



Technical Assistance Report

Project Number: 48462-001
Policy and Advisory Technical Assistance (PATA)
December 2015

People's Republic of China: Study on the Coordinated Development of Beijing–Tianjin–Hebei

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 10 December 2015)

Currency unit	–	yuan (CNY)
CNY1.00	=	\$0.1555
\$1.00	=	CNY6.4291

ABBREVIATIONS

ADB	–	Asian Development Bank
BTH	–	Beijing–Tianjin–Hebei
HPG	–	Hebei provincial government
HPFB	–	Hebei Provincial Finance Bureau
PBL	–	policy-based loan
PRC	–	People’s Republic of China
TA	–	technical assistance

NOTE

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

Vice-President	S. Groff, Operations 2
Director General	A. Konishi, East Asia Department (EARD)
Director	Y. Qian, Public Management, Financial Sector, and Regional Cooperation Division, EARD
Team leader	B. An, Public Management Specialist, EARD
Team members	C. Javier, Project Analyst, EARD
	C. Lo, Senior Operations Assistant, EARD
	Y. Zhang, Senior Regional Cooperation Specialist, EARD

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CONTENTS

	Page
POLICY AND ADVISORY TECHNICAL ASSISTANCE AT A GLANCE	
I. INTRODUCTION	1
II. ISSUES	1
III. THE POLICY AND ADVISORY TECHNICAL ASSISTANCE	3
A. Impacts and Outcome	3
B. Methodology and Key Activities	3
C. Cost and Financing	5
D. Implementation Arrangements	5
IV. THE PRESIDENT'S DECISION	5
APPENDIXES	
1. Design and Monitoring Framework	6
2. Cost Estimates and Financing Plan	9
3. Outline Terms of Reference for Consultants	10

POLICY AND ADVISORY TECHNICAL ASSISTANCE AT A GLANCE

1. Basic Data		Project Number: 48462-001	
Project Name	Study on the Coordinated Development of Beijing–Tianjin–Hebei	Department /Division	EARD/EAPF
Country	China, People's Republic of	Executing Agency	Hebei Provincial Finance Department
2. Sector	Subsector(s)	ADB Financing (\$ million)	
✓ Public sector management	Public administration		0.75
		Total	0.75
3. Strategic Agenda	Subcomponents	Climate Change Information	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive	Climate Change impact on the Project	Low
Environmentally sustainable growth (ESG)	Eco-efficiency		
4. Drivers of Change	Components	Gender Equity and Mainstreaming	
Governance and capacity development (GCD)	Institutional development	No gender elements (NGE)	✓
Knowledge solutions (KNS)	Institutional systems and political economy		
Partnerships (PAR)	Knowledge sharing activities		
Private sector development (PSD)	Civil society organizations		
	Implementation Private Sector Conducive policy and institutional environment Public sector goods and services essential for private sector development		
5. Poverty Targeting		Location Impact	
Project directly targets poverty	Yes	Nation-wide	High
Geographic targeting (TI-G)	Yes		
6. TA Category:	B		
7. Safeguard Categorization	Not Applicable		
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		0.75	
Policy and advisory technical assistance: Technical Assistance Special Fund		0.75	
Cofinancing		0.00	
None		0.00	
Counterpart		0.00	
None		0.00	
Total		0.75	
9. Effective Development Cooperation			
Use of country procurement systems		No	
Use of country public financial management systems		No	

I. INTRODUCTION

1. A series of loan and technical assistance (TA) projects is being prepared to support coordinated development in the Beijing–Tianjin–Hebei (BTH) region with a focus on sustainable and inclusive growth. Immediate support includes four TA projects and one sovereign loan to promote policy reforms in areas of air pollution reduction, balanced economic and social development, and low-carbon transport.¹

2. The Government of the People’s Republic of China (PRC) requested policy and advisory TA from the Asian Development Bank (ADB) for coordinated development in the BTH region. ADB fielded a mission in May 2015 and reached an understanding with the government on the impact, outcome, outputs, implementation arrangements, costs, and terms of reference for consultants. The design and monitoring framework is in Appendix 1.² The TA is included in ADB’s country operations business plan, 2015 for the PRC.³

II. ISSUES

3. Beijing municipality, Tianjin municipality, and Hebei province make up an important economic region in the PRC. The region is home to 109.2 million people and generates a gross domestic product of about CNY6.2 trillion, accounting for 10% of the national total in 2013. The region also has the world’s eighth largest urban agglomeration of Beijing (19.5 million inhabitants as of 1 July 2014) with the fastest average annual population growth rate of 4.6% among the top 10 city agglomerations in the world during 2010–2015.⁴

