Report and Recommendation of the President to the Board of Directors

Project Number: 49021-004
Loan Number: 3613-PRC
September 2019

Proposed Loan for Additional Financing
People's Republic of China: Heilongjiang Green Urban and Economic Revitalization Project

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Asian Development Bank
CURRENCY EQUIVALENTS
(as of 9 August 2019)

Currency unit  =  yuan (CNY)
CNY1.00  =  €0.1594  or  $0.1423
$1.00  =  CNY7.0264  or  €1.1200
€1.00  =  CNY6.2736  or  $0.8929

ABBREVIATIONS

ADB  –  Asian Development Bank
BDS  –  business development services
EIB  –  European Investment Bank
EMP  –  environmental management plan
ESMS  –  environmental and social management system
FIC  –  financial intermediation component
HPG  –  Heilongjiang Provincial Government
PAM  –  project administration manual
PIU  –  project implementation unit
PMO  –  project management office
PRC  –  People’s Republic of China
SMEs  –  small and medium-sized enterprises
SPS  –  Safeguard Policy Statement
TA  –  technical assistance
WWTP  –  wastewater treatment plant

NOTE

In this report, “$” refers to United States dollars.
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**PROJECT AT A GLANCE**

### 1. Basic Data

<table>
<thead>
<tr>
<th>Project Number</th>
<th>49021-004</th>
</tr>
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<tbody>
<tr>
<td>Project Name</td>
<td>Heilongjiang Green Urban and Economic Revitalization Project (Additional Financing)</td>
</tr>
<tr>
<td>Department</td>
<td>EARD/EASS</td>
</tr>
<tr>
<td>Division</td>
<td></td>
</tr>
<tr>
<td>Executing Agency</td>
<td>Heilongjiang Provincial Government</td>
</tr>
<tr>
<td>Country</td>
<td>China, People’s Republic of China</td>
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<td>People’s Republic of China</td>
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<td>Country Economic Indicators</td>
<td><a href="https://www.adb.org/Documents/LinkedDocs/?id=49021-004-CEI">https://www.adb.org/Documents/LinkedDocs/?id=49021-004-CEI</a></td>
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<td>Portfolio at a Glance</td>
<td><a href="https://www.adb.org/Documents/LinkedDocs/?id=49021-004-PortAtaGlance">https://www.adb.org/Documents/LinkedDocs/?id=49021-004-PortAtaGlance</a></td>
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</table>

### 2. Sector Subsector(s)

<table>
<thead>
<tr>
<th>ADB Financing ($ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, natural resources and rural development</td>
</tr>
<tr>
<td>Land-based natural resources management</td>
</tr>
<tr>
<td>Urban public transport</td>
</tr>
<tr>
<td>Urban roads and traffic management</td>
</tr>
<tr>
<td>Water and other urban infrastructure and services</td>
</tr>
<tr>
<td>Urban flood protection</td>
</tr>
<tr>
<td>Urban sewerage</td>
</tr>
<tr>
<td>Urban water supply</td>
</tr>
</tbody>
</table>

### 3. Operational Priorities

- Addressing remaining poverty and reducing inequalities
- Accelerating progress in gender equality
- Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability
- Making cities more livable
- Promoting rural development and food security
- Strengthening governance and institutional capacity

#### Climate Change Information

- Climate Change impact on the Project: Medium
- ADB Financing
  - Adaptation ($ million): 38.80
  - Mitigation ($ million): 24.00

#### Sustainable Development Goals
- SDG 2.4
- SDG 5.1, 5.5
- SDG 6.3, 6.4
- SDG 10.2
- SDG 11.2, 11.b
- SDG 12.2, 12.8
- SDG 13.a

#### Gender Equity and Mainstreaming
- Effective gender mainstreaming (EGM): Yes

#### Poverty Targeting

### 4. Risk Categorization: Low

### 5. Safeguard Categorization

- Environment: C
- Involuntary Resettlement: C
- Indigenous Peoples: C

### 6. Financing

<table>
<thead>
<tr>
<th>Modality and Sources</th>
<th>Amount ($ million)</th>
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<tr>
<td>ADB</td>
<td>150.00</td>
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<tr>
<td>Cofinancing</td>
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<tr>
<td>None</td>
<td>0.00</td>
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<td>Counterpart</td>
<td>60.00</td>
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<tr>
<td>Government</td>
<td>60.00</td>
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<tr>
<td>Total</td>
<td>210.00</td>
</tr>
</tbody>
</table>

Currency of ADB Financing: Euro

Source: Asian Development Bank

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Generated Date: 05-Sep-2019 11:02:11 AM
I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to the People’s Republic of China (PRC) for the additional financing of the Heilongjiang Green Urban and Economic Revitalization Project.

2. The overall project remains timely and essential for providing strategic and comprehensive support to multicity non-coal diversification. It aims to revitalize the economy and improve urban livability through (i) a financial intermediation component (FIC), linked to a business development services (BDS) subcomponent, to strengthen the capacity of small and medium-sized enterprises (SMEs) and enable private sector development; and (ii) investment project components that enhance regional public goods by cleaning up the environment from coal-mining impacts, reduce pollution, and improve urban infrastructure and public services for people in the coal-dependent cities of Hegang, Jixi, Qitaihe, and Shuangyashan (project cities) in eastern Heilongjiang Province in northeastern PRC.¹ The Asian Development Bank (ADB) provided technical assistance to prepare the project.² The government requested additional financing to help fund outputs 3, 4, and 5 (paras. 14–16), to cover the gap left when originally planned cofinancing did not materialize.

