



**ASIAN INFRASTRUCTURE
INVESTMENT BANK**

PD000367-CHN
March 18, 2020

**Project Document
of the Asian Infrastructure Investment Bank
Sovereign-backed Financing
The People's Republic of China
Emergency Assistance to China Public Health Infrastructure**

Currency Equivalents

(As at Feb. 27, 2020)

Currency Unit – Chinese Yuan (RMB)

RMB1.00 = USD0.14

USD1.00 = RMB7.00

Borrower's Fiscal year

Jan. 1 – Dec. 31

Abbreviations

AIIB	Asian Infrastructure Investment Bank
CDC	Center for Disease Control and Prevention
COVID-19	Corona Virus Disease 2019
ECMO	Extra-corporeal Membrane Oxygenation
ES	Environmental and Social
ESP	Environmental and Social Policy
GDP	Gross Domestic Product
GNI	Gross National Income
IMF	International Monetary Fund
IPC	Infection Prevention and Control
IU	Implementing Unit
MERS (MERS-CoV)	Middle East Respiratory Syndrome / MERS Corona Virus
PCR	Polymerase Chain Reaction
PHEIC	Public Health Emergency of International Concern
PMI	Purchasing Managers' Index
PMU	Project Management Unit
PPE	Personal Protection Equipment
PPM	Project-affected People's Mechanism
RMB	Lawful currency of the People's Republic of China
SARS/SARS CoV	Severe Acute Respiratory Syndrome / SARS Corona Virus
USD	United States Dollar
VAT	Value-added Tax
WHO	World Health Organization

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1. Summary Sheet

The People's Republic of China Emergency Assistance to China Public Health Infrastructure Project

Project No.	000367
Borrower	People's Republic of China
Project Implementation Entity	Municipal Government of Chongqing; and Municipal Government of Beijing
Sector Subsector	Other Infrastructure Public Health Infrastructure
Project Objective	To strengthen the public health emergency response infrastructure in Chongqing and Beijing through the upgrading of public health infrastructure and the provision of emergency equipment and supplies.
Project Description	<p>The Project will have two parts:</p> <p><i>Part 1: Strengthening of public health emergency response capacity in Chongqing:</i></p> <ul style="list-style-type: none"> - Component 1.1: systematic upgrading of the Centers for Disease Control and Prevention (CDCs) at all administrative levels and the treatment capacity of medical institutions in dealing with epidemic emergencies. - Component 1.2: providing emergency equipment and supplies to help contain the outbreak of COVID-19 in Chongqing. <p><i>Part 2: Strengthening of public health emergency response capacity in Beijing:</i></p> <ul style="list-style-type: none"> - Component 2.1: capacity enhancement of the municipal-level CDC and the treatment capacity of municipal hospitals in dealing with epidemic emergencies - Component 2.2: providing emergency equipment and supplies to help contain the outbreak of COVID-19 in Beijing.
Implementation Period	Indicative Start Date: April 2020 Indicative End Date: March 2021
Expected Loan Closing Date	March 2021
Cost and Financing Plan	<p>Estimated cost: USD374 million</p> <p><u>Proposed Financing Plan:</u></p> <p>AIIB Loan: USD355 million Government of China: USD19 million</p>

Size and Terms of AIIB Loan	RMB 2,485million ¹ (approximately USD355 million equivalent) The loan will have a maturity of 34.5 years, including a grace period of one year, with standard terms for sovereign-backed loans
Co-financing (Size and Terms)	N/A
Environmental and Social Category	B
Risk (Low/Medium/High)	Medium
Conditions for Effectiveness	None
Key Covenants/Conditions for Disbursement	Establishment of the respective PMU and adaption of Financial Management Manual are the conditions for the disbursement to each Implementing Entity respectively.
Retroactive Financing (Loan % and dates)	Up to 65 percent of the loan amount, for expenditures incurred and paid for no earlier than 12 months prior to the expected signing date.
Policy Assurance	The Vice President, Policy and Strategy, confirms an overall assurance that the Bank is in compliance with the policies applicable to the Project.

President	Jin Liqun
Vice President	Konstantin Limitovskiy, Investment Operations Region 2
Director General	Supee Teravaninthorn, Technical Department, Region 2
Manager	Gregory Liu
Team Leader	Anzheng Wei, Investment Officer
Team Members	Elaine Hsiao-yun Sun, Senior Advisor to the President on Investment Operations Liming Li, Public Health Infrastructure Consultant Xiaowei Guo, Sr. Procurement Consultant Chongwu Sun, Sr. Environmental and Social Consultant Yi Geng, Sr. Financial Management Specialist Hanyan Wang, Sr. Disbursement Specialist Olga Dyakova, Sr. Treasury Officer Tomas Kairys, Chief Counsel Liu Yang, Counsel Henry Bell, Sr. Secretariat Officer Yongxi Liu, Project Assistant

¹ The Loan is denominated in RMB, however, the costs and funding in this report will still presented in USD with the exchange rate applied of USD 1=RMB 7.

2. Project Description

A. Rationale

1. **Background.** The Corona Virus Disease 2019 (COVID-19) is a new strain of Corona virus¹. The first case of COVID-19 in China was reported in Wuhan city, Hubei province, in December 2019. The virus was isolated on Jan. 7, 2020, and the Chinese authorities shared its genetic sequence with World Health Organization (WHO) on Jan. 12, 2020, in order to support the development of diagnostic kits. On Jan. 30, 2020, WHO declared the outbreak of COVID-19 to be a public health emergency of international concern (PHEIC) and the outbreak was classified a global pandemic on March 11, 2020.

2. **China's response and measures.** WHO describe China's response to the outbreak of COVID-19 as 'probably the most ambitious, agile and aggressive disease containment effort in history'². Specific measures taken have been included a nationwide campaign of awareness raising and the quarantine of large populations within high risk area, including Wuhan city on Jan 23, 2020. As a result of China's all-of-government, all-of society approach to managing the spread of COVID-19, the number of reported new daily infections fell from approximately 2, 500 on Feb 9, 2020 to fewer than 20 by March 13. According to the WHO, 'there is no question that China's bold approach to the rapid spread of this new respiratory pathogen has changed the course of what was a rapidly escalating and continues to be deadly epidemic'³.

3. **Cost to China.** The cost to China of managing the spread of COVID-19 has been significant. According to IMF's latest estimates,⁴ in its baseline scenario, China's gross domestic product (GDP) growth for 2020 would likely drop to 5.6 percent compared to 6.1 percent in the previous year, due to the epidemic outbreak. This is 0.4 percent lower than IMF's forecast in January. The emergency response and measures have also increased the fiscal burden on both central and provincial governments. According to public information, as of Feb. 24, 2020, governments across all levels in China have provided budget support of nearly USD15 billion. All provinces within China have required urgent financial support to strengthen their capacity in epidemic prevention and control as well as medical treatment. The financial needs of places like Beijing, Guangdong, Zhejiang and Chongqing have been especially acute given their large floating populations, which increases the challenge of prevention and control, particularly after the resumption of work and the reopening of schools.

¹ Coronaviruses are a large family of viruses ranging from the common cold to severe conditions such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome.