4. Even though the BTH region is geographically connected, the socioeconomic structure is disconnected. Beijing and Tianjin are two special municipalities directly under the central government and have advanced manufacturing capacity and strong tertiary sector. Hebei is less developed, with a vast peri-urban and rural hinterland, and lags in overall regional development. The gross domestic product per capita of Hebei was only 42% of that of Beijing and 39% of Tianjin in 2013. About 88% of the 3.1 million people in poverty in the BTH region live in Hebei.⁵ As a result of the available business opportunities, high-quality education, and health care resources, Beijing has attracted too many residents. Heavy smog, sprawling traffic, and notoriously long commutes downgrade the living standards of the residents. Beijing is facing the so-called megalopolis disease challenge.

5. For the BTH region as a whole, in addition to imbalanced economic and social development, air pollution is a huge health and environmental challenge threatening all BTH

¹ Asian Development Bank (ADB). Forthcoming. *Technical Assistance to the People’s Republic of China for the Study on the Coordinated Development of Beijing–Tianjin–Hebei*. Manila; ADB. 2015. *Technical Assistance to the People’s Republic of China for the Study on Beijing–Tianjin–Hebei Air Pollution Control*. Manila; ADB. 2015. *Technical Assistance to the People’s Republic of China for the Policy Study on the Development of Intercity Railway in the Beijing–Tianjin–Hebei Region*. Manila; and ADB. Forthcoming. *Technical Assistance to the People’s Republic of China for the Study on Handan Low Carbon Emission Transport Project*. Manila. The sovereign loan is ADB. 2015. *Report and Recommendation of the President to the Board of Directors: Proposed Policy-Based Loan to the People’s Republic of China for the Beijing–Tianjin–Hebei Air Quality Improvement Hebei Policy Reforms Program*. Manila.

² The TA first appeared in the business opportunities section of ADB’s website on 3 November 2015.

³ ADB. 2015. *Country Operations Business Plan: People’s Republic of China, 2015–2017*. Manila.

⁴ United Nations, Department of Economic and Social Affairs, Population Division. 2014. *World Urbanization Prospects: The 2014 Revision, Highlights*. New York.

⁵ Based on Beijing, Tianjin, and Hebei National Economic and Social Development Statistical Communiques in 2014.

regional residents. As part of unprecedented rapid growth, the BTH region suffers from air pollution resulting from industrialization, urbanization, and motorization. The BTH region encompasses a large area with diverse sources of pollutants, including emissions from automobiles in metropolis such as Beijing, coal based power plants and energy-intensive and polluting industries in Tianjin and Hebei, emissions from the vessels and equipment in Tianjin port, and coal based boilers for residential heating and seasonal stalk burning on farm lands in Hebei. All three jurisdictions have adopted air pollution reduction strategies; for example, Hebei Provincial Government (HPG) has committed to reduce PM_{2.5} concentration by 25% by 2017 through reduction of industrial production capacities and other related methods.⁶ However, there has been a lack of coordinate effort to work jointly among the three areas.

6. Against this backdrop, the Politburo of the Central Committee of the Communist Party of China approved the Program Outline for Coordinated Development of the BTH Region (the program outline) on 30 April 2015. The program outline aims to develop a more coordinated BTH region by 2030, mainly through transfer of some industry capacities and public service facilities out of Beijing to neighboring areas, including some energy-intensive industries, wholesale markets, public service entities, and state-owned enterprises and administrative institutions. Accordingly, the following phased targets have been set:

- (i) By 2017, breakthroughs in transport integration, environmental protection, and industrial upgrading in the BTH region will be achieved, with “remarkable progress” made in curing for Beijing’s megalopolis disease.
- (ii) By 2020, the pressure of congestion and air pollution will ease, as the population of Beijing is expected to be controlled at 23 million. Regional industry linkage will be created. Social development gaps within the BTH region will be reduced with solid progress in public service equalization.
- (iii) By 2030, an integrated BTH region will be created, with a rationalized economic structure, improved environment, and generally equalized public service.

