	This is being established.	Low
A.8. Does the agency have a procurement department/unit, including a permanent office that performs the function of a Secretariat for the Procurement Unit, and which serves as the main support unit of the Procurement Committee?	Yes	Low
A.9. If yes, what type of procurement does it undertake?	Local works, goods, and consulting services	
A.10. At what level does the department/unit report (to the head of agency, deputy etc.)?	Baiyin PMO	Low
A.11. Do the procurement positions in the agency have job descriptions, which outline specific roles, minimum technical requirements and career routes?	Yes	Low
A.12. Is there a procurement process manual for goods and works?	Yes	Low
A.13. If there is a manual, is it up to date and does it cover foreign-assisted projects?	Yes, but it does not cover international financial institutes-assisted projects	
A.14. Is there a procurement process manual for consulting services?	Yes	
A.15. If there is a manual, is it up to date and does it cover foreign-assisted projects?	Yes, but it does not cover international financial institutes-assisted projects	
A.16. Are there standard documents in use, such as Standard Procurement Documents/Forms, and have they been approved for use on ADB funded projects?	Yes, for domestic procurement activities, but not approved for ADB projects	
A.17. Does the ToR follow a standard format such as background, tasks, inputs, objectives and outputs?	Yes	

Question	Answer/Finding	Risk
A.18. Who drafts the procurement specifications?	The person who invites tenders	Low
A.19. Who approves the procurement specifications?	Head of JHRSS	
A.20. Who drafts the bidding documents?	Tendering agency drafts them, with assistance from the project owner and the design institute.	
A.21. Who manages the sale of the bidding documents?	Tendering agency	
A.22. Who identifies the need for consulting services requirements?	Baiyin PMO	Average
A.23. Who drafts the terms of reference (ToR)?	Baiyin PMO	
A.24. Who prepares the request for proposals (RFPs)?	Baiyin PMO	
B. Information Management		
B.1. Is there a referencing system for procurement files?	Yes	Low
B.2. Are there adequate resources allocated to record keeping infrastructure, which includes the record keeping system, space, equipment and personnel to administer the procurement records management functions within the agency?	Yes	Low
B.3. For what period are records kept?	30 years	Low
B.4. Are copies of bids or proposals retained with the evaluation?	Yes	Low
B.5. Are copies of the original advertisements retained with the pre-contract papers?	Yes	Low
B.6. Is there a single contract file with a copy of the contract and all subsequent contractual correspondence?	Yes	Low
B.7. Are copies of invoices included with the contract papers?	Yes	Low
C. Procurement Practices		
Goods and Works		
C.1. Has the agency undertaken foreign-assisted procurement of goods or works recently (last 12 months, or last 36 months)? (If yes, please indicate the names of the development partner/s and the Project/s.)	No	High
C.2. If the above answer is yes, what were the major challenges?		
C.3. Is there a systematic process to identify procurement requirements (for a period of one year or more)?	Yes	Low
C.4. Is there a minimum period for preparation of bids and if yes how long?	Yes, 15 days	Low
C.5. Are all queries from bidders replied to in writing?	Yes	
C.6. Does the bidding document state the date and time of bid opening?	Yes	Low
C.7. Is the opening of bids done in public?	Yes	Low
C.8. Can late bids be accepted?	Do not accept	
C.9. Can bids be rejected at bid opening?	Yes	
C.10. Are minutes of the bid opening taken?	Yes	Low
C.11. Who may have a copy of the minutes?	Procurement committee	
C.12. Are the minutes free of charge?	Yes	
C.13. Who undertakes the evaluation of bids (individual(s), permanent committee, ad-hoc committee)?	An ad hoc committee	Low
C.14. What are the qualifications of the evaluators with respect to procurement and the goods and/or works under evaluation?	They must have senior professional titles domestically recognized.	Low