² https://www.who.int/docs/default-source/coronaviruse/transcripts/joint-mission-press-conference-script-english-final.pdf?sfvrsn=51c90b9e_2

³ ibid

⁴ Source: "Remarks by [International Monetary Fund] IMF Managing Director Kristalina Georgieva to G20 on Economic Impact of COVID-19, February 22, 2020, Riyadh." [https://www.imf.org/en/News/Articles/2020/02/22/pr2061-remarks-by-kristalina-georgieva-to-g20-on-economic-impact-of-covid-19#:~:text=Remarks%20by%20IMF%20Managing%20Director%20Kristalina%20Georgieva%20to,Economic%20Imp](https://www.imf.org/en/News/Articles/2020/02/22/pr2061-remarks-by-kristalina-georgieva-to-g20-on-economic-impact-of-covid-19#:~:text=Remarks%20by%20IMF%20Managing%20Director%20Kristalina%20Georgieva%20to,Economic%20Impact%20of%20COVID%2D19)

4. **Sectoral context.** China's disease control and prevention system was first established in 1953, following the model of the former Soviet Union. At the core of the system lies the prevention and control of infectious diseases and the so-called 'five hygienes': school hygiene, environmental hygiene, occupational hygiene, food hygiene and radiological hygiene. Since the Reform and Opening-up Policy of China starting in 1978, the disease control and prevention system in China has continued to be reformed and strengthened. In 2002, the China Center for Disease Control and Prevention (CDC) was established, forming a four-level disease prevention system (i.e., at the central, provincial, city, and county level).

5. The SARS outbreak in 2003 exposed significant weaknesses in the disease control system, including: poor information-sharing; a shortage of trained personnel; and inadequate systems for managing the overall response. After the SARS, the disease control and prevention system in China has been strengthened through the significant investment in physical health infrastructure; the establishment of systematic information-sharing mechanisms; and sustained public communication regarding the preventing the spread of infectious disease.

6. The COVID-19 outbreak this year has exceeded significantly the SARS outbreak in terms of the complexity, severity and reach, and the outbreak has exposed additional weaknesses in China's public emergency healthcare infrastructure. These include the need for: more timely releases of epidemiological data; more sophisticated emergency response systems; more effective collaboration among disease control staff, clinicians, and researchers; sufficient reserves of epidemic control and medical treatment equipment; more capacity in nosocomial infection control; strengthened knowledge base and strategic technology in pathogenic research; and the need to establish and equip across the country a strong team of public health and emergency response personnel.

7. **AIIB's response.** AIIB was quick to express its support for the authorities' efforts to control the spread of COVID-19⁵ and a Project Team was formed rapidly to assess how the Bank could most effectively support these efforts. Following extensive consultation with the borrower, it was decided that AIIB's support could best be used to support the improvement of emergency public health infrastructure in two municipalities: Chongqing and Beijing.

- (i) Chongqing, with a total population of more than 31 million, is one of the four municipalities in the west of China directly under the central government. It is the regional center of the west of China and shares a western border with Hubei Province. Chongqing is among the top five centrally administered regions in terms of the percentage of confirmed COVID-19 cases for the total population – according to the surveillance numbers published by WHO, as of March 15, the number of confirmed COVID-19 cases is 576 in Chongqing.
- (ii) Beijing is the capital of China and the host city of AIIB. Beijing has a total population of about 22 million, of which more than 7 million are migrant workers. As of March 17,

⁵ E.g. see AIIB's Statement of Support issued on Jan 26, 2020 https://www.aiib.org/en/news-events/news/2020/20200126_001.html

the number of confirmed COVID-19 cases is 456. The percentage of confirmed cases for Beijing's total population puts it among the top three provinces in China, except for Hubei. Given the high proportion of migrant workers, Beijing faces specific challenges controlling the spread of COVID-19 following the end of the extended Lunar New Year holiday period. As one of the main entry gates, Beijing is facing another challenge- imported infected cases since the beginning of March. According to the public information, as of March 17, a cumulative total of 155 imported cases was reported in China, about 30% were found in Beijing.

8. **Strategic fit for AIIB.** A robust public health emergency response infrastructure, staffed by suitably-equipped front line public health workers, is a prerequisite to achieving AIIB's goal of "sustainable social and economic development." Achieving the Bank's thematic priority of cross-border connectivity is especially dependent on the effective control of communicable diseases, as illustrated by the sharp reduction in the movement of goods and people during the current COVID-19 outbreak.

9. **Value addition by AIIB.** AIIB's resources will finance emergency response health infrastructure in the municipalities of Chongqing and Beijing. The resources will be deployed to improve both the long-term structure and capacity of the emergency response systems and to ensure that the hospitals and front-line workers have the necessary facilities and equipment.

10. **Value addition to AIIB.** This would be AIIB's first emergency financing for public health infrastructure. This financing provides a test-case to assess AIIB's capacity to respond to the emergency needs of a member.

B. Project Objective and Expected Results

11. **Project Objective.** The Project objective is to strengthen the public health emergency response infrastructure in Chongqing and Beijing through the upgrading of public health infrastructure and the provision of emergency equipment and supplies.

12. **Expected Results.** The main results indicators include: (i) number of CDCs that have completed upgrading during the Project period (for Chongqing); (ii) number of public health and medical workforce receiving training under the Project (for Chongqing); (iii) increase of capacity (in terms of number of the beds) for medical treatment of infected patients (for Beijing); and (iv) establishment of a unified Emergency Dispatch and Command Information System at municipal level (for Beijing).

13. **Expected Beneficiaries.** The Project beneficiaries include the populations of Chongqing and Beijing, who are infected by COVID-19 or at risk of infection with COVID-19 and other epidemics. The Project will also directly benefit frontline public health workers through the provision of essential equipment and supplies.

C. Description and Components

14. The Project consists of two parts:

Part 1: Strengthening of public health emergency response capacity in Chongqing:

15. **Component 1.1 Sustainable development of Chongqing's public health infrastructure and system** (USD135 million). This includes: (i) systematic upgrading of the epidemic prevention and control agencies (such as CDCs) at provincial, city, and county level, through the provision of appropriate equipment and facilities, and upgrading of the centers to the required standards according to the *National Standards of CDC* amended in 2019 (USD55m); (ii) enhancing the medical treatment capacity of selected hospitals in Chongqing in dealing with epidemic emergencies, including upgrading of negative pressure laboratories, conversion of normal wards into airborne isolation infection rooms, and provision of urgently needed equipment and facilities for the purpose (USD57m); (iii) enhancing the capacity of Health Centers at the grassroots level to address epidemics through provision of ambulances, wastewater treatment facilities, and digital outpatient infrastructure and systems and other similar facilities required for the purpose (USD20m); and (iv) training of the CDCs' public health workforce and hospital staff in the use of the upgraded equipment and system provided under the Project; and capacity building of the associated medical disciplines for epidemic prevention, control and medical treatment (USD3m).

16. **Component 1.2 Emergency response** (USD28 million). This component comprises the purchase of supplies for preparedness, prevention and emergency response to outbreaks of COVID-19, including ambulances, medical equipment, infection prevention and control (IPC), Personal Protection Equipment (PPE), medical clothing, and other urgently needed supplies⁶.

Part 2: Strengthening of public health emergency response capacity in Beijing

17. **Component 2.1 Sustainable development of Beijing's public health infrastructure and system** (USD169 million). This includes: (i) upgrading of designated epidemic hospitals (namely, Xiaotangshan, Ditan and You'an Hospitals) to handle the epidemic emergency, comprising upgrading of wards and facilities for receiving infected patients and providing medical treatment, as well as provision of medical equipment and facilities required to address epidemic emergencies (USD136m) (ii) enhancing the capacity of the CDC in disease identification, prevention and control through the provision of necessary laboratory equipment and facilities as well as the development of the information system and big data applications in epidemic control; and improving the capacity in epidemiological investigations and strengthening cross-sector cooperation between CDC and medical institutions in epidemic control, through courseware development and associated training (USD18m); (iii) enhancing the medical treatment capacity of selected hospitals (specifically, two major children's hospitals and one major chest hospital whose patients are very vulnerable to the epidemic outbreak) in dealing with epidemic emergencies, through increasing the number of negative pressure labs and improving dissection facilities (USD9m); and (iv) enhancing Beijing's emergency response capacity through the development of a unified Emergency Dispatch and Command Information

⁶ The portion of supplies, such as IPC, PPE, medical closing and others, accounts for around 6% of the total cost of Part 1.

System and provision of negative pressure ambulances to the Beijing Emergency Center (USD6m).