7. To achieve these targets, the central government of the PRC will carry out a large number of projects involving relocating industry capacities and public service facilities from Beijing to nearby provinces; initiating BTH region-wide industrial transformation; equalizing basic public services; improving air quality control; developing integrated urban and rural transport system; constructing a megalopolis area in the BTH region and creating an integrated science and technology innovation market. The program outline also recommends enhanced policy coordination and further reform of present systems and institutions during the program implementation at the local government level.

8. However, the program outline does have some shortcomings:

- (i) The main focus of the program outline was to solve the megalopolis disease facing Beijing rather than achieve economic integration of the BTH region. More detailed economic analysis and innovative reform design should be integrated into the implementation plan of local governments involved to ensure those central government-initiated projects contribute to sustainable region-wide economic development and integration.
- (ii) Central government projects will be assigned to local governments using a top-down approach, where coordination among the same level of local governments is weak or even missing.

⁶ 2013, Hebei Clean Air Action Plan, Hebei.

- (iii) The relocation of industry capacities and public service facilities from Beijing may create new environmental and social challenges in the relocating region, especially Hebei.

9. To help improve the air quality of Hebei and the BTH region, ADB prepared a policy-based loan (PBL) to Hebei, the Beijing–Tianjin–Hebei Air Quality Improvement Program. The PBL model, which has not been used before in Hebei, is complicated to implement for local government when compared with traditional project lending. It involves adjustments to policies and investment plans and capacity building of institutions. Smooth implementation of the PBL depends on the capacity of HPG and close implementation monitoring from ADB. The Beijing–Tianjin–Hebei Air Quality Improvement Program supports the HPG to (i) reduce emissions from major air pollution sources, (ii) strengthen environmental policy and the institutional framework for implementation, and (iii) enhance employment support for inclusive industrial transformation. Based on international experiences, air quality improvement in the BTH region is a long-term challenge. ADB is committed to continued support in the medium term.

10. The proposed TA will support the HPG to implement the program outline through (i) designing its own implementation policies related to creating a megalopolis in the BTH region, upgrading Hebei industries, equalizing basic public services, creating a regional science-technology market, and eliminating the poverty belt around Beijing and Tianjin; (ii) enhancing policy coordination within the BTH region; and (iii) facilitating the implementation of the Beijing–Tianjin–Hebei Air Quality Improvement Program.

III. THE POLICY AND ADVISORY TECHNICAL ASSISTANCE

A. Impacts and Outcome

11. The impacts will be increased integrated, sustainable and inclusive economic growth, and reduced air pollution in the BTH region. The outcome will be better coordination of program outline implementation in Hebei and development in the BTH region.

B. Methodology and Key Activities

12. The TA will assess the Hebei provincial development experience, design the program outline implementation policies for Hebei, and enhance policy coordination within the BTH region to facilitate the implementation of the program outline and the Beijing–Tianjin–Hebei Air Quality Improvement Program. The program has three outputs:

13. **Output 1: Formulation of Hebei program outline implementation policy supported.** In the summary report, the consultants will review the experiences of Hebei economic development. They will also assess the economic integration status of the BTH region and identify main challenges Hebei is facing, such as limitations of the present industrialization strategy focusing on heavy industries, and comparative advantages of Hebei from the perspective of an integrated BTH region. The consultants will also analyze how Hebei can benefit from future integration and develop a plan for how Hebei can achieve more sustainable and inclusive growth. The effectiveness of the policy actions under the Beijing–Tianjin–Hebei Air Quality Improvement Program will be analyzed. Based on the summary report, this TA will provide policy notes for the HPG.

14. In addition to the summary report, there will be the following five thematic reports:

- (i) **Construction of world-class megalopolis area in BTH region** Based on international and local megalopolis area development experience, the consultants will design a development path for an inclusive and environmentally sustainable BTH city cluster.
- (ii) **Upgrading of Hebei industries.** The consultants will assess the Hebei heavy industry development experience and design a more environmentally sustainable Hebei industry strategy.
- (iii) **Equalization of education, health care, and other basic public services.** The consultants will assess the BTH basic public service disparity status and make policy recommendations for BTH regional basic service equalization.
- (iv) **Creation of a regional science-technology innovation market.** The consultants will review the present BTH science-technology market development status, and make recommendations on the creation of an integrated BTH regional science-technology market.
- (v) **Further study on elimination of the poverty belt around Beijing and Tianjin.** The consultants will review the government's poverty reduction achievements and recommend future poverty reduction measures through integrating a practical environmental compensation mechanism and BTH regional joint contribution arrangement.