II. THE PROJECT

A. Rationale

3. The project cities were important bases for coal mining and electricity production in the PRC, particularly between 1949 and 2013.³ Their fundamental reliance on coal mining and related industries made their economies vulnerable, especially when coal prices dropped steeply in 2013. Changing global and domestic energy and climate change policies also contributed to rapid economic decline, wage reductions, unemployment, urban poverty, and population loss in the project cities.⁴ In 2014, the project cities had an average per capita gross domestic product of CNY26,600, 33% lower than the average rate in Heilongjiang Province, which in turn was about 16% below the national average.

4. The project cities suffer from environmental degradation (pollution of soil, water, and air) caused by more than 60 years of coal mining. This, along with inadequate urban infrastructure and services—e.g., water supply, wastewater management, drainage, and district heating systems—makes for poor livability. Project cities lack adequate road maintenance, public transport, bus lanes, bus stops, and sidewalks; and urgently need road rehabilitation. Some rivers, especially in Hegang and Jixi, flood during heavy storms, have narrow channels, and are polluted by sediments and untreated discharge of domestic and industrial wastewater.

5. **Value added by ADB assistance.** ADB helped identify and comprehensively tackle key economic development challenges through non-coal diversification, sustainable and inclusive private sector development, and job creation. It enabled a holistic investment project that will generate cross-sector synergies. It prepared a diversification road map and an SME development and financing program to leverage ADB funds and strengthen the local finance sector. It contributes to regional public goods by preparing initial mining remediation strategies and

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¹ ADB has engaged in policy dialogue and provided project support for urban environmental improvement and water pollution prevention for more than 20 years in Heilongjiang Province.


⁴ After 255,000 people out-migrated during 2010–2015, the population declined by 4.7%.
identifying pilot projects that improve the environment and public health, and initiate a change of image from dirty coal cities to livable, clean, and green cities. ADB assessed the climate risk and proposed adaptation measures that are included in the overall project.

6. **Strategic fit.** The project builds on more than 20 years of partnership between ADB and Heilongjiang Province, including several strategic priority projects such as reducing pollution and flood risk in the Songhua River Basin with both public and private sector support. It supports government strategies to revitalize the PRC’s challenged northeastern region. Through its strategic and holistic approach, the project will support the (i) 13th five-year plans of the governments of the PRC, Heilongjiang Province, and project cities to transform the economy and improve financing of new industries and SMEs; (ii) Transformation Development Planning of Coal Cities in Heilongjiang Province, 2014–2020 by assisting SMEs in non-coal pillar industries such as green food processing, graphite high-tech materials and products, machinery, tourism, trade, and logistics; and (iii) the National New-Type Urbanization Plan, 2014–2020 by strengthening small and medium-sized cities. The project aligns with ADB policies, notably the (i) Strategy 2030 and its operational priority of livable cities by (a) providing integrated solutions to four cities to show their transformation from coal-based to diverse, green, and livable cities; (b) enhancing resilience to climate change shocks and stresses, e.g., reducing flood risk and increasing water safety; (c) strengthening institutions by building institutional knowledge and capacity; and (d) sharing best practices and innovation experiences both for replication in the PRC and for cooperation among developing member countries; (ii) country partnership strategy, 2016–2020 for the PRC by supporting socially inclusive, environmentally sustainable, and economically competitive urban development; and (iii) various operational plans and environment operational directions.

7. The current project was approved on 5 December 2017 and declared effective on 4 September 2018. It is performing well and meets all criteria to be eligible for additional financing because (i) it is rated on track under the project performance system; (ii) each safeguard covenant is being complied with; (iii) the delivery of expected outputs is rated successful given that the initial actions—such as advanced contracting and retroactive financing, disbursement of an initial advance of $20 million to the advance account, subsequent liquidation and replenishment of $9.63 million, and the preparation of the detailed engineering design and bidding documents—are progressing as planned; and (iv) the management of risks is rated successful since all the risks in the Risk Assessment and Risk Management Plan were managed successfully. By June 2019, with 27.30% of the project time elapsed, physical progress stood at about 19.00%, and loan

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11 Includes a goods contract (HG-G2) and a civil works contract (SY-RC-W9) totaling $23.31 million.
disbursement totaling $30.30 million was at 11.92% of the current ADB loan amount. Eight contracts totaling $22.88 million have been awarded.

8. The government requested ADB to provide additional financing to cover the financing gap that emerged when originally planned cofinancing by the European Investment Bank (EIB) did not materialize despite EIB’s earlier indication of interest. The proposed additional financing was included as a 2019 firm project for $150 million (€133.929 million equivalent) from ADB’s ordinary capital resources in the country operations business plan for the PRC, 2019–2021 to help finance outputs 3, 4, and 5. The project remains consistent with the country partnership strategy (footnote 9), and additional financing is essential to fully deliver the outputs and outcome.

B. Impact and Outcome

9. The project is aligned with the following impacts: (i) economy revitalized and diversified, and non-coal industries in the cities of Hegang, Jixi, Qitaihe, and Shuangyashan developed (footnote 6); and (ii) living environment, safety, and public health in the cities of Hegang, Jixi, Qitaihe, and Shuangyashan improved (footnote 7). The project will have the following outcome: non-coal economic activities and urban livability in project cities increased.\textsuperscript{12} The impact and outcome of the overall project will remain unchanged from the current project.

10. The comprehensive revitalization approach of the overall project is expected to help stop the out-migration of young and qualified workers, draw new individuals and companies to the newly attractive project cities, and retain existing residents. The project will directly benefit 2.73 million urban residents through (i) stronger SME competitiveness and job creation in improved non-coal industrial parks; (ii) a positive environment and public image through mining remediation; (iii) better water supply, sewers, district heating, flood protection, roads, road safety, and public transport; (iv) greater environmental and traffic safety awareness through public education programs; and (v) closer cooperation between project cities in tourism promotion, logistics and trade, supply chain integration, and SME support using smart city applications.