18. **Component 2.2 Emergency response** (USD42 million). This comprises provision of emergency supplies for preparedness, prevention and emergency response to outbreaks of COVID-19, including medical equipment, IPC, PPE, medical clothing⁷, and virus detection kits.

D. Cost and Financing Plan

19. The total Project cost is estimated at USD374 million. The Project cost estimation and financing plan are shown in the table below.

Table 1. Project Cost and Financing Plan

Item	Project Cost (USD m)	Financing Plan (USD m and %)			
		AIIB		Gov.	
Baseline Costs					
Part 1: Chongqing Public Health Program	163	155	95%	8	5%
-Component 1.1 Sustainable Development of Public Health Infrastructure and system	135	135	100%	0	0%
-Component 1.2: Emergency Response	28	20	71%	8	29%
Part 2: Beijing Public Health Program	211	200	95%	11	5%
-Component 2.1 Sustainable Development of Public Health Infrastructure and system	169	163	96%	6	4%
-Component 2.2: Emergency Response	42	37	88%	5	12%
Total Project Cost (Inclusive of VAT and Import Duties):	374	355	95%	19	5%

20. **Currency of the Loan.** The loan is denominated in RMB. The exact loan amount after the loan negotiation is RMB2,485 million (approximately USD355 million equivalent). The costs for Part 1 and Part 2 are RMB1,085 million (approximately USD155 million equivalent) and RMB1,400 million (approximately USD200 million equivalent), respectively. As it is a non-USD loan to be provided under the General Conditions valid at the time of the negotiation with the Borrower (i.e. before newly updated General Conditions covering non-USD loans comes into force), the loan agreement will include the necessary RMB loan related provisions including amendments to the definition of “Variable Rate” and “Variable Spread” in the General Conditions.

⁷ The portion of supplies, such as IPC, PPE, medical closing, accounts for around 10% of the total cost of Part 2.

E. Implementation Arrangements

21. **Implementation period.** Due to the emergency nature of the Project, the proposed Project implementation period is 12 months, estimated to be from April 1, 2020 to March 31, 2021.

22. **Implementation management - Part 1:** The Chongqing Municipal Government will be the implementing agency for Part 1, and a Project Management Unit (PMU), or a Dedicated Project Team, will be officially established and its structure and terms of reference will be agreed with the Bank before the initial disbursement. The PMU would consist of representatives from Chongqing Health Commission, Chongqing Financial Bureau and other relevant agencies. The PMU will be responsible for managing, monitoring and supervision of implementation of all components under Part 1, including procurement, quality control, financial management and disbursement, and compliance with national law and Bank policies. The PMU will collect information, coordinate with Implementing Units (IUs) and communicate with AIIB as the single channel representing the implementing agency. The IUs include CDCs at all administrative levels, hospitals and medical centers to be supported under Part 1 and the special task force under the Municipal Government who is responsible for purchasing and distributing the emergency supplies. IUs will be responsible for the implementation of their respective subcomponents.

23. **Implementation management - Part 2:** The Beijing Municipal Government will be the implementing agency for Part 2, and a similar PMU (or Dedicated Project Team) as above will be officially established and its structure and terms of reference will be agreed with the Bank before the initial disbursement. The PMU would consist of representatives from Beijing Financial Bureau, Beijing Health Commission, Beijing Medical Products Administration and other relevant agencies. The PMU will be responsible for managing, monitoring and supervision of implementation of all components under Part 2, including procurement, quality control, financial management and disbursement, and compliance with national law and Bank policies. The PMU will collect information, coordinate with IUs and communicate with AIIB as the signal channel representing the implementing agency. The IUs include Beijing Medical Products Administration, Beijing Municipal CDC, Beijing Hospital Authority and selected hospitals to be supported under the Part 2. IUs will be responsible for the implementation of their respective subcomponents.

24. **Procurement.** All procurement for the Project will be conducted in accordance with the Bank's Procurement Policy of January 2016 and the Interim Operational Directive on Procurement Instructions for Recipients, dated June 2, 2016. These provide for the use of Country Procurement Systems and, particularly, the use of Request for Quotations and Direct Contracting in emergency situations. Project Delivery Strategies, including the procurement plans, have been prepared by the two implementing agencies and agreed by the Bank on March 12, 2020. The procurement plan will be updated and revised during the Project implementation in accordance with possible varying requirements to meet the demand of the epidemic emergencies.

25. A “Green Channel” of procurement policy, which has been adopted following the instruction of the Government of China as a special arrangement during epidemic emergencies. Under this policy and the Government’s Procurement Guideline, the Chongqing and Beijing Municipal Governments have issued their own regulations with operational instructions for this “Green Channel” approach, describing the fast track procurement procedures and requiring justification of the procurement costs on the basis of supplier market analysis in emergency situations. The Bank Project Team has reviewed the government’s Procurement Guideline and Green Channel approach adopted in the current epidemic emergency (for procurement of works, goods and consulting or non-consulting services contracts), and concluded that this special procurement arrangement is acceptable to the Bank and will be applied for this Project, considering the following factors: (i) the principle of the guideline and approach is the same as the Bank’s: fit for urgency purpose; value for money - balance of quality and price; economy and efficiency; and transparency; (ii) the procurement methods: “Shopping” and “Direct Contracting” are the same as the Bank’s “Request for Quotations” and “Direct Contracting” methods; (iii) procurement activities will be managed in order and all records will be kept by the IUs; and (iv) the procurement activities will be audited by Municipal Audit Offices to ensure that the funds are used properly.

26. Each IU will carry out procurement under its own subcomponent and will be monitored and support by the PMUs in their respective municipalities. The main procurement methods for goods, works and services will be “Request for Quotations (issued to both international and national suppliers)” and “Direct Contracting (to both international and national suppliers)”; and “Consultant’s Qualifications Based Selection” and “Direct Selection” methods will also be used for procurement of consulting services. They have been assessed as appropriate to meet the requirement of the current emergency and the supply market situation. In addition, “National Competitive Tender” procedures would be used for high value medical equipment procurement after the end of the emergency (subject to formal announcements issued by the government). No procurement prior review will be applied for this Project. Post review will be carried out by the Bank on a sample basis for advance procurement as well as new procurement during Project implementation. Records and documents regarding procurement will be maintained to facilitate smooth procurement audit or post-review by the Bank.

27. **Advance procurement and retroactive financing.** Following the outbreak of COVID-19, most of the procurement of emergency equipment and supplies and the upgrading of the epidemic hospitals has been completed or is underway. The Bank estimates that retroactive financing will be required for eligible expenditures up to an aggregate amount not to exceed 65 percent of the loan amount (or not to exceed RMB1,615million, approximately USD231 million equivalent), with the provision that the contracts would only be reimbursed if they followed the government’s procurement procedures and are acceptable to the Bank. The PMUs of Chongqing and Beijing will provide details of information and records of the advance procurement for Bank’s post review and audit. The President has authorized a derogation of the 20 percent retroactive financing limit specified in the Directive on Sovereign-backed and Non-sovereign-backed Financing, by increasing it to 65 percent.

28. **Financial Management.** Both Chongqing and Beijing Municipalities will maintain financial management arrangements acceptable to the Bank to ensure proper usage of Project funds. Interim Project financial statements in the format agreed with the Bank will be prepared by both municipalities on a semi-annual basis and be submitted to the Bank within 45 days after the end of the semester. A Project financial audit will be conducted by the Municipal Audit Office of each city respectively on an annual basis, and such audit report and audited financial statements will be submitted to the Bank within six months after the end of each calendar year.