15. Two workshops to review the interim and the draft final summary reports will be held. Tripartite meetings involving ADB staff, the consultants, and the HPG will be held frequently to review the progress of TA implementation, offer guidance to the consultants, and review consultants' reports. After submission of the final report, the HPG, with support from ADB, will hold a symposium for the dissemination of the TA findings.

16. **Output 2: Beijing–Tianjin–Hebei regional policy coordination enhanced.** Five thematic reports under output 1 cover the main challenges three BTH regional governments facing during BTH region integration. To enhance BTH region-wide policy dialogue, when the draft thematic reports are completed, the consultants will arrange and conduct a series of consultation conferences led by the HPG, with support from ADB, to present the findings and recommendations to stakeholders concerned, including Beijing, Tianjin, and Hebei government agencies; private enterprises; and research institutes. Comments and feedback from conferences will be incorporated into the final reports and policy notes. After each consultation conference, the HPG will share discussion records and policy notes with the BTH region government agencies for further policy coordination.

17. **Output 3: Effectiveness of the Beijing–Tianjin–Hebei Air Quality Improvement Program policy actions assessed.** The Beijing–Tianjin–Hebei Air Quality Improvement Program supported by ADB's PBL in strengthening Hebei's framework for incremental policy and investment actions to improve the air quality in the BTH region (planned approval in December 2015), includes 17 key policy reform actions and 10 key performance monitoring indicators in three areas mentioned in paragraph 9. The consultants will monitor the implementation of the program, assess the effectiveness of the HPG-agreed 17 key policy actions, and make suggestions regarding future medium- and long-term reform and investment needs. The output will be the basis for future dialogue between ADB and HPG to scale up the partnership in the BTH region.

C. Cost and Financing

18. The TA is estimated to cost \$900,000, of which \$750,000 will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-other sources). The HPG will provide counterpart support in the form of office space and local transport, remuneration and per diem of local support staff, workshops, and equipment, and will assist in arranging meetings with counterpart agencies. The cost estimates and financing plan are in Appendix 2.

D. Implementation Arrangements

19. The TA will be implemented over 20 months, from 15 December 2015 to 15 August 2017. Representing the HPG, the Hebei Provincial Finance Bureau (HPFB) will be the executing agency. The HPFB will coordinate with Hebei, Tianjin, and Beijing government agencies; academia; and other stakeholders, and assign counterpart staff to assist the consultants. The International Division of the HPFB, as the implementing agency, will supervise the day-to-day work of the consultants and assume overall responsibility for workshops and conferences.

20. Three international consultants (5 person-months), eight national consultants (32 person-months), and several resource persons will be recruited. The international consultants will provide international experiences and organize an overseas study tour in ADB member countries on megalopolis development. The national consultants will have expertise in economic development planning, urban planning, macroeconomics, as well as fiscal and taxation policies. The resource persons will participate in the consultation conferences and workshops to provide specific expertise and experiences relevant to the issues addressed by the event.

21. The consultants will be hired through a consulting firm in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time) using the quality- and cost-based selection method following the simplified technical proposal procedure. The weighted ratio of technical-financial proposal will be 80:20. All reports will be submitted in both English and Chinese to the HPFB and ADB, in hard and electronic copies, by the consulting firm. The final outputs will be posted online in both languages. The consultants will maintain close working relations with ADB and the HPFB and will regularly discuss progress and findings. Tripartite meetings involving ADB, the HPFB, and consultants will be held when necessary to provide guidance to the consultants and to review draft reports.

22. The TA will be implemented in close coordination with related ADB-supported projects targeting coordinated development in the BTH region. The TA will be monitored and evaluated based on satisfactory implementation and delivery of outputs following the agreed time line and budget allocation. To support monitoring and evaluation, the consulting team will submit an inception report, a midterm report, a draft final and a final report to the HPFB and ADB. TA review missions will be conducted periodically to monitor progress, assess performance, and ensure relevance. Proceeds of the TA will be disbursed in accordance with ADB's *Technical Assistance Disbursement Handbook* (2010, as amended from time to time).

IV. THE PRESIDENT'S DECISION

23. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$750,000 on a grant basis to the Government of the People's Republic of China for the Study on the Coordinated Development of Beijing-Tianjin-Hebei, and hereby reports this action to the Board.