C. Outputs

11. The overall project outputs will remain unchanged from the current project. Details are in the design and monitoring framework, in the project administration manuals (PAMs), and in the procurement plan.\textsuperscript{13}

12. Output 1: Capacity for business development services and integrated project planning and management developed. The project will support project management and capacity development to ensure successful diversification and project sustainability in the areas of (i) project planning, procurement, and financial management; (ii) BDS for SMEs and local SME bureaus; (iii) human resources and skills development; (iv) smart city cluster cooperation; (v) planning and implementation of mining remediation; (vi) flood risk management, climate resilience, and sponge city planning; (vii) design, construction, and operation of water, wastewater, and drainage systems; and (viii) sustainable urban public transport and road safety.

13. Output 2: Sustainable investment in small and medium-sized enterprises and access to finance in project cities improved. The project will establish an SME financing

\textsuperscript{12} The design and monitoring framework is in Appendix 1.
\textsuperscript{13} Project Administration Manual: Investment Project Components (Section A) [PAM (Section A)], and Project Administration Manual: Financial Intermediation Component and Business Development Services Subcomponent (Section B) [PAM (Section B)] (accessible from the list of linked documents in Appendix 2).
platform, using the FIC, to mobilize domestic financing. The platform will offer (i) cofinancing loans for SMEs by financial intermediaries in which the ADB loan component is subordinated, (ii) a first-loss cash collateral facility to mobilize commercial guarantees and ease access to commercial financing for investments and longer-term working capital, and (iii) entrusted loans for high-priority projects for local governments. The FIC will be linked to the BDS subcomponent (output 1).

14. **Output 3: Key infrastructure and facilities for small and medium-sized enterprises in non-coal industrial parks in project cities constructed.** The additional financing will augment the current loan to help build and make operational key infrastructure and facilities, including (i) roads with advanced safety features and associated utility pipes; (ii) industrial wastewater treatment plants (WWTPs); and (iii) facilities for SMEs, start-ups, and for training.

15. **Output 4: Remediation and environmental cleanup from mining impacts in project cities improved.** The additional financing will augment the current loan to help develop mining remediation strategies, prepare investment plans, and implement pilot projects as models for replication. In Hegang, remediation of an open-pit mine will involve grading, clay lining, topsoil cover, vegetation, environmental management, and monitoring. In Jixi, a former mining area and waste-rock dumpsite, and initiate construction and operation of a subsidence-monitoring center. In Qitaihe and Shuangyashan, waste-rock dumpsites and subsidence areas will be remediated and reused as open spaces.

16. **Output 5: Integrated urban infrastructure and services in project cities improved.** The additional financing will augment the current loan to help enhance urban livability and attractiveness through improved, spatially integrated infrastructure and services: (i) Hegang—river rehabilitation, drainage system, sustainable urban and public transport, urban greening, and district heating; (ii) Jixi—integrated improvements to the core area of Hengshan District and West Jixi, including river rehabilitation, urban roads, water supply, wastewater management, and drainage system; (iii) Qitaihe—water supply, wastewater, and public transport systems improvements; and (iv) Shuangyashan—sustainable urban transport through key road links, water supply, sewer, and drainage systems.

### D. Investment and Financing Plans

17. The overall project is estimated to cost $1,011.0 million equivalent (Table 1). The amount was reduced from $1,021.0 million after an update of foreign exchange rates and because the interest cost will be lower if the total loan amount is lower. Detailed cost estimates by expenditure category and by financier are included in the PAM (Section A). The major expenditure items for the overall project are civil works, procurement and installation of equipment, FIC costs, and consulting services. Additional financing will help finance outputs 3, 4, and 5.

<table>
<thead>
<tr>
<th>Table 1: Project Investment Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Item</strong></td>
</tr>
<tr>
<td>----------------------------------</td>
</tr>
<tr>
<td><strong>A. Investment Project Components—Base Cost</strong> c</td>
</tr>
<tr>
<td>1. Output 1: Capacity for BDS and integrated project planning and management developed</td>
</tr>
<tr>
<td>2. Output 3: Key infrastructure and facilities for SMEs in non-coal industrial parks constructed</td>
</tr>
</tbody>
</table>
### Table 2: Financing Plan

<table>
<thead>
<tr>
<th>Source</th>
<th>Current&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Additional Financing&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Overall Project&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount ($ million)</td>
<td>Share of Total (%)</td>
<td>Amount ($ million equivalent)</td>
</tr>
<tr>
<td><strong>A. Investment Project Components</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. ADB OCR (regular loan)</td>
<td>254.0</td>
<td>24.9</td>
<td>133.9</td>
</tr>
<tr>
<td>2. EIB loan&lt;sup&gt;d&lt;/sup&gt;</td>
<td>220.0</td>
<td>21.5</td>
<td>0.0</td>
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<tr>
<td>3. Government&lt;sup&gt;e&lt;/sup&gt;</td>
<td>315.0</td>
<td>30.9</td>
<td>53.6</td>
</tr>
<tr>
<td><strong>Subtotal (A)</strong></td>
<td>789.0</td>
<td>77.3</td>
<td>187.5</td>
</tr>
</tbody>
</table>

**Notes:**
- **Current:** Refers to the original amount.
- **Additional Financing:** Includes taxes and duties of $28.92 million financed from ADB loan resources. Such amount does not represent an excessive share of the project cost. The government will finance taxes and duties of $11.17 million through cash contribution. The amount was reduced from $1.021.0 million after an update of foreign exchange rates and because the interest cost will be lower if the total loan amount is lower.
- **Overall Project:** In mid-2016 prices as of 23 April 2017.
- **Contingencies:** Physical contingencies computed at 4.00% for civil works; and for field research and development, training, surveys, and studies. Price contingencies computed at 1.52% on foreign exchange costs and 1.93% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate. No contingencies are included for the financial intermediation component.
- **Financial Intermediation Component:** Includes interest and commitment charges that are calculated conservatively. Interest during construction for a regular OCR loan has been computed at the 5-year United States dollar fixed swap rate plus an effective contractual spread of 0.50% and maturity premium of 0.10%. Commitment charges for a regular OCR loan are 0.15% per year charged on the undisbursed loan amount.