29. **Fund Flow and Disbursement.** The loan will be on-lent to Chongqing Municipality and Beijing Municipality respectively on the same terms and conditions as the loan, and the Ministry of Finance of China will authorize them to claim disbursements from the Bank directly. The loan will adopt a combination of reimbursement and advance methods for payments, and reimbursement will be mainly used for retroactive financing and advances for others. Under the advance method, designated accounts must be maintained in a financial institution acceptable to the Bank, and the criteria for this are set out in the Interim Disbursement Manual for Sovereign-backed loans. The advance method will be used to pay for eligible expenditures which will be reported to the Bank subsequently. The statement of expenditure will be used to document disbursements. The ceiling for advances is variable and will be adjusted from time to time during Project implementation based on the Project expenditure forecast for the next two quarters. In order to ensure smooth Project implementation, further advance mechanisms would be allowed for Chongqing's components considering the subcomponents under Part 1 that would be implemented across various administrative levels. The borrower will be required to follow the requirements in the Financial Management Manual, which is under preparation with Bank's support and will be finalized and adopted by the implementing agencies before the initial disbursement.

30. The detailed disbursement arrangements have been set out in a Disbursement Letter, to which the Interim Disbursement Manual for Sovereign-backed loans is attached. Withdrawals for retroactive financing will be permitted, and subject to the date and limit specified in the legal agreements.

3. Project Assessment

A. Technical

31. Both the Chongqing and Beijing Municipal Governments have provided AIIB with detailed plans for how they intend to address the weaknesses in their public health emergency response infrastructure that have been exposed by the current crisis. From a technical perspective, these proposals meet the Project's objective and requirements and are consistent with the country's overall approach to combatting the epidemic.

32. **Part 1 - Chongqing.** Chongqing is a relatively new municipality situated in a relatively undeveloped part of China. It is therefore essential for Chongqing to strengthen its capacity to respond to public health emergencies at all administrative levels. The Project will therefore provide capacity building in the CDC system throughout the municipality. The Project design is practical and realistic. Chongqing has implemented Class B standards for upgrading of

municipal and regional centers for CDCs. Some of the county-level CDCs have implemented Class A standards for the upgrading in accordance with national requirements⁸.

33. The subcomponent for improving medical institutions' treatment capacity is important, particularly at the level of community health centers, so that these centers can play an effective role in emergency work, supporting operation of the hierarchical medical system, and stabilizing primary health care staff. The activities for the general hospital will be limited to the clearly identified dual-use buildings or wards, which can be immediately converted into dedicated buildings or wards for patients with communicable diseases at critical times. The purchase of emergency equipment and supplies for COVID-19 is aligned with the demand based on the analysis of the epidemic in Chongqing by the expert panel of the National Health Commission. The critical training provided to the disease control and prevention personnel and specialized clinic and nurse staff involved in the Project will comprise a sound and realistic training program to be developed during Project implementation.

34. **Part 2 - Beijing.** The proposal from Beijing Municipal Government combines short-term emergency measures and long-term needs. Based on the actual situation in Beijing, the Project has focused on strengthening the health care infrastructure and capacities in responding to epidemic emergencies. Project design has achieved full coverage in all 16 districts, through its focus on the capacity enhancement of the three designated epidemic hospitals at municipal level, namely Xiaotangshan Hospital, Ditan Hospital and You'an Hospital. This strategy of the Municipal Government is assessed as reasonable and appropriate. The purchase of emergency equipment and supplies for COVID-19 is aligned with the demand taking into consideration the important positioning of Beijing as well as the potential risk and impact to the country and beyond as the COVID-19 epidemic evolves.

35. The Project also contains subcomponents to enhance the capacity of the CDC system in Beijing to deal with the epidemic, which is a key element in improving the overall public health infrastructure and system in epidemic control. The Project also supports the development of a unified Emergency Dispatch and Command Information System for Beijing's hospitals and CDCs at all levels, which is critical to the improvement of the disease control system in Beijing.

B. Economic Impact

36. It is too early to quantify the aggregate economic impact of COVID-19 on the Chinese economy. However, impact is likely to be severe, in terms of reduction in both production and demand. According to the information published on the website of the National Bureau of Statistics, in February 2020, the Manufacturing Purchasing Managers' Index (PMI) declined from 50 percent to 35.7 percent and the Non-manufacturing PMI (Business activities) dropped from 54.1 percent to 29.6 percent. Comparisons with the data of last month and the same period last year are shown in the table below.

Table 2. Manufacturing PMI and Non-Manufacturing PMI of China

⁸ According to *National Standards of CDC amended in 2019*, Class B is a higher standard with higher requirements than Class A.

Period	Manufacturing PMI	Non-manufacturing PMI (Business activities)
February of 2020	35.7%	29.6%
January of 2020	50.0%	54.1%
February of 2019	49.2%	54.3%

Source: National Bureau of Statistics http://www.stats.gov.cn/tjsj/zxfb/202002/t20200229_1729136.html

37. The epidemic outbreak occurred during the Lunar New Year holiday in China, which is usually a peak time of year in terms of consumption and service production. The sectors hit especially hard by the epidemic outbreak include catering, hotel and tourism, film and television entertainment, retail, transportation and real estate and construction. These sectors accounted for approximately 30 percent of GDP in 2019 and provided around 30 percent of urban employment in 2018.

38. The most tragic impact is of course the loss of human life caused by COVID-19, including patients, medical workers and patients with other diseases who were unable to receive required medical treatment due to lack of medical resources in the early stage of the epidemic emergency. Apart from the loss of human life, the impact of the epidemic outbreak on some sectors has been overwhelming. The epidemic outbreak occurred during the Lunar New Year holiday in China, which is usually a peak time of year in terms of consumption and service production. The sectors hit especially hard by the epidemic outbreak include catering, hotel and tourism, film and television entertainment, retail, transportation and real estate and construction. These sectors accounted for approximately 30 percent of GDP in 2019 and provided around 30 percent of urban employment in 2018. For example, in the film sector, 2019 box office revenues in China during the Lunar New Year holiday (7 days) was about USD850 million, which fell in 2020 to nearly zero because all the cinema chains were closed. In the transportation sector, which is usually at its peak during the holiday, the cumulative number of passengers for all public transport models (road, rail, aviation and waterway) decreased between Jan. 25 and Feb. 10, 2020 by over 81 percent compared to the same period last year. The top six power generation companies in China⁹ reported that the total volume of fuel consumption dropped by 40 percent in the first week after the Lunar New Year holiday compared to the same time in 2019.

39. Emergency measures, such as travel restrictions and quarantine, implemented nationwide have significantly slowed down investment and consumption in China. The declaration of the PHEIC by WHO will lead to decline in exports. A temporary increase in the unemployment rate can also be expected. All available information indicates a high possibility of an economic slowdown in the first quarter of 2020 and achievement of the government's targeted growth rate for the year also may be affected. The severity of the longer-term impact will depend on the speed at which the authorities are able to curb the epidemic and most importantly to resume production and rapidly restore the country's social and economic activities.

40. The outbreak of COVID-19 also exposed weak links in the public health infrastructure, in particular the inadequate capacity to deal with epidemic emergency in the major cities where population and industries are concentrated. Beijing and Chongqing, along with Wuhan, are among the top eight cities in China based on their GDP for 2019. These major cities are the engines of China's economic growth. This suggests that providing support for emergency response and development of the public health infrastructure and system are important to control the epidemic spread effectively and end the outbreak rapidly, thereby helping to sustain the economic growth of the country.

C. Institutional Capacity Assessment, Fiduciary and Governance

41. **Institutional Capacity Assessment.** Both Chongqing and Beijing Municipalities have experience in preparation and implementation of projects financed by multilateral development banks (MDBs). The PMU in Chongqing has just completed a public health sector project financed by the World Bank, as one of that project's implementing units. Beijing's most recent experience with AIIB was the preparation of the Beijing-Tianjin-Hebei Low Carbon Energy Transition and Air Quality Improvement Project approved by AIIB in Dec. 2019. According to the Bank's assessment, both Chongqing and Beijing have sufficient experience and capacity to implement their own components under this Project.

