

## DEVELOPMENT COORDINATION

### A. Major Development Partners: Strategic Foci and Key Activities

1. The greater Beijing–Tianjin–Hebei (BTH) region is one of the most important economic regions in the People’s Republic of China (PRC), generating more than a third of the country’s gross domestic product (GDP).<sup>1</sup> It is also a region with consistently poor air quality a result of its rapid economic growth. In 2013, the Government of the PRC promulgated its first Comprehensive Action Plan for Air Pollution Prevention and Control, 2013–2017 to help improve air quality in the core BTH region.<sup>2</sup> The plan has led to a suite of policies that are driving efforts to reduce pollution and improve air quality. Despite significant progress, air quality is still far below national and World Health Organization standards.<sup>3</sup> To further improve air quality, the government issued the Three-Year Action Plan to Win the Blue Sky War (2018–2020) in June 2018.<sup>4</sup> It includes policy actions to (i) accelerate closure of heavily polluting industries, (ii) reduce surplus industrial capacity, (iii) shift to less polluting transport modes, and (iv) build cleaner and less air polluting energy systems, with the goal of reducing nitrogen oxide (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) emissions by more than 15%, and emissions of particulate matter less than 2.5 micrometers in diameter (PM<sub>2.5</sub>) by more than 18% during 2015–2020. Given the multisectoral and transboundary nature of the air pollution problem, a concerted and comprehensive approach is needed to address the underlying causes and make sustainable improvements in air quality. The approach requires (i) advanced and effective pollution control technologies, (ii) measures that cut across sectors, (iii) efficient coordination, (iv) stricter environmental policy and regulation, (v) a robust results-monitoring and verification system, (vi) innovative and dedicated financing mechanisms, and (vii) social protection measures to safeguard vulnerable sections of the population.

2. Actions that can improve air quality include a decrease in coal consumption, expanded use of cleaner energy, upgraded industrial process, an increase in the energy efficiency of buildings, increased use of renewable energy, deployment of alternative energy vehicles, promotion of public transport, and a decline in the uncontrolled burning of agricultural waste. The Asian Development Bank (ADB) is well positioned to support such cross-sector operations. Since its assistance to the PRC began in 1986, the core areas for operational support have been energy, transport, urban, and rural development and food security (agriculture).

3. Other bilateral and multilateral financial institutions providing financial assistance to improve air quality include Agence Française de Développement, the European Investment Bank (EIB), the International Finance Corporation, KfW, and the World Bank.

4. Under the government’s Thirteenth Five-Year Plan, the Government of the PRC introduced new financing initiatives for air quality improvements in the BTH region beginning in 2015.<sup>5</sup> In 2015, ADB approved the first policy-based loan with cofinancing from KfW for the

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<sup>1</sup> The BTH region includes Beijing and Tianjin municipalities; Hebei, Henan, Liaoning, Shandong, and Shanxi provinces; and the Inner Mongolia Autonomous Region.

<sup>2</sup> The plan aims to cut the level of fine particulate matter in the BTH region by 25%. The annual average concentration of PM<sub>2.5</sub> in the BTH region declined by 9.8% in 2014 and 11.3% in 2015 compared to the 2013 level.

<sup>3</sup> The annual average concentration of PM<sub>2.5</sub> declined from 73 micrograms per cubic meter (µg/m<sup>3</sup>) to 43 µg/m<sup>3</sup> by the end of 2015. The air quality standard for PM<sub>2.5</sub> (ambient air quality standard GB 3095-2012) in the PRC is 35 µg/m<sup>3</sup>, compared to 10 µg/m<sup>3</sup> for the World Health Organization.

<sup>4</sup> State Council. 2018. *Three-Year Action Plan to Win the Blue Sky War*. Beijing.

<sup>5</sup> Government of the PRC. 2015. *The Thirteenth Five-Year Plan for Economic and Social Development of the People’s Republic of China, 2016–2020*. Beijing.

Beijing–Tianjin–Hebei Air Quality Improvement—Hebei Policy Reforms Program.<sup>6</sup> The program supported policy actions in Hebei Province, including (i) adjustment of the energy mix; (ii) promotion of public transport; (iii) reduction of biomass burning and promotion of clean energy in rural areas; (iv) capacity development in environmental monitoring, administration, and supervision; and (v) employment promotion for inclusive industrial transformation. In 2016, the World Bank approved the Innovative Financing for Air Pollution Control in Jing-Jin-Ji Project to decrease coal consumption in the power industry, and the Hebei Air Pollution Prevention and Control Program to curb emissions from coal through end-of-pipe measures and the enforcement of emission standards. In 2016, ADB's second loan in its multiyear, multisector support program for air quality improvement in the region targeted better access to finance for small and medium-sized enterprises, in order to scale up investments in pollution reduction projects.<sup>7</sup> The third loan, in 2017, will establish a dedicated financing facility to deploy high-level technologies for air quality improvement targeting major emitters in some of the most polluted cities and provinces in the region.<sup>8</sup> The fourth loan, approved in 2018, will support efficient and advanced technologies for heat production and refrigeration by replacing coal with cleaner sources such as natural gas, renewable energy and waste heat recovery in Shandong Province.<sup>9</sup>