DESIGN AND MONITORING FRAMEWORK

Impacts the Technical Assistance Project is Aligned with			
BTH region integrated sustainable and inclusive economic growth increased (2015, Program Outline for Coordinated Development of the BTH Region, Beijing)			
Air pollution in the BTH region reduced (Action Plan on Prevention and Control of Air Pollution, 2013–2017)			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
Outcome The program outline implementation in Hebei and development in the BTH region better coordinated	a. BTH regional economic growth accelerated compared with the national level, and the economic and social development gaps between Hebei, Beijing, and Tianjin reduced. (Economic annual growth rate, 2013 baseline: People's Republic of China as a whole 7.7%; Hebei 8.2%, Beijing 7.7%, Tianjin 12.5%; per capita disposal income 2013 baseline: Hebei CNY15,189.6; Beijing CNY40,830.0; Tianjin CNY26,359.2) b. Policy notes submitted to Hebei provincial government by executing agency 3 months after the completion of the TA (baseline: not applicable)	a. China Statistics Yearbook, annually b. TA progress report and TA completion report	The central and BTH regional governments' attention to BTH economic integration weakens. Policy advice is not accepted by policy makers and stakeholders.
Outputs 1. Formulation of Hebei program outline implementation policy supported	1a. One summary report plus five thematic reports and policy notes submitted to executing agency as scheduled (baseline: not applicable)	1a. TA progress report, TA completion report	Information and data are not accessible or insufficient. Participation of officials of the Beijing and Tianjin governments is limited.
2. BTH region policy coordination enhanced	2a. At least one conference held to facilitate BTH scholars and officials' opinion exchanges for the following areas: (i) construction of world-class megalopolis area in BTH region (ii) upgrading of Hebei industries; (iii) equalization of education, health	2a–2b. TA progress report, local government announcements, and TA review missions	

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
	<p>care, and other basic public services;</p> <p>(iv) creation of a regional science-technology innovation market;</p> <p>(v) further study on the elimination of poverty belt around Beijing and Tianjin.(baseline: not applicable)</p> <p>2b. After each consultation conference, executing agency will share discussion records and policy notes with relevant government agencies in the BTH region for further policy coordination reference (baseline: not applicable)</p>		
3. Effectiveness of the Beijing–Tianjin–Hebei Air Quality Improvement Program policy actions assessed	3. A report on the effectiveness of the Beijing–Tianjin–Hebei Air Quality Improvement Program policy actions with 10 key performance monitoring indicators compiled and submitted (baseline: 0)	3. TA completion report	

Key Activities with Milestones

1. Formulation of Hebei program outline implementation strategy supported
 - 1.1 Mobilize consultants by April 2016
 - 1.2 Submit inception report by October 2016
 - 1.3 Submit interim report by April 2017
 - 1.4 Submit final report by July 2017
2. BTH region policy coordination enhanced
 - 2.1 Submit conference schedule by April 2016
 - 2.2 Carry out series of consultation conferences from October 2016 to April 2017
 - 2.3 Submit conference discussion records by July 2017
3. Effectiveness of the Beijing–Tianjin–Hebei Air Quality Improvement Program policy actions assessed
 - 3.1 Confirm the performance indicators under the program from January 2017 to March 2017
 - 3.2 Complete collection of public finance information and social and safeguards assessment in April 2017
 - 3.3 Based on the assessments, identify next step policy reform and investment needs for coordinated development in the BTH region in April 2017
 - 3.4 Submit a draft report on effectiveness of the Beijing–Tianjin–Hebei Air Quality Improvement Program policy reform actions in May 2017
 - 3.5 Submit a report on effectiveness of the Beijing–Tianjin–Hebei Air Quality Improvement Program policy reform actions in July 2017

Inputs

Asian Development Bank: \$750,000

Note: The government will provide counterpart support in the form of office space and local transport, remuneration and per diem of local support staff, workshops, equipment, and other in-kind contributions, and will assist in arranging meetings with counterpart agencies.

Assumptions for Partner Financing

Not applicable.

BTH = Beijing–Tianjin–Hebei, TA = technical assistance.

Source: Asian Development Bank.

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Amount
Asian Development Bank^a	
1. Consultants	
a. Remuneration and per diem	
i. International consultants	125.0
ii. National consultants	160.0
b. International and local travel	80.0
c. Reports and communications ^b	60.0
2. Training, seminars, and conferences	
a. Seminars and workshops ^c	120.0
b. Resource persons and survey	100.0
c. International study tour ^d	70.0
3. Contingencies	35.0
Total	750.0

Note: The technical assistance (TA) is estimated to cost \$900,000, of which contributions from the Asian Development Bank (ADB) are presented in the table above. The government will provide counterpart support in the form of counterpart staff, office space and local transport, remuneration and per diem of local support staff, workshops, equipment, and other in-kind contributions. The value of government contribution is estimated to account for 16.67% of the total TA cost.