42. **Procurement.** Procurement under the Project will be handled by the IUs, such as CDCs and hospitals, with the support and monitoring of the respective PMUs. Both PMUs have procurement experience under projects financed by MDBs and all the IUs have public procurement experience under the national Procurement Guideline and policy. Procurement will be managed by dedicated and qualified procurement staff in each IU. The most significant procurement risk for this emergency Project will be to source appropriate and qualified contractors for timely delivery of all urgently needed material and equipment for epidemic prevention and treatment. To mitigate the risk, the PMUs will work closely with each IU, and monitor and analyze the available supply chain and supplier market to adjust the procurement schedule to meet the delivery objectives of the Project.

43. **Financial Management.** Under Part 1 of the Project, the components will be implemented by Chongqing Municipality's IUs at municipal, district and county levels.¹⁰ The loan proceeds will be managed by Chongqing Municipal Finance Bureau, which will use its Treasury System in budget allocation, funds release and contract payments based on the IU's request. All IUs will retain originating documents and use their existing system to maintain Project financial records. The PMU of Chongqing will reconcile financial records with IUs and prepare consolidated Project financial statements.

¹⁰ Chongqing Municipal Health Commission, CDCs in municipality, regions and counties, designated hospitals and health centers in municipality, regions, and counties, and the special task force under the Municipal Government who is responsible for purchasing and distributing the emergency supplies.

44. Under Part 2 of the Project, the components will be implemented by several IUs of Beijing Municipality.¹¹ The loan proceeds will be managed by Beijing Municipal Finance Bureau, which will allocate budget and appropriate funds to the IUs based on approved activity proposals and procurement plans. All the IUs will follow their internal review procedures to make payments to contractors and retain originating documents, and also keep Project financial records using their existing systems, which are generally acceptable to the Bank. The PMU of Beijing will coordinate with IUs to prepare consolidated Project financial statements.

45. In order to quickly respond to the emergency operations, the Bank has streamlined and simplified its ex ante requirements while relying more heavily on ex post requirements for additional fiduciary controls and reviews. The following oversight arrangements (including governance and fiduciary arrangements), which have been discussed and agreed with the borrower, will be in place to ensure proper usage of Project funds: (i) both municipal finance bureaus have experience in managing MDB-financed¹² operations and their oversight of loan proceeds will provide fiduciary assurance; (ii) in addition to the general rules issued by the Ministry of Finance governing MDB-financed operations,¹³ the Bank's Project Team will assist the borrower to prepare a Project Financial Management Manual to standardize Project financial management and disbursement work. This Manual will specify implementing agencies, asset management and transfer, funds management, financial reporting, and audit arrangements; and (iii) the Bank's Project Team will conduct more frequent and intensive supervision, particularly early in implementation when financial management arrangements are being established.

D. Environmental and Social

46. **The Bank's Environmental and Social Policy.** The Bank's Environmental and Social Policy (ESP) is applicable to the proposed Project. The Project has been placed in Category B, based on a virtual review of the proposed Project activities described in Component 1.1 and Component 2.1 under Section C: Description and Components, including equipment installation, interior improvements and upgrading of laboratories, existing wards and facilities for receiving infected patients and providing medical treatment in several designated hospitals in Chongqing and Beijing. Given the emergency nature of this Project, a phased approach for addressing environmental and social (ES) risks and impacts, permitted under the ESP for Situations of Urgent Need of Assistance, has been adopted.

47. In the case of equipment installation, interior improvements or upgrading of laboratories, wards and facilities in the designated hospitals, it is expected that the majority of activities would be completed in March and by the end of December 2020 in Beijing and Chongqing, respectively. Therefore, an environmental and social audit (ES Audit) is planned to be used as

¹¹ Beijing Municipal Health Commission, Beijing Municipal CDC, Beijing Medical Products Administration, Beijing Hospital Authority and selected hospitals.

¹² Chongqing Municipal Finance Bureau has been managing operations financed by the World Bank, Asian Development Bank, New Development Bank; Beijing Municipal Finance Bureau has just prepared the first Sovereign-backed loan financed by AIIB.

¹³ Management Rules for Loans and Grants from International Financial Organizations and Foreign Governments (order 85 issued by the Ministry of Finance on October 11, 2016); Financial Management Rules for Loans and Grants from International Financial Organizations and Foreign Governments (Caigouhe No. 28 [2017]).

the ES instrument. Under the phased approach, the ES Audit may be deferred to the Project implementation phase. Consequently, the Bank may approve the Project prior to the preparation of the ES Audit and the Bank’s field-based ES due diligence. The ES Audit will include collection and review of national governmental laws and regulations on environmental management of medical facilities and hospital construction and operation, medical waste disposal and management, hospital wastewater treatment and management, as well as site inspection and the audit of the related ES performance conducted by the contractors in the course of equipment installation, interior improvements or upgrading of laboratories, wards and facilities in the designated hospitals. The ES Audit will serve as the basis for any corrective or mitigation measures that may need to be undertaken by the borrower. The ES Audit process will check if there are any grievances that need to be addressed from Project activities and recommend actions for their resolution.

48. **Project-Affected People’s Mechanism.** The Project-affected People’s Mechanism (PPM) has been established by the Bank to provide an opportunity for the independent and impartial review of submissions from Project-affected people who believe they have been or are likely to be adversely affected by the Bank’s failure to implement its ESP in situations when their concerns cannot be addressed satisfactorily through the Project-level grievance redress mechanism or the processes of the Bank’s Management. For information on the PPM, please visit: <https://www.aiib.org/en/policies-strategies/operational-policies/policy-on-the-project-affected-mechanism.html>

E. Risks and Mitigation Measures

49. The Project is designed to complement the current program of response and measures implemented under the leadership of the Government of China to contain the COVID-19 epidemic, with a clear roadmap of principles and strategies. According to the assessment, the Project has been given a “medium” risk rating. Risks have been identified and analyzed and the related mitigation measures have been proposed, as summarized in Table 4.

Table 4: Summary of Risks and Mitigating Measures

Risk Description	Assessment Ratings (High, Medium, Low)	Mitigation Measures
Institutional Risk: PMU has not been officially established in both Chongqing and Beijing.	Medium	The Bank’s Project team will follow up closely with the two municipalities on the progress and ensure that the structure and TORs of the PMUs are agreed by the Bank, and the PMUs are established officially before the initial disbursement.
Procurement Risk: The main	Medium	The implementing agencies have

<p>challenge in the procurement for this emergency Project will be to source appropriate and qualified suppliers to provide timely delivery of all urgently needed material and equipment, which is likely facing shortages in the market.</p>		<p>already been engaged in the procurement process for two months since the outbreak of the virus and have accumulated experience in planning and implementing procurement in emergency circumstances. The procurement plans have been developed and the Bank's Project Team will work with the implementing agencies closely to modify the procurement plan as needed and support implementation.</p>
<p>Environmental and Social Risk: Given the emergency nature of the Project, limited environmental and social risks may occur due to the speed of design and implementation of activities, which may need to be mitigated after their implementation.</p>	<p>Medium</p>	<p>An ES Audit will be carried out during the implementation, including collection and review of relevant national governmental laws and regulations on environmental management for medical facilities and hospital operation, medical waste disposal and management, hospital wastewater treatment and management, as well as site inspection and audit of related ES performance conducted by the contractors in the course of equipment installation, interior improvements and upgrading of laboratories, wards and facilities in designated hospitals. The ES Audit will serve as the basis for any corrective or mitigation measures that may need to be undertaken by the implementing agencies.</p>

Annex 1: Results Monitoring Framework

Project Objective:	The objective of the Project is to strengthen the public health emergency response infrastructure in Chongqing and Beijing through the upgrading of public health infrastructure and the provision of emergency equipment and supplies.					
Indicator Name	Unit of measure	Base-line Data Year	Cumulative Target Values	End Target	Frequency	Responsibility
			YR1			
Intermediate Results Indicators:						
1. Number of CDCs (including all administrative levels) that complete the planned upgrading through the support of the Project (Chongqing)	Number	0	>10	>10	By end of Project	Chongqing PMU
2. Number of public health and medical workforce receiving training supported by the Project (Chongqing)	Number	0	>2000	>2000	By end of Project	Chongqing PMU
3. Increase in capacity (in terms of number of beds) for medical treatment of infected patients through the support of the Project (Beijing)	Number	0	1330	1330	By end of Project	Beijing PMU
4. Establishment of unified Emergency Dispatch and Command Information System at municipal level (Beijing)	Yes/No	No	Yes	Yes	By end of Project	Beijing PMU

Annex 2: Detailed Project Description

1. The Project consists of two parts and will support two municipalities: Chongqing and Beijing. The details of each subcomponent under both parts are described below. The cost estimates by subcomponent are indicative and may be subject to adjustment during implementation given the rapid evolution of the emergency situation.