Question	Answer/Finding	Risk
C.15. Is the decision of the evaluators final or is the evaluation subject to additional approvals?	The evaluation result is the final result.	Low
C.16. Using at least three real examples, how long does it normally take from the issuance of the invitation for bids up to contact effectiveness?	Generally at least three months, but may also be less	Low
C.17. Are there processes in place for the collection and clearance of cargo through ports of entry?	Yes	Low
C.18. Are there established goods receiving procedures?	Yes	Low
C.19. Are all goods that are received recorded as assets or inventory in a register?	Yes	Low
C.20. Is the agency/procurement department familiar with letters of credit?	Yes, but not with international financial institutes-assisted projects	Average
C.21. Does the procurement department register and track warranty and latent defects liability periods?	Yes	Low
Consulting Services		
C.22. Has the agency undertaken foreign- assisted procurement of consulting services recently (last 12 months, or last 36 months)? (If yes, please indicate the names of the development partner/s and the Project/s.)	No	High
C.23. If the above answer is yes, what were the major challenges?		
C.24. Are assignments and requests for expressions of interest (EOIs) advertised?	Yes	Low
C.25. Is a consultants' selection committee formed with appropriate individuals, and what is its composition (if any)?	Yes. They are randomly selected from an expert database.	Low
C.26. What criteria is used to evaluate EOIs?	ADB project guidelines (through Baiyin PMO)	Low
C.27. Historically, what is the most common method used (QCBS, QBS, etc.) to select consultants?	Based on consideration of both quality and cost (through Baiyin PMO)	Low
C.28. Do firms have to pay for the RFP document?	Yes	Low
C.29. Does the proposal evaluation criteria follow a pre-determined structure and is it detailed in the RFP?	Yes	Low
C.30. Are pre-proposal visits and meetings arranged?	Yes	Low to Average
C.31. Are minutes prepared and circulated after pre-proposal meetings?	Yes	
C.32. To whom are the minutes distributed?	Procurement committee	
C.33. Are all queries from consultants answered/addressed in writing?	Yes	Low
C.34. Are the technical and financial proposals required to be in separate envelopes?	Yes	Low
C.35. Are proposal securities required?	Yes	Low
C.36. Are technical proposals opened in public?	Yes	Low
C.37. Are minutes of the technical opening distributed?	Yes	
C.38. Do the financial proposals remain sealed until technical evaluation is completed?	Yes	Low
C.39. Who determines the final technical ranking and how?	Bid evaluation committee	
C.40. Are the technical scores sent to all firms?	Yes	
C.41. Are the financial proposal opened in public?	Yes	Low
C.42. Are minutes of the financial opening distributed?	Yes	
C.43. How is the financial evaluation completed?	The lowest evaluation price or the highest score, and the other	Average

Question	Answer/Finding	Risk
	bidders' scores are evaluated from the bid evaluation criteria in the document.	
C.44. Are face to face contract negotiations held?	Yes	
C.45. How long after financial evaluation is negotiation held with the selected firm?	The evaluation results are usually issued within 15 days after the end of the bid assessment	
C.46. What is the usual basis for negotiation?	The special provisions attached to the bidding documents and the financial offer prices	
C.47. Are minutes of negotiation taken and signed?	Yes	
C.48. How long after negotiation is the contract signed?	Within ten days	Low
C.49. Is there an evaluation system for measuring the outputs of consultants?	Yes	Low
Payments		
C.50. Are advance payments made?	Yes	Low
C.51. What is the standard period for payment included in contracts?	Depends on the contract	Low
C.52. On average, how long is it between receiving a firm's invoice and making payment?	According to the contract	
C.53. When late payment is made, are the beneficiaries paid interest?	Yes	
D. Effectiveness		
D.1. Is contractual performance systematically monitored and reported?	Yes	Low
D.2. Does the agency monitor and track its contractual payment obligations?	Yes	Low
D.3. Is a complaints resolution mechanism described in national procurement documents?	Yes	Low
D.4. Is there a formal non-judicial mechanism for dealing with complaints?	Yes	Low
D.5. Are procurement decisions and disputes supported by written narratives such as minutes of evaluation, minutes of negotiation, notices of default/withheld payment?	Yes	Low
E. Accountability measures		
E.1. Is there a standard statement of ethics and are those involved in procurement required to formally commit to it?	Yes	Low
E.2. Are those involved with procurement required to declare any potential conflict of interest and remove themselves from the procurement process?	Yes	Low
E.3. Is the commencement of procurement dependent on external approvals (formal or de-facto) that are outside of the budgeting process?	Yes.	Low
E.4. Who approves procurement transactions, and do they have procurement experience and qualifications?	Baiyin PMO approves it, before which specific departments and experts are consulted for advice.	Low
E.5. Which of the following actions require approvals outside the procurement unit or the evaluation committee, as the case may be, and who grants the approval?		Average
(i) Bidding document, invitation to pre-qualify or RFP	Baiyin PMO	
(ii) Advertisement of an invitation for bids, pre-qualification or call for EOIs	Baiyin PMO	

Question	Answer/Finding	Risk
(iii) Evaluation reports	Baiyin PMO	
(iv) Notice of award	Baiyin PMO	
(v) Invitation to consultants to negotiate	Baiyin PMO	
(vi) Contracts	Baiyin PMO	
E.6. Is the same official responsible for: (i) authorizing procurement transactions, procurement invitations, documents, evaluations and contracts; (ii) authorizing payments; (iii) recording procurement transactions and events; and (iv) the custody of assets?	No. Custody of assets will be responsibility of JHRSS and related agencies, while a bid evaluation committee will responsible for evaluation and the Baiyin PMO will be responsible for the remaining items.	Average
E.7. Is there a written auditable trail of procurement decisions attributable to individuals and committees?	Yes	Low to Average

II. General Ratings

Criterion	Risk
Organizational and staff capacity	Low
Information management	Low
Procurement practices	Average
Effectiveness	Low
Accountability measures	Average
Overall risk rating	**Average**