^a Financed by ADB's Technical Assistance Special Fund (TASF-other sources).

^b Includes the cost of survey, translation, and interpretation of reports and other TA outputs.

^c Includes the cost of two workshops on the summary report and a symposium, plus consultation conferences held to collect the stakeholder comments after the draft thematic reports are finished.

^d Study tour should be carried out in ADB member countries for appropriate government officials. Such arrangement will offer Hebei provincial government officials a chance to learn from megalopolis area development experiences of different countries, review the lessons learned, and contribute to Hebei's next stage urbanization and megalopolis area development in the BTH region.

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. Summary Report on the Study of a Hebei Program Outline Implementation Strategy

1. **Macroeconomic planning specialist and team leader** (national, 6 person-months, intermittent). The team leader, in cooperation with the Hebei Provincial Finance Bureau (the executing agency) and Asian Development Bank (ADB) project officer, will oversee, coordinate, and monitor the consultants' work. The specialist will have strong expertise, 15 or more years of experience, and in-depth knowledge of macroeconomic planning and government policy formulation, and a master's degree or higher qualification in urban planning, economics, management, or other relevant field. Experience with Government of the People's Republic of China (PRC) policy formulation and consultation and moderate English communication skills are required. The specialist will

- (i) jointly with the deputy team leader, design an overall analytical framework for the study, identify main issues, and monitor the progress of consultants in undertaking the work and quality control;
- (ii) prepare inception, interim, and final summary reports with inputs from the team members and submit these to the executing agency and ADB;
- (iii) ensure the timely implementation of technical assistance activities, which includes conducting field investigations and data collection; preparing reports; and organizing workshops, conferences, and symposiums;
- (iv) lead the assessment of effectiveness of the policy actions under the Beijing–Tianjin–Hebei Air Quality Improvement Program with 10 key performance monitoring indicators and analyze
 - (a) the program's contributions to coordinated development in the Beijing–Tianjin–Hebei (BTH) region;
 - (b) public financial management, social, and environment safeguards assessment of the program; and
 - (c) draft recommendations of reform and investment needs for air quality improvement in the BTH region;
- (v) help the executing agency organize consultation conferences after the draft thematic reports are completed and prepare the discussion records for the executing agency and ADB after the conferences; and
- (vi) offer necessary assistance during the drafting of consultants' policy notes, review the notes, and submit them to the executing agency and ADB.

2. **Macroeconomic planning specialist and deputy team leader** (international, 2 person-months, intermittent). The specialist will have 10 or more years of experience and in-depth knowledge of macroeconomic planning and policy formulation, and a master's degree or higher qualification in urban planning, economics, management, or other relevant field. Experience with Government of the PRC consultation is preferred. The specialist will

- (i) jointly with the team leader, design an overall analytical framework for the study, identify main issues, and monitor the progress of consultants in undertaking the work and quality control;
- (ii) guided by the team leader, review and comment on the design of thematic reports and ensure international experience and best practice are applied;
- (iii) based on the team leader's report and the findings of thematic reports, prepare a final summary report in English for the executing agency and ADB;
- (iv) review the reports prepared by the thematic report consultants and help polish the English reports; and

- (v) conduct other related tasks assigned by the team leader.

B. Construction of World-Class Megalopolis in BTH Region

3. **Urban planning specialist** (international, 2 person-months, intermittent). The specialist will have 10 or more years of experience and in-depth knowledge in urban development planning and a master's degree or higher qualification in urban development, economics, finance, or other relevant field. The specialist will

- (i) review international megalopolis development experience, focusing on government policies, and research should cover both developed and developing country experience;
- (ii) design an analytical framework and identify the main driving forces, barriers, and possible issues arising during the urban agglomeration development;
- (iii) design and organize a study tour to cover two ADB member countries with 8-day duration limit;
- (iv) jointly with the national urban planning specialist, prepare a high-quality thematic report; and
- (v) review and provide quality control of the English version of the report.