Part 1 – Strengthening of public health emergency response capacity in Chongqing

2. Chongqing is located in southwest China, on the upper reaches of the Yangtze River. Covering an area of 82,400 square kilometers, it has jurisdiction over 38 districts and counties (26 districts, 8 counties and 4 autonomous counties). The registered population is 34 million, with 31 million permanent population and an urbanization rate of 65.5 percent. Han comprise the majority of the population; minority nationality populations mainly include Tujia and Miao. The landscape is mostly made up of hills and mountains, with mountainous areas accounting for 76 percent of the area; it is known as a “mountainous city.”

3. Geographical proximity facilitates frequent movement of people between Hubei and Chongqing (according to big data analysis, Chongqing is among the top 3 contributors of migrant workers to Wuhan; this year, there were 210,000 people returning to Chongqing from Hubei, ranking first in China). Cases of COVID-19 thus arrived rapidly, and the situation was worsened by local transmission. According to the Situation Report published by WHO, as of March 15, Chongqing reported a cumulative total of 576 confirmed cases, with a total of six deaths.

4. Following the outbreak of COVID-19, Chongqing Municipal Government rapidly implemented emergency measures following the principles and requirements (such as the “Four Centralized” principles) issued by the National Health Commission. Patients have received required medical care and are recovering physically and mentally. However, weaknesses and gaps have appeared in the capacity to prevent and control diseases and to provide emergency treatment, which are in urgent need of improvement and enhancement. First, regional/county CDCs have been unable to produce accurate results in a timely manner due to incomplete allocation of inspection and testing equipment; consequently the Chongqing Municipal CDC is unable to carry out analysis and research such as virus gene sequencing and pathogen tracing as it is partly saddled with the testing tasks of regional/county CDCs. Secondly, Chongqing’s municipal and regional medical centers are struggling to provide medical treatment to infected patients in the emergency situation, due to inadequate infrastructure (such as lack of separate zones, wards and ICU for infectious diseases), insufficient inspection, testing and treatment facilities and equipment (such as lack of alternative life support systems, gene sequencing instruments, flow cytometers), and inadequate development of relevant disciplines (such as insufficient capacity and experience in infectious diseases, intensive medicine, and in-hospital infection departments, which are the key medical departments needed to respond to epidemic emergencies).

5. Part 1 of the Project will comprise the improvement of capacity in medical and health institutions in Chongqing, and the purchase of urgently needed equipment and supplies for the prevention and control of COVID-19, particularly in the development of “prevention” plus “treatment” capacity to address the shortcomings revealed during the current outbreak. The details of the subcomponents under Part 1 are provided below.

6. **Component 1.1 Sustainable development of Chongqing public health infrastructure and system** (RMB in an amount equivalent to USD135 million). This component includes:

- (i) **Development of the disease control system** (RMB in an amount equivalent to USD55m). The National Standards for CDC Construction (draft for comments) (hereinafter referred to as the Standards) 2019 Version, categorized CDCs into four levels under the central, provincial, city and county levels, each of which is further divided into two categories: Classes A and B, with Class B higher than A in some configurations. Class A refers to the equipment which must be allocated, with explicit requirements as to number, mainly for capacity appraisal of institutions; and Class B refers to the equipment which can be allocated as per local needs and workloads, without explicit number requirements. The Chongqing Government plans to develop the disease control system step by step, which will comprise four-level standardized CDCs according to the National Standards. The specifics are as follows:
- The Chongqing Municipal CDC will follow the provincial Class B standards: it will need 267 sets of equipment such as microbial identification systems, with a fund of USD10 million needed. Gradually, it will be built into a public health medical center and response center for public health emergencies. It will also take a leading role in west China and rank among the top CDCs in China.
 - The six regional CDCs - Fuling, Wanzhou, Qianjiang, Hechuan, Jiangjin and Yongchuan - will follow the city Class B standards: they will need 196 sets of equipment such as microbial identification systems, with a fund of USD15 million needed. The focus will be on the configuration of lab equipment, which will be used for the inspection of major regional diseases, emergency inspection and major routine public health monitoring, among other tasks, so as to develop a municipality-wide network to identify pathogenic bacteria and factors and to increase the capacity of inspection, monitoring and tracing of infectious diseases and unidentified diseases.
 - The remaining twenty district-level CDCs (excluding the above-mentioned six regional CDCs) will adopt the city Class A standards: they will need 105 sets of equipment, such as microbial identification systems and susceptibility testing systems, with a fund of USD20 million needed. The focus is to enhance their ability to carry out immunization, disinfection and control of vector hazards; to monitor, investigate, collect and report information on

public health incidents within their jurisdiction; and to carry out routine testing of pathogenic microorganisms and common pollutants.

- The twelve county-level CDCs will adopt the county-level Class B standards: they will need 101 sets of equipment such as a multi-pathogen rapid screening and identification systems, with a fund of USD10 million needed. The focus is to enhance their ability to carry out immunization, disinfection and control of vector hazards, to monitor, investigate, collect and report information on public health incidents within their country-level jurisdiction; and to carry out routine testing of pathogenic microorganism and common pollutants.
- (ii) **Enhance capacity of medical treatment in selected hospitals in Chongqing** (RMB in an amount equivalent to USD57m) in dealing with epidemic emergencies, out of which USD30 million will go to the procurement of equipment in medical institutions, focusing on renovation of wards, upgrading of negative pressure labs, and procurement of emergency treatment equipment, testing and inspection equipment, life-support systems, rehabilitation facilities and other equipment. The remaining USD27 million will be used for treatment capacity enhancement in medical institutions under construction, including renovation of wards, fresh-air systems and wastewater treatment systems in Chongqing People's Hospital, Ba'nán District People's Hospital and other designated backup hospitals for the epidemic treatment. **The Project will cover dual-use buildings or wards, which can be immediately converted into dedicated buildings or wards for patients with communicable diseases at critical times.**
- (iii) **Enhance the capacity of medical institutions at grassroots level** (RMB in an amount equivalent to US20m). This will focus on the development of digital outpatient departments, the provision of wastewater treatment systems (equipment and installation), and the procurement of ambulances, in township Health Centers and Central Health Centers in counties and districts across Chongqing.
- (iv) **Train the public health workforce in CDCs and medical institutions** (RMB in an amount equivalent to US3m) in the use of the upgraded equipment and system included under the Project and for the associated development of disciplines and training in infectious disease, intensive medicine, in-hospital infection, testing and inspection departments and the nursing section directly related to epidemic prevention, control and medical treatment.