Source: Asian Development Bank estimates.

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18. The government has requested a regular loan of €133.929 million ($150 million equivalent) from ADB’s ordinary capital resources to help finance the project. The additional financing will fund part of the gap of $220 million programmed as cofinancing by EIB for the current project. Given the lower total cost, the balance will be €53.6 million ($60 million equivalent), to be financed by the government. The additional financing will be fully synchronized with the current loan, with the same loan closing and debt service dates, and will have a 23.5-year term, including a grace period of 3.5 years; an annual interest rate determined in accordance with ADB’s London interbank offered rate (LIBOR)-based lending facility; a commitment charge of 0.15% per year; and such other terms and conditions set forth in the draft loan and project agreements. Based on the straight-line method, the average maturity is 13.75 years, and the maturity premium payable to ADB is 0.10% per year. The financing plan is in Table 2.
B. Financial Intermediation Component

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount ($ million)</th>
<th>Share of Total (%)</th>
<th>Current⁴</th>
<th>Additional Financing</th>
<th>Overall Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ADB OCR (regular loan)</td>
<td>56.0</td>
<td>5.5</td>
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<td>56.0</td>
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<tr>
<td>2. Domestic commercial banks</td>
<td>106.4</td>
<td>10.4</td>
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<td>0.0</td>
<td>106.4</td>
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<td>3. Subborrowers</td>
<td>69.6</td>
<td>6.8</td>
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<td>0.0</td>
<td>69.6</td>
</tr>
<tr>
<td>Subtotal (B)</td>
<td>232.0</td>
<td>22.7</td>
<td>0.0</td>
<td>0.0</td>
<td>232.0</td>
</tr>
<tr>
<td>Total (A+B)</td>
<td>1,021.0</td>
<td>100.0</td>
<td>187.5</td>
<td>210.0</td>
<td>1,011.0</td>
</tr>
</tbody>
</table>

ADB = Asian Development Bank, EIB = European Investment Bank, OCR = ordinary capital resources.

⁴ Refers to the original amount.

B. Financial Intermediation Component

- The amount was reduced from $1,021.0 million after an update of foreign exchange rates and because the interest cost will be lower if the total loan amount is lower.
- With the additional financing, new total loan amounts were calculated, and the shares of the final total loan amount by city are: (ia) Hegang—$149.05 million equivalent ($93.91 million from current loan plus €49.23 million from additional financing), (iia) Jixi—$87.44 million equivalent ($71.80 million from current loan plus €13.96 million from additional financing), (iii) Qitaihe—$98.40 million equivalent ($39.54 million from current loan plus €52.55 million from additional financing), and (iva) Shuangyashan—$125.11 million equivalent ($104.75 million from current loan plus €18.18 million from additional financing).
- The originally planned EIB cofinancing of the project did not materialize. Table 2, footnote b of the approved report and recommendation of the President indicates that cofinancing is subject to EIB approval. The allocation and withdrawal of loan proceeds items of the current project in the project administration manual (Tables 15a and 15b) were revised to reflect reallocation between cost categories, removing amounts from the ADB–EIB joint cost category.
- The government counterpart amount for each city was recalculated, and increased in accordance with the shares in the reduced total loan amount: (ia) Hegang—$96.04 million equivalent; (iia) Jixi—$71.69 million equivalent; (iii) Qitaihe—$118.00 million equivalent; and (iva) Shuangyashan—$89.29 million equivalent.

E. Implementation Arrangements

The implementation arrangements remain unchanged. The Heilongjiang Provincial Government (HPG) is the executing agency and continues to supervise, coordinate, and manage the project. The Heilongjiang Finance Department opened an advance account for the current project, and will establish and maintain a second account in the form of a subledger for the additional financing. The government requested an initial advance of $20 million for the current project in 2018 and will continue to manage the advance account—and now also the subledger—and to support financial management. The municipal governments of Hegang, Jixi, Qitaihe, and Shuangyashan are the implementing agencies, and each established and operates (i) a project leading group headed by the mayor or vice mayor, (ii) a local project management office (PMO) under the municipal development and reform commission, and (iii) project implementation units (PIUs) in the participating agencies to implement the subcomponents.

The updated implementation arrangements are summarized in Table 3 and described in detail in the PAM (Section A).

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Arrangements</th>
</tr>
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<tbody>
<tr>
<td>Implementation period</td>
<td>March 2018 (current project) / March 2020 (additional financing)–February 2023</td>
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<tr>
<td>Estimated completion date</td>
<td>28 February 2023</td>
</tr>
<tr>
<td>Estimated loan closing date</td>
<td>31 August 2023</td>
</tr>
</tbody>
</table>

¹⁴ PAM (accessible from the list of linked documents in Appendix 2).
Aspects | Arrangements
--- | ---
Management | 
(i) Oversight body | Heilongjiang PLG  
(ii) Executing agency | HPG, under HDRC’s leadership and with HAD, HFD, and HIITC participation  
(iii) Key implementing agencies | HMG, JMG, QMG, and SMG, each with a local PLG and PMO  
(iv) Implementation units | Project cities’ concerned departments
Procurement | International competitive bidding | 5 contracts | $51.94 million
 | National competitive bidding | 47 contracts | $419.21 million
Consulting services | QCBS (2 contracts) | 845 person-months | $12.91 million
 | CQS (5 contracts) | 148 person-months | $1.18 million
 | ICS (6 contracts) | 16 person-months | $0.17 million
Retroactive financing and/or advance contracting | A goods contract for Hegang’s intelligent transport system ($1.41 million) and a civil works contract for Shuangyashan’s XinXing Avenue link ($21.40 million) were implemented as advance contracting and retroactive financing for the current project. Consulting services were also considered as advance procurement of the current project. Retroactive financing will be provided for eligible expenses incurred not more than 12 months prior to date of the loan agreement. Total retroactive financing will not exceed 20% of the loan amount.
Disbursement | The loan proceeds will be disbursed following ADB’s Loan Disbursement Handbook (2017, as amended from time to time) and detailed arrangements agreed between the government and ADB, as per the PAM.