4. **Urban planning specialist** (national, 4 person-months, intermittent). The specialist will have 10 or more years of experience in PRC urban development programming and planning; be responsible for provincial urban development plan drafting; and have a master's degree or higher qualification in urban development, economics, economic planning and programming, or other relevant field. The specialist will

- (i) review the BTH megalopolis area-related literature and government policies;
- (ii) with the assistance of the international urban planning specialist, design an analytic framework to assess the economic and environmental constraints on urban agglomeration development in this area, identify the specific challenges the Government of the PRC is facing, and design a sustainable plan for the next step in BTH megalopolis area development;
- (iii) clarify the area the government should dominate and which market should play a bigger role during future urban agglomeration development;
- (iv) collect and confirm the performance monitoring indicators of the program (i.e., the amount of raw coal reduction in 2015–2016 from 11 municipal governments will reach 8 million tons, centralized heating service coverage in urban area in Hebei increased to 80%);
- (v) review the effectiveness of the policy actions under the Beijing–Tianjin–Hebei Air Quality Improvement Program and assess their contributions to
 - (a) the economic and environment constraints; and
 - (b) the main driving forces, barriers, and possible issues arising during the urban agglomeration development identified above;
- (vi) prepare the thematic report and policy note and submit these to the team leader; and
- (vii) conduct other related tasks assigned by the team leader.

C. Hebei Industries Upgrading

5. **Industry development specialist** (international, 1 person-month, intermittent). The specialist will have strong expertise, 10 or more years of experience, and in-depth knowledge of industry development policy design and implementation, and a master's degree or higher qualification in economics, law, management, or other relevant field. The specialist will

- (i) prepare international cases on government-guided industries upgrading, introduce best practice, and review the lessons learned from the experience of other countries;
- (ii) design an analytical framework or identify the main issues during industries upgrading;
- (iii) jointly with the national industry development specialist, prepare high-quality thematic report;
- (iv) review and provide quality control of the English version of the report; and
- (v) conduct other related tasks assigned by the team leader.

6. **Industry development specialist** (national, 4 person-months, intermittent). The specialist will have 10 or more years of experience and in-depth knowledge of the Government of the PRC's industry development policy formulation, be familiar with procedures, and have a master's degree or higher qualification in economics, industry economy, or other relevant field. The specialist will

- (i) review past industry updating policies of the government, including the creation of industry development zones, and assess the effects of such policies;
- (ii) review the past production plant relocation experience in Beijing, Tianjin, and Hebei (e.g., Shougang Group) and assess the influence of BTH integration on Hebei industry upgrading;
- (iii) review the effectiveness of the policy actions under the Beijing–Tianjin–Hebei Air Quality Improvement Program and assess their contributions to the overall industrial transformation in Hebei province and the BTH region;
- (iv) based on international experience and above analysis, draw lessons from past government experience and make suggestions for the next steps in government policy design;
- (v) prepare the final thematic report and policy note, and submit these to the team leader; and
- (vi) conduct other related tasks assigned by the team leader.

D. Equalization of Education, Health Care, and Other Basic Public Services

7. **Public service specialist** (national, 4 person-months, intermittent). The specialist will have 10 or more years of experience and in-depth knowledge in public service supply, and a master's degree or higher qualification in finance, economics, management, education, health, or other relevant field. The specialist will

- (i) design an analytical framework to identify the main issues and barriers for public service equalization, and use both qualitative and quantitative methods to illustrate the impact on the BTH-coordinated development program outline target achievements, especially the alleviation of Beijing's megalopolis development pressure;
- (ii) review the effectiveness of the policy actions under the program and assess their contributions to strengthening the social protection system, focusing on employment promotion and social security in Hebei province and the BTH region;
- (iii) collect information on the policies and regulations relevant to the social protection system, focusing on social security policies and employment promotion policies, issued in 2015–2016 as a part of the effectiveness assessment of the Beijing–Tianjin–Hebei Air Quality Improvement Program;
- (iv) prepare the final thematic report and policy note and submit these to the team leader; and
- (v) conduct other related tasks assigned by the team leader.

8. **Public finance and taxation specialist** (national, 4 person-months, intermittent). The specialist will have 10 or more years of experience and in-depth knowledge of public finance and taxation; be familiar with the PRC fiscal structure; and have a master's degree or higher qualification in finance, taxation, law, or relevant field. The specialist will

- (i) as guided by the team leader, design and carry out a survey among BTH entrepreneurs on the barriers they face in moving business inside this region;
- (ii) assess the impact of present government pro-integration fiscal and taxation policies;
- (iii) in relation to the Beijing–Tianjin–Hebei Air Quality Improvement Program, conduct public financial management assessment of Hebei province, especially on
 - (a) monitoring actual expenditures of the Hebei Clean Air Action Plan-related activities and employment training policy-related activities in 2015–2016 at the provincial and municipal level, and
 - (b) reviewing relevant financial and audit reports;
- (iv) prepare a thematic report and policy note based on the result of the survey and international experience, to be submitted to the team leader; and
- (v) conduct other related tasks assigned by the team leader.