7. **Component 1.2 Emergency Response.** (RMB in an amount equivalent to USD28m). This component will purchase urgently needed equipment and ambulances and emergency supplies for epidemic prevention, control, and medical treatment against COVID-19. These comprise: protective supplies such as N95 masks, isolation gowns, protective shoe covers and

rubber gloves; disinfectants and sterilizers such as ethyl alcohol and sodium hypochlorite (such as “84 disinfecting liquid”) (around USD10 m); and emergency treatment equipment, testing equipment, life support or alternative systems, and rehabilitation equipment for handling COVID-19 in designated hospitals and CDCs in Chongqing Municipality, such as negative pressure ambulances, extra-corporeal membrane oxygenation machines (ECMOs) and polymerase chain reactor (PCR) nucleic acid amplifiers, etc.(around USD18m)

Part 2 – Strengthening of public health emergency response capacity in Beijing

8. Beijing is the capital of China and consists of 16 districts, with an area of 16,410.54 square kilometers. Beijing has a total population of about 22 million, of which more than one third are floating. As the nation’s political, economic and cultural center, apart from the central government, Beijing also houses a vast number of headquarters and institutions of major national and multinational companies across all industries, as well as the residential missions of international organizations and embassies of more than 160 foreign countries. It is also the host city of AIIB.

9. According to the WHO’s Situation Report of March 15, Beijing reported a cumulative total of 442 confirmed cases of COVID-19, including eight deaths. Given the special positioning of Beijing for China, the central government has emphasized the utmost importance of enhancing epidemic prevention and control, ensuring public health security and maintaining social stability in Beijing. Based on the data and the trend analysis of COVID-19 spread in Beijing, Wuhan and other major cities, the Beijing Municipal Government decided to take action to enhance the city’s medical treatment capacity, aiming to have enough beds and wards to receive infected patients. Beijing Hospitals Authority started the upgrading and construction of the epidemic wards in three designated hospitals: Xiaotangshan, Ditan and You’an at the beginning of the outbreak. These hospitals can thus provide additional safeguards and capacity to Beijing in accommodating and providing proper medication, treatment and care to the projected number of epidemic patients in possible extreme situations. At the same time, the Beijing Municipal Government has a longer--term view on sustainable development of Beijing Municipal CDC, seeking to improve its performance, particularly in the areas related to enhancement of epidemiological investigation through the application of big data and improvement of multisector cooperation during epidemic emergencies. Details on the subcomponents under Part 2 are provided below.

10. **Component 2.1 Sustainable development of Beijing public health infrastructure and system** (RMB in an amount equivalent to USD169 million). This includes:

- (i) **Upgrading of designated epidemic hospitals** (RMB in an amount equivalent to USD136m), namely, Xiaotangshan Hospital, Ditan Hospital and You’an Hospital, to handle the epidemic emergency. Of this, around USD57 million will be for upgrading wards and facilities in the three hospitals for receiving infected patients and providing medical treatment. The upgrade will increase the total number of beds by 1,330 for infected patients. The remaining USD78.6 million will be for

provision of the required medical equipment for the designated hospitals as well as other municipal hospitals with fever clinics, which have urgent demands for medical equipment. This includes CT scanners, ventilators, electrocardiogram monitors, ECMO equipment, defibrillators, full-automatic nucleic acid extractors and PCR instruments. This support will achieve full coverage of Beijing's 16 administrative districts (including two counties).

(ii) **Enhancing the capacity of the Beijing Municipal CDC** (RMB in an amount equivalent to USD18m) in disease identification, prevention and control by providing necessary laboratory equipment and facilities as well as setting up the required information system and applications of big data in epidemic control; improving capacity for epidemiological investigations and strengthening cross-sector cooperation between CDC and medical institutions in epidemic control, including through associated trainings. Specifics are as follows:

- Through the supply of laboratory testing equipment, upgrading of hygiene emergency vehicles, installation of information and network security equipment, and upgrading and reconstruction of infrastructure including infectious disease and public health testing laboratory, facilities and equipment supply, Beijing Municipal CDC will be able to meet the requirements of disease prevention and public health surveillance in Beijing. The health emergency response capacity and the ability to prevent and control infectious diseases will be comprehensively improved to ensure public health safety in Beijing (about USD 14.7m).
- A big data platform and application for epidemic prevention and control will be enhanced through the support of the Project. The big data platform integrates medical and health data such as epidemiological surveys, medical management of close-contact staffs, personnel information data from community, registered information in medical clinics at the primary health care institutions, and health follow-up tracking of discharged patients, as well as multi-source data information including transportation, the Internet, weather, and tourism. The application of big data technology will provide the public with epidemic prevention information that is complete, continuous, accurate and timely; provide the disease control experts with a basis for disease traceability; and provide decisionmakers with previsions on the trend of infectious diseases (about USD1.5m).
- An infectious disease training system combining medical treatment and prevention will be developed, to provide a support platform for cross training of clinicians and public health physicians, as well as to promote the training and improvement of comprehensive capabilities for IPC. This can help resolve problems of knowledge silos and inconsistent public health concepts between clinical medicine and public health professionals, which leads to

challenges in responding to major emergency outbreaks. It will help medical personnel to effectively and efficiently identify the risk of outbreak in the initial stage of infectious diseases. In the event of a major epidemic, both types of professionals could effectively communicate and collaborate to improve the effectiveness of epidemic risk management and effectively prevent the occurrence of an epidemic (about USD2.1m).

- (iii) **Enhancing the capacity of medical treatment in selected hospitals** (RMB in an amount equivalent to USD9.1m), specifically two major children’s hospitals and one major chest hospital where patients are very vulnerable to the epidemic outbreak, to deal with epidemic emergencies, through increasing the number of negative pressure labs and improving dissection facilities.
- (iv) **Enhancing Beijing’s emergency response capacity** (RMB in an amount equivalent to USD 6m) through developing a unified Emergency Dispatch and Command Information System and provision of negative pressure ambulances to Beijing Emergency Center.

11. **Component 2.2 Emergency Response.** (RMB in an amount equivalent to USD42 million). Purchase of urgently needed medical equipment and emergency supplies, including around USD22.0 m for IPC and PPE, medical clothing; USD10.5 m for medical equipment and around USD9.5 m for virus detection kits for COVID-19.

Table A2.1: Cost Estimate and Financing Plan (Unit: USD million)

Component	Project Cost ¹	AIB	GOV.
<i>Part 1: Strengthening of Public Health Emergency Response Capacity in Chongqing</i>			
Component 1.1. Support to sustainable development of public health infrastructure and system.	135.0	135.0	0.0
(i) systematic upgrading of the epidemic prevention and control agencies (such as CDCs) at provincial, city and county level by provision of appropriate equipment and facilities, and upgrading them to the required standards according to the National Standards of CDC amended in 2019	55.0	55.0	0.0
(ii) enhancing the medical treatment capacity of selected hospitals in Chongqing in dealing with epidemic emergencies, including upgrading the negative pressure laboratories, conversion of normal wards to airborne isolation infection rooms; and provision of urgently needed equipment and facilities	57.0	57.0	0.0
(iii) enhancing the capacity of Health Centers at the grassroots level through provision of ambulances, wastewater treatment facilities, and the digital outpatient infrastructure and system, etc.	20.0	20.0	0.0

¹ Inclusive of the VAT and Import duties.