### III. DUE DILIGENCE

#### A. Technical

21. The current project and the proposed additional financing remain technically feasible and comply with PRC and international engineering standards, local regulations and conditions, and strategic and sector priorities. Design options were compared, and the best possible technologies with the least environmental, social, and cost impacts were selected. The proposed capacity development aims at the successful implementation and sustainable operation of the project.

#### B. Economic and Financial

22. **Economic analysis.** The original economic analysis for all investment loan subcomponents, prepared following ADB guidelines, was updated. The economic viability of the overall project was reconfirmed under various sensitivity scenarios. Benefits considered include (i) improved water supply, wastewater management, and sanitation; (ii) improved flood protection and avoided damage; (iii) increased savings in vehicle operating costs and travel time; and (iv) improved public health with less productivity losses and reduced medical costs. Additional benefits include more SME employment, reduced carbon emission through mining remediation, increased carbon sequestration from afforestation, and less exposure to pathogens. The economic internal rate of return was recalculated at 15.4% (above the 9.0% economic opportunity cost of capital); it drops to 14.3% if the capital cost increases by 10.0%, to 15.3% if the operating cost increases by 10.0%, to 14.0% under a 10.0% benefit decrease, to 12.8% when combining these assumptions, and to 15.2% if benefits are achieved with a 1-year delay.

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23. **Financial analysis.** The original financial analysis carried out for all revenue-generating subcomponents was updated to reflect the change of financier and loan terms, a lower loan amount and lower total interest and financing charges, and foreign exchange rate fluctuation. Most assumptions and costs are unchanged, and the project remains financially feasible. The financial internal rate of return was recalculated in real terms at 2.96% for the Hegang Luobei WWTP, 3.43% for Hegang’s district heating, 2.67% for the Jixi WWTP, 7.44% for Jixi’s water supply, and 3.45% for Qitaihe’s water supply. These rates exceed the weighted average costs of capital of 0.86% for the Hegang WWTP, 2.01% for Hegang’s district heating, 1.50% for the Jixi WWTP, 1.17% for Jixi’s water supply, and 2.16% for Qitaihe’s water supply. The rates remain robust under various sensitivity scenarios. Fiscal analysis concluded that the project cities are likely to require support from the provincial government to meet shortfalls in counterpart contributions, as well as for debt servicing and operation and maintenance of project facilities.

C. **Governance**

24. The financial management risk for the overall project is still moderate because the PMOs and PIUs have limited experience with ADB-financed projects. This risk will be mitigated through project implementation support as described in the risk management plan and summarized in Table 4. ADB and consultants provided training on safeguard implementation, procurement, and disbursement. A financial management action plan is provided in the PAM (Section A).

25. The procurement risk for the overall project remains moderate. Given its experience with ADB projects, HPG will supervise the less experienced PIUs. The procurement arrangement is deemed adequate, since a tendering agency and consultants under output 1 will provide support during implementation. Procurement under the additional financing will also follow ADB’s Procurement Guidelines (2015, as amended from time to time) as per the current loan arrangement.

26. ADB’s Anticorruption Policy (1998, as amended to date) was explained to and discussed with HPG and the governments of Hegang, Jixi, Qitaihe, and Shuangyashan. The specific policy requirements and supplementary measures are described in the PAM (Section A, footnote 14).

D. **Poverty and Social**

27. The overall project will contribute to poverty reduction by supporting SME development and job creation, and by improving infrastructure and services, public health, sanitation, and living conditions. The project will create 1,853 skilled and 5,430 unskilled jobs during construction, and 398 skilled and 138 unskilled jobs during operation. The PMOs will prioritize vulnerable groups, such as women and the poor, for employment and training. A social and gender action plan was prepared to ensure that positive benefits of the project accrue to beneficiaries.

28. **Gender benefits.** The overall project is categorized effective gender mainstreaming. Women are affected by unemployment and poor urban services, and consider improvements in road safety and public transport as important benefits to their well-being and quality of life. The social and gender action plan will improve women’s employment opportunities; provide consultation and participation opportunities; and proactively help prevent and respond to sexual harassment, exploitation, and abuse during project construction and operation. It will raise awareness on environmental protection, road safety, and flood risk management through public education. The FIC will provide loans to SMEs and start-up companies owned and/or managed by women. Social development and gender specialists will support project implementation.
E. Safeguards

29. In compliance with ADB’s Safeguard Policy Statement (SPS, 2009), the safeguard categories for the additional financing are C for environment, involuntary resettlement, and indigenous peoples, since it requires no change in scope, while the safeguard categories for the overall project are as shown in paras. 30–33. Meaningful consultations on safeguards and on the grievance redress mechanism have taken place and will continue.