E. **Creation of a Regional Science-Technology Innovation Market**

9. **Public policy specialist** (national, 4 person-months, intermittent). The specialist will have 10 or more years of experience, and in-depth knowledge of BTH regional science-technology resource allocation and relevant policies; and a master's degree or higher qualification in science, economics, engineering, law, or other relevant field. The specialist will

- (i) review the policies of the three provinces governing science-technology resource movement and high-tech industries promotion;
- (ii) assess the main barriers to the creation of a BTH regional science-technology market based on market survey, evaluate the impact on Hebei high-tech industry development, and prepare policy packages for the governments on the next steps for innovation market development;
- (iii) review the effectiveness of the policy actions under the Beijing–Tianjin–Hebei Air Quality Improvement Program and assess their contributions to science and technology innovation for overall industry transformation in Hebei province and the BTH region;
- (iv) prepare the thematic report and policy note, and submit these to the team leader; and
- (v) conduct other related tasks assigned by the team leader.

F. **Further Study on Elimination of Poverty Belt around Beijing and Tianjin**

10. **Poverty reduction specialist** (national, 4 person-months, intermittent). The specialist will have 10 or more years of experience in government poverty reduction policies and mechanism, plus a master's degree or higher qualification in economics, engineering, or a relevant field. Previous participation experience in ADB or other multilateral development bank-led poverty belt elimination projects is preferred. The specialist will

- (i) review previous ADB and Government of the PRC poverty alleviation efforts, visit relevant government agencies, and analyze the lessons learned from the past;

- (ii) conduct field trips to the poverty belt region, assess the poverty alleviation progress, identify the gap between actual achievement and original design, and design a new policy package for poverty reduction;
- (iii) collect and confirm the social sector monitoring indicator of the program (i.e., 100,000 workers reemployed and redeployed after receiving the technical and vocational training, gender disaggregated);
- (iv) review the effectiveness of the policy actions under the Beijing–Tianjin–Hebei Air Quality Improvement Program and assess their contributions to poverty reduction, accessibility, affordability of public services, and social protection for poor people in Hebei province and the BTH region;
- (v) prepare a thematic report and policy note based on above analysis and submit these to the team leader; and
- (vi) conduct other related tasks assigned by the team leader.

G. Beijing–Tianjin–Hebei Air Quality Improvement Program Policy Actions Effectiveness Assessment

11. **Environment specialist** (national, 2 person-months, intermittent). The specialist should have a degree in environmental studies or environmental engineering, and expertise in the review and assessment of environmental programs, including environmental sustainability appraisal, plus 10 or more years of relevant experience. Previous participation experience in ADB or other multilateral development bank projects is preferred. The specialist will

- (i) coordinate the conduct of a multistakeholder assessment of the environmental performance of the program;
- (ii) quantify, to the extent possible, air pollution and greenhouse gas emission reductions from the program’s policy matrix, and compare these with the emission reduction targets established at the program appraisal stage;
- (iii) review compliance of government activities and projects that may have resulted from policy reforms supported under output 1 of the program with Hebei province’s environmental safeguard requirements;
- (iv) conduct site visits and document at least three projects that demonstrate how policy reforms under the Beijing–Tianjin–Hebei Air Quality Improvement Program have been translated into actions (including coke-oven gas utilization, agriculture waste to energy, boiler closure, and site rehabilitation and redevelopment);
- (v) prepare a thematic report and policy note based on above analysis and submit these to the team leader; and
- (vi) conduct other related tasks assigned by the team leader.

H. Resource Persons (national and international, intermittent, up to 10 persons for each consultation conference or workshop, up to 10 days each)

12. The resource persons will have a degree in finance, economics, law, public management, business administration, public policy, or a closely related field, as well as at least 10 years’ experience in public policy design, government administration, and business administration. Experience with BTH region provincial government public policy formulation, administration, and consultation is required. Reporting to the team leader, the resource persons will participate in the consultation conferences and workshops to provide specific expertise and experience relevant to the issues addressed by the event.