Component	Project Cost¹	AIB	GOV.
(iv) training of the public health workforce in CDCs and hospitals in using the upgraded equipment and system provided by this Project and associated development of medical disciplines in epidemic prevention, control and medical treatment.	3.0	3.0	0.0
Component 1.2. Emergency response.	28.0	20.0	8.0
(i) support purchasing of the supplies for preparedness, prevention and emergency response to outbreaks of COVID-19, including ambulances, medical equipment, IPC, PPE, medical clothing, etc.	28.0	20.0	8.0
<i>Part 1 Subtotal:</i>	<i>163.0</i>	<i>155.0</i>	<i>8.0</i>
<i>Part 2: Strengthening of Public Health Emergency Response Capacity in Beijing</i>			
Component 2.1. Support to sustainable development of public health infrastructure and system.	169.0	163.0	6.0
(i) upgrading of designated epidemic hospitals (namely: Xiaotangshan Hospital, Ditan Hospital and You'an Hospital) to handle the epidemic emergency, including upgrading wards and facilities for receiving infected patients and providing medical treatment, as well as provision of the required medical equipment and facilities to meet the demand of epidemic emergencies	136.0	130.0	6.0
(ii) enhancement of the capacity of the CDC in disease identification, prevention and control by provision of necessary laboratory equipment and facilities as well as setting up the required information system and applications of big data in epidemic control; improvement in the capacity for epidemiological investigations and strengthening of cross-sector cooperation between CDC and medical institutions in epidemic control, including the associated trainings	18.0	18.0	0.0
(iii) enhancement of the medical treatment capacity of selected hospitals (specifically two major children's hospitals and one major chest hospital where the patients are very vulnerable to the epidemic outbreak) in dealing with epidemic emergencies, through increasing the negative pressure labs and improving dissection facilities	9.0	9.0	0.0
(iv) enhancing Beijing's emergency response capacity through developing a unified Emergency Dispatch and Command Information System and provision of negative pressure ambulances to Beijing Emergency Center.	6.0	6.0	0.0
Component 2.2. Emergency response	42.0	37.0	5.0
(i) purchasing of the emergency supplies for preparedness, prevention and emergency response to outbreaks of COVID-19, including medical equipment, IPC, PPE, medical clothing, and virus detection kits	42.0	37.0	5.0
<i>Part 2 Subtotal</i>	<i>211.0</i>	<i>200.0</i>	<i>11.0</i>
TOTAL PROJECT COST (Inclusive of VAT and Import duties)	374.0	355.0	19.0

Annex 3: Sovereign Credit Fact Sheet

A. Recent Economic Development

At the end of 2019, China had a population of 1.393 billion and was an upper-middle-income country with gross national income (GNI) per capita in current USD of USD9,470 (Atlas method).¹ China's economic growth has been trending down, from 6.8 percent in 2017 to 6.1 percent in 2019. Notwithstanding the downward trend, the economy remains resilient, and structural reform has borne fruits. On the demand side, internal rebalancing toward consumption has accelerated, with the contribution exceeding 70 percent of GDP growth. On the supply side, the rebalancing toward services has stalled, with the contribution from services stabilizing at around 60 percent of GDP growth, which is over 30 percentage points more than the manufacturing sector.

Associated with the oil price dropdown, inflation declined to -0.1 percent in 2016 and gradually returned to 2.1 percent in 2018. Starting from the last quarter of 2019, however, driven by the increasing pork prices caused by African Swine Fever, inflation increased sharply, which resulted in annual inflation of 2.3 percent in 2019. The government cut the deposit reserve ratio requirement three times in 2019 to support financial liquidity.² The general government gross debt increased from 50.6 percent to GDP in 2018 to 55.6 percent in 2019, while the revenue moderated as economic growth slowed down. The combined effect led to the general government's overall balance widening from -4.8 percent of GDP in 2018 to -6.1 percent in 2019.

Regarding the external sector, the current account surplus decreased from 1.6 percent in 2017 to 1.0 percent in 2019. This mainly reflects a shrinking trade balance (driven by high import volume growth) and a continued increase in the services deficit (mostly driven by tourism). The exchange rate of CNY against USD reached 6.96 at the end of 2019, depreciating 7 percent from 2017. As

¹ The income is within the range of a GNI per capita USD3,896 -12,055, making China an upper-middle income country according to World Bank 2019 fiscal year criteria.

² <https://data.eastmoney.com/cjsj/ckzbj.html>

a combined effect, the gross official reserve shrank from USD3.24 trillion in 2017 to USD3.17 trillion in 2019, which is still adequate because the FX reserve coverage exceeds 16 months – much above the 3-month threshold.

B. Economic Indicators

Selected Macroeconomic Indicators (2017-2021)

Economic Indicators	2017	2018	2019*	2020*	2021*
Real GDP growth (in percent)	6.8	6.6	6.1	6.0	5.8
Inflation (GDP deflator, in percent)	1.6	2.1	2.3	2.4	3.0
Current account balance (percent of GDP)	1.6	0.4	1.0	0.9	0.4
General government overall balance (percent of GDP)	-3.9	-4.8	-6.1	-6.3	-6.2
General government gross debt (percent of GDP)	46.8	50.6	55.6	60.9	65.4
Public gross financing needs (percent of GDP)	11.0	10.2	9.6	9.8	11.1
Non-financial corporate domestic debt (percent of GDP)	130	124	124	124	124
External debt (percent of GDP, end period)	14.6	14.8	14.9	14.7	14.4
Gross official reserves (USD billions)	3,236	3,168	3,167	3,174	3,177
Foreign exchange (FX) reserve coverage (months of imports)	20.0	17.2	16.3	-	-
Broad money (M2, annual percentage change)	9.0	8.1	8.4	-	-
Exchange rate (CNY/USD, yearly) **	6.51	6.88	6.96	7.04	-

Notes: * denotes projected figures. The growth rate projections for 2020 and 2021 are from IMF World Economic Outlook (WEO) Jan 2020. Inflation and current account are from WEO Oct 2019; the general government overall balance and the general government gross debt are from IMF Fiscal Monitor Oct 2019. FX reserve coverage for 2019 is from CEIC. The broad money is calculated based on the M2 number reported by the People's Bank of China.

** FX rate from Refinitiv, 2020 FX data as of Feb 24th, 2020.

Source: IMF Country Report No. 19/266 (August 2019), unless otherwise indicated.

C. Economic Outlook and Risks

Looking ahead, real GDP growth is projected to slow from 6.0 percent in 2020 to 5.8 percent in 2021. The economic outlook in China remains positive, given the still sizable gap between China's labor productivity and that of advanced economies, which implies considerable room for

further productivity convergence. The envisaged partial rollback of past tariffs and pause in additional tariff hikes as part of a “phase one” trade deal with the United States is likely to alleviate near-term cyclical weakness, resulting in China’s 6.0 percent 2020 growth forecast. However, unresolved disputes on broader US-China economic relations as well as needed domestic financial regulatory strengthening are expected to continue weighing on activity, which explains the 5.8 percent projection for 2021.

There are several risk factors in China. On the external side, a further escalation in trade tensions could result in higher tariffs, disrupting supply chains and investment confidence, especially in the private sector. Export bans on certain Chinese technology companies could exacerbate this trend. On the domestic side, concerns about a sharp downturn on the property market and a return to PPI deflation mount, as the asset quality of financial institutions deteriorates and funding stress for small-and-medium enterprise increases.

China has relatively low risks to debt sustainability, as economic growth is still robust and the external debt is projected to remain stable at around 14 percent of GDP in the medium term. However, the general government gross debt will increase by 10 percent of GDP between 2019 and 2021. On the augmented-debt-basis,³ the debt dynamics are worsening – from 80 percent in 2019 to 91.1 percent in 2021, and the off-budget public investments pose large risks to debt sustainability. China’s future debt profile will largely depend on the implementation of fiscal measures and on the willingness to reduce the off-budget activities and support macroeconomic rebalancing.

The coronavirus brings new uncertainty: a global health emergency that started in January 2020. There are a number of scenarios, depending on how quickly the spread of the virus is contained. If the disruptions from the virus end quickly, the IMF expects the economy will bounce back soon. The result would be a sharp drop in GDP growth in the first quarter of 2020, but only a small

³ *Augmented Debt* is estimated in the broad coverage scenario to include the local government special vehicle by IMF staff. Source: IMF Country Report No. 19/266.

reduction for the entire year. However, a long-lasting and more severe outbreak would result in a sharper and more protracted growth slowdown in China.⁴

⁴ <https://blogs.imf.org/2020/02/19/finding-solid-footing-for-the-global-economy/>