30. **Environment (overall project: category A).** An environmental impact assessment and environmental management plan—prepared in compliance with the SPS, and disclosed on the ADB website on 22 May 2017—remain valid for the overall project. Overall, the project will generate positive impacts on the environment. Impacts during construction include earthworks and movement, treatment of soil, polluted river sediment, and contaminated soil from coal processing. Temporary impacts are on soil, surface water, air, and community safety, but will not cause loss of valuable ecology or physical cultural resources. Impacts during operation include an increase in traffic on project roads. The environmental management plan (EMP) includes measures to avoid and/or mitigate impacts during construction and operation, and deal with potential subsidence and leachate release at mining remediation sites. Site-specific EMPs were prepared based on the original EMP, and included in tender documents and contracts for ongoing and planned works. Implementation and monitoring are in compliance with the SPS, no grievances and no health or safety incidents were identified or reported, and an internal monitoring report was disclosed on the ADB website. Safeguard training was provided to PMOs and their safeguard officers.

31. **Involuntary resettlement (overall project: category A).** Four resettlement plans were prepared in line with government laws and regulations on involuntary resettlement and the SPS. About 318 households (1,075 persons) will be permanently affected by impacts on collective farm land (908.37 mu). Impacts on households and annual per capita income are found to be marginal with loss at no more than 10%. About 296 households (700 persons) will be affected by house demolition and relocation. About 6 organizations (1,530 workers) and 10 stores (32 persons) will be affected by impacts on structures. HPG engaged a start-up consultant to support the updating and monitoring of the resettlement plan, and is engaging an external monitoring agency. The resettlement plan for Shuangyashan was updated specifically for the Xinxing Avenue–Railway Bridge component in January 2018, while the preparation of updated resettlement plans reflecting the detailed designs for the three other project cities is ongoing. Each PMO has designated resettlement staff and a functional grievance redress mechanism. The project implementation consultants initiated capacity building support to PMO staff on involuntary resettlement. An internal monitoring report was disclosed on the ADB website.

32. **Indigenous peoples (overall project: category C).** Ethnic minorities account for less than 4% of the population in project cities. Due diligence confirmed that ethnic minorities will benefit equally from the project, and no negative impact on indigenous peoples will arise from the overall project.

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16 ADB. Safeguard Categories. https://www.adb.org/site/safeguards/safeguard-categories
17 The environmental impact assessment incorporates results from ADB and domestic reports, including consultant reports, domestic feasibility studies, domestic environmental impact assessments, and climate risk and vulnerability assessments. The domestic safeguard documents were prepared in compliance with the PRC Law on Environmental Impact Assessment (2016), the Technical Guidelines for Environmental Impact Assessment (HJ 2.1 -2016), and other PRC regulations and guidelines.
18 A mu is a Chinese unit of measurement for land area (1 mu = 666.67 square meters).
F. Risks and Mitigating Measures

33. Major risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.19

<table>
<thead>
<tr>
<th>Risks</th>
<th>Mitigating Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPG has relatively weak lead and coordination role.</td>
<td>HDRC and HFD have committed to coordinate the project, along with four PMOs and with support from project implementation consultants.</td>
</tr>
<tr>
<td>PMO and PIU staff lack experience in implementing ADB-financed projects, especially regarding financial management and procurement.</td>
<td>HPG and the implementing agencies have committed to fulfill ADB’s requirements for procurement and financial management. The tendering agency and the project implementation consultants will continue to provide capacity development on procurement and financial management.</td>
</tr>
<tr>
<td>PMOs and PIUs suffer frequent turnover of trained staff.</td>
<td>Project start-up consultants provided initial training, and implementation consultants provide training on ADB requirements at regular intervals.</td>
</tr>
<tr>
<td>PMOs and financial intermediaries lack experience in SME financing, ESMS implementation, due diligence, investment appraisal, and ADB requirements.</td>
<td>Project financing training on sample subprojects was demonstrated with project start-up support, and will continue with BDS consultants. The TA attached to the current project will support financial intermediaries through ESMS implementation assistance, and due diligence. Both the TA and the BDS subcomponent will improve SMEs’ capacity for preparing, implementing, and operating technically and financially sound projects.</td>
</tr>
</tbody>
</table>

ADB = Asian Development Bank, BDS = business development services, ESMS = environmental and social management system, HDRC = Heilongjiang Development and Reform Commission, HFD = Heilongjiang Finance Department, HPG = Heilongjiang Provincial Government, PIU = project implementation unit, PMO = project management office, SMEs = small and medium-sized enterprises, TA = technical assistance.


IV. ASSURANCES

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

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

V. RECOMMENDATION

36. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loan of €133,929,000 to the People’s Republic of China for the additional financing of the Heilongjiang Green Urban and Economic Revitalization Project, from ADB’s ordinary capital resources, in regular terms, with interest to be determined in accordance with ADB’s London interbank offered rate (LIBOR)-based lending facility; for a term of 23.5 years, including a grace period of 3.5 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan and project agreements presented to the Board.

Takehiko Nakao
President

3 September 2019

19 Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).
# REVISED DESIGN AND MONITORING FRAMEWORK

**Impacts the Project is Aligned with**

**Current project**
- Economy revitalized and diversified, and non-coal industries in the cities of Hegang, Jixi, Qitaihe, and Shuangyashan developed (Heilongjiang Province’s Thirteenth Five-Year Plan)\(^a\)
- Living environment, safety, and public health in cities of Hegang, Jixi, Qitaihe, and Shuangyashan improved (National New-Type Urbanization Plan, 2014–2020)\(^b\)

**Overall project**
- Unchanged

<table>
<thead>
<tr>
<th>Results Chain</th>
<th>Performance Indicators with Targets and Baselines</th>
<th>Data Sources and Reporting Mechanisms</th>
<th>Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome</strong></td>
<td>By 2024 (baseline: 2016)</td>
<td>a–d. Annual reports of administrative departments in Hegang, Jixi, Qitaihe, and Shuangyashan cities; and project completion report</td>
<td>Limited success in attracting non-coal SMEs because the government reverses SME development policies</td>
</tr>
<tr>
<td><strong>Current project</strong></td>
<td>By 2023 (baseline: 2016)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Non-coal economic activities and urban livability in project cities increased</strong></td>
<td><strong>Current project</strong></td>
<td>a. 2,000 person-year jobs(^c) created in non-coal industries (baseline: 0)</td>
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<tr>
<td></td>
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<td>b. At least 15 non-coal SME projects in priority sectors implemented, of which at least 30% are women-led(^d) (baseline: 0)</td>
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<td></td>
<td></td>
<td>c. Land area affected by risks from mining impact reduced by 188.7 ha (baseline: not applicable)</td>
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<td></td>
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<td>d. Urban residents’ rate of satisfaction with road, water supply, wastewater, and heating services increased to 60% (baseline: 42% [road], 25% [water supply], 12% [wastewater], and 20% [heating])</td>
<td></td>
</tr>
<tr>
<td><strong>Overall project</strong></td>
<td>a–d. Unchanged</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Outputs</strong></td>
<td>By 2023 (baseline: 2016)</td>
<td>1a–1b. Project progress and completion reports; and training materials and knowledge products prepared by the consultants</td>
<td></td>
</tr>
<tr>
<td><strong>Output 1</strong></td>
<td>Current project</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Capacity for BDS and integrated project planning and management developed</strong></td>
<td><strong>Current project</strong></td>
<td>a. At least 400 individuals (at least 30% of them women) reported new skills in project management; labor force assessment and TVET; mining remediation engineering, strategic planning, and investment programming; smart city and city cluster cooperation and regional planning; flood risk management and sponge city design and investment planning; water, wastewater, and drainage management; tariff reform and nonrevenue water reduction; and/or sustainable urban transport and road and traffic safety awareness (baseline: 0)</td>
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<td>b. BDS capacity development training provided to SMEs, and at least 50 entrepreneurs (at least 30% of them women) reported improved skills in business planning (baseline: 0)</td>
<td></td>
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<tr>
<td><strong>Overall project</strong></td>
<td>1a–1b. Unchanged</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Results Chain</td>
<td>Performance Indicators with Targets and Baselines</td>
<td>Data Sources and Reporting Mechanisms</td>
<td>Risks</td>
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<tr>
<td><strong>Output 2</strong></td>
<td><strong>Current project</strong></td>
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</tbody>
</table>
| **Current project** Sustainable investment in SMEs and access to finance in project cities improved | 2a. At least $232 million for SME investments in project cities provided (baseline: 0)  
2b. At least 30 entrepreneurs (30% of them women) have accessed finance (baseline: 0)  
2c. At least 20 FI staff (30% of them women) report increased capacity on ESMS implementation (baseline: 0) | 2a–2b. Project progress and completion reports; and annual audits by FIs  
2c. Technical assistance progress reports | PMOs and FIs lack experience in SME financing, ESMS implementation, due diligence, investment appraisal, and ADB requirements |
| **Overall project** Unchanged |                                      |                                      |       |
| **Output 3**  | **Current project**                              |                                      |       |
| **Current project** Key infrastructure and facilities for SMEs in non-coal industrial parks in project cities constructed | 3a. 18.4 km of roads with associated utilities constructed (Hegang, 6.3 km; Jixi, 4.3 km; Qitaixe, 2.1 km; and Shuangyashan, 5.7 km) (baseline: 0)  
3b. Two WWTPs in non-coal industrial parks constructed and operational with a combined capacity of 26,000 m³/d (Hegang: 6,000 m³/d; Jixi: 20,000 m³/d) (baseline: 0)  
3c. At least 56,000 m² of multifunction SME facilities constructed and commissionedd (baseline: 0) | 3a–3c. Project progress and completion reports | Delays in availability of counterpart funding and in land acquisition and resettlement activities |
| **Overall Project** Unchanged |                                      |                                      |       |
| **Output 4**  | **Current project**                              |                                      |       |
| **Current project** Remediation and environmental cleanup from mining impacts in project cities improved | 4a. Mining remediation pilots in project cities implemented, including stabilization, soil cleanup, clay lining, soil cover, and afforestation on 188.7 ha (Hegang: 52.6 ha; Jixi: 89.7 ha; Qitaixe: 21.7 ha; Shuangyashan: 24.7 ha) (baseline: 0) | 4a. Project progress and completion reports | Uncertainty over women’s participation in SME financing and capacity development |
| **Overall project** Unchanged |                                      |                                      |       |
| **Output 5**  | **Current project**                              |                                      |       |
| **Current project** Integrated urban infrastructure and services in project cities improved | 5a. Hegang: four rivers with a total length of 19.9 km rehabilitated and green flood protection embankment constructed (baseline: 0)  
5b. Hegang: 7.2 km primary and 65.2 km secondary old district heating pipes retrofitted (baseline: 0)  
5c. Hegang: 34.3 km road with sidewalks rehabilitated, including 29.1 km of bus priority lanes; and intelligent transport system equipment at 50 improved bus stops and lighting for safety of women installed (baseline: 0) | 5a–5j. Project progress and completion reports |       |
### Results Chain

<table>
<thead>
<tr>
<th>Performance Indicators with Targets and Baselines</th>
<th>Data Sources and Reporting Mechanisms</th>
<th>Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>5d. Jixi: two rivers with a total length of 8.7 km and Hongqi lake (23.5 ha) rehabilitated and green flood protection embankment constructed (baseline: 0)</td>
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<tr>
<td>5e. Jixi: WTP with capacity of 50,000 m³/d upgraded and 72.5 km water supply pipes retrofitted; 23.3 km of sewers, and 32.5 km of drainage pipes and/or trench constructed (baseline: 0)</td>
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<tr>
<td>5f. Jixi: 2.2 km of roads with associated utilities and a public park (3.2 ha) and 18,000 m² of multifunction public training facilities constructed (baseline: 0)</td>
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</tr>
<tr>
<td>5g. Qitahei: two WTPs with capacities of 100,000 m³/d and 50,000 m³/d upgraded, 17.8 km old main pipes retrofitted, 73.2 km pipes installed, and 15 pump stations built (baseline: 0)</td>
<td></td>
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<tr>
<td>5h. Qitahei: 209 electric buses procured; and three bus terminals, including separate and safe facilities for women, constructed (baseline: 0)</td>
<td></td>
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<tr>
<td>5i. Shuangyashan: 24.7 km of water supply pipes, 3 pump stations, and 3 water tanks constructed and their equipment installed; and 85.1 km of sewers and 52.3 km of drainage pipes installed (baseline: 0)</td>
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<tr>
<td>5j. Shuangyashan: 6.7 km of key road links constructed (baseline: 0)</td>
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### Key Activities with Milestones (overall project)

1. **Capacity for BDS and integrated project planning and management developed**
   1.1 Recruit and mobilize implementation support consultants by Q2 2019 (updated)
   1.2 Implement BDS support to SMEs during 2018–2023 (ongoing)
   1.3 Implement capacity development training during 2018–2023 (ongoing)
   1.4 Implement and monitor EMP, resettlement plan, and SGAP during 2018–2023 (ongoing)

2. **Sustainable investment in SMEs and access to finance in project cities improved**
   2.1 Complete framework agreements and subloan templates by Q2 2019 (updated)
   2.2 Identify subprojects and sign subloan agreements for first batch by Q2 2019 (updated, ongoing)
   2.3 Identify subprojects in project cities and sign subloan agreements for second batch by Q2 2023

3. **Key infrastructure and facilities for SMEs in non-coal industrial parks in project cities constructed**
   3.1 Design infrastructure, acquire land, and procure works during 2018–2020 (ongoing)
   3.2 Implement infrastructure works and equipment installation during 2019–2023 (updated)

4. **Remediation and environmental cleanup from mining impacts in project cities improved**
   4.1 Design, acquire land, and procure works during 2018–2020 (ongoing)
   4.2 Implement works during 2019–2023 (updated, ongoing)

5. **Integrated urban infrastructure and services in project cities improved**
   5.1 Design infrastructure, acquire land, and procure works during 2018–2020 (ongoing)
   5.2 Implement infrastructure works and equipment installation during 2018–2023 (ongoing)
## Inputs

<table>
<thead>
<tr>
<th>Loan</th>
<th>ADB Technical Assistance Grant</th>
<th>Financial Sector Development Partnership Special Fund</th>
</tr>
</thead>
<tbody>
<tr>
<td>$310.0 million (current)</td>
<td>$450,000 (current)</td>
<td>$300,000 (current)</td>
</tr>
<tr>
<td>€133.9 million (additional)</td>
<td>$0 (additional)</td>
<td>$0 (additional)</td>
</tr>
<tr>
<td>$460.0 million (equivalent overall)</td>
<td>$450,000 (overall)</td>
<td>$300,000 (overall)</td>
</tr>
</tbody>
</table>

### Government

<p>| | |</p>
<table>
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<tbody>
<tr>
<td>$315.0 million (current)</td>
<td></td>
</tr>
<tr>
<td>€53.6 million (additional)</td>
<td></td>
</tr>
<tr>
<td>$375.0 million (equivalent overall)</td>
<td></td>
</tr>
</tbody>
</table>

## Assumptions for Partner Financing

**Current project:**
- EIB: $220 million equivalent (loan)
- Domestic commercial banks: $106.4 million
- Subborrowers: $69.6 million

Outputs not administered by ADB that are necessary to reach the outcome include selected subcomponents of outputs 3 and 4 (EIB)

**Overall project:**
- EIB: $0.0 (changed)
- Domestic commercial banks: $106.4 million
- Subborrowers: $69.6 million

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ADB = Asian Development Bank, BDS = business development services, EIB = European Investment Bank, EMP = environmental management plan, ESMS = environmental and social management system, FI = financial intermediary, ha = hectare, km = kilometer, m² = square meter, m³/d = cubic meter per day, PMO = project management office, SGAP = social and gender action plan, SMEs = small and medium-sized enterprises, TVET = technical and vocational education and training, WTP = water treatment plant, WWTP = wastewater treatment plant.

c. “Person-year job” is defined as 12 months of employment equivalent for one person.
d. Women-led SMEs are SMEs that are founded by women and/or have female senior executives.
e. The flood risk management component is included in output 5 and as capacity development in output 1. It includes structural and nonstructural measures, such as hydrological and hydraulic modeling across the river basin, identification of upstream and downstream flood plain preservation options, early warning systems, adjustments to riverside greenway to increase flow and retention capacity, and additional stormwater retention ponds and depressed open space network. Sponge city is a concept in which greenways, parks, and wetlands maximize ecosystem services, including water resource management and stormwater retention, using ecosystems-based adaptation.
f. Each city will design, build, and operate at least one pilot 2-star green building or above under the People’s Republic of China’s green building standard or green industrial building standard.
g. Established by ADB. Financing Partner: the Government of Luxembourg.

LIST OF LINKED DOCUMENTS
http://www.adb.org/Documents/RRPs/?id=49021-004-3

1. Loan Agreement
2. Project Agreement
4. Project Administration Manual: Investment Project Components (Section A)
5. Summary of Project Performance
6. Contribution to the ADB Results Framework
7. Development Coordination
8. Financial Analysis
9. Economic Analysis
10. Country Economic Indicators
11. Summary Poverty Reduction and Social Strategy
12. Social and Gender Action Plan
13. Risk Assessment and Risk Management Plan

Supplementary Documents
14. Detailed Economic Analysis
15. Report and Recommendation of the President to the Board of Directors (current project)