### Major Development Partners

Partner	Project Name	Duration	Amount (million)
ADB	Beijing–Tianjin–Hebei Air Quality Improvement—Hebei Policy Reforms Program	2015–2016	\$300
ADB	Air Quality Improvement of the Greater Beijing–Tianjin–Hebei Region—China National Investment and Guaranty Corporation's Green Financing Platform	2016–2022	€458
ADB	Qingdao Smart Low-Carbon District Energy Project	2016–2020	\$130
ADB	Air Quality Improvement in the Greater Beijing–Tianjin–Hebei Region—Regional Emission-Reduction and Pollution-Control Facility	2017–2023	€428
ADB	Shandong Spring City Green Modern Trolley Bus Demonstration Project	2018–2022	\$150
ADB	Air Quality Improvement in the Greater Beijing–Tianjin–Hebei Region—Shandong Clean Heating and Cooling Project	2018–2024	€350
AFD	Green Credit Line	2007–2012	€120
EIB	China Climate Change Framework Loan II	2010–2016	\$500
IFC	China Utility-Based Energy Efficiency Finance Program	2006–2010	\$50
KfW	Green Finance Program	2008–2012	€75
KfW	Beijing–Tianjin–Hebei Air Quality Improvement—Hebei Policy Reforms Program	2015–2016	€150
World Bank	Hebei Air Pollution Prevention and Control Program	2016–2020	\$500
World Bank	Air Pollution Control in Jing-Jin-Ji China	2016–2020	\$500
World Bank	Hydrochlorofluorocarbons Phase-Out Project (Stage I)	2012–2017	\$73 <sup>a</sup>
World Bank	Energy Efficiency Financing Program	2011–2016	\$300

ADB = Asian Development Bank, AFD = Agence Française de Développement, EIB = European Investment Bank, IFC = International Finance Corporation.

<sup>a</sup> Grant from the Multilateral Fund for the implementation of the Montreal Protocol.

<sup>6</sup> ADB. 2015. [Beijing–Tianjin–Hebei Air Quality Improvement—Hebei Policy Reforms Program](#). Manila.

<sup>7</sup> ADB. 2016. [Air Quality Improvement in the Greater Beijing–Tianjin–Hebei Region—China National Investment and Guaranty Corporation's Green Financing Platform Project](#). Manila.

<sup>8</sup> ADB. 2017. [Air Quality Improvement in the Greater Beijing–Tianjin–Hebei Region—Regional Emission-Reduction and Pollution-Control Facility](#). Manila.

<sup>9</sup> ADB. 2018. [Air Quality Improvement in the Greater Beijing–Tianjin–Hebei Region—Shandong Clean Heating and Cooling Project](#). Manila.

Source: Asian Development Bank estimates.

## **B. Institutional Arrangements and Processes for Development Coordination**

5. ADB has established working relationships with the EIB, KfW, the World Bank, and other multilateral and bilateral agencies to address policy issues and coordinate lending and technical assistance operations. Both ADB and the World Bank emphasize the importance of air quality improvement, environmentally sustainable growth, and climate change mitigation and adaptation.

## **C. Achievement and Issues**

6. Despite substantial efforts to improve energy efficiency, the PRC still has a large unrealized energy efficiency potential.<sup>10</sup> Accelerated and sustained improvement in air quality in the BTH region, which includes some of the most energy-intensive and urban-transport-intensive provinces, requires multipronged, long-term efforts to improve demand-side energy efficiency and switch to cleaner fuels. Multilateral development banks and bilateral development partners—including ADB, Agence Française de Développement, EIB, KfW, and the World Bank—have mobilized financing for several air quality projects. However, the BTH region still needs substantial support to meet its air quality objectives, estimated at more than \$30 billion of new investment in the near future. By the end of 2018 ADB had approved \$1,698.5 million of loans for the BTH multi-year investment program, with \$696.7 million (41% of the total loan) disbursed by the third quarter of 2019. ADB's Energy Sector Group carried out a midterm program evaluation of ADB assistance for air quality improvement in the greater BTH region in 2018, which it assessed *highly relevant, effective, efficient, and sustainable*. The midterm review recommended (i) collaboration across ongoing BTH projects through joint workshops to share lesson and experience, and (ii) use of flexible lending modalities and designs to adopt to evolving PRC policies.<sup>11</sup> In 2018, ADB organized a workshop on air pollution reduction in the greater BTH region, inviting government agencies, private sector including technology suppliers, financial institutions, and multilateral and bilateral donors for information and knowledge sharing to enhance cooperation among stakeholders.

## **D. Summary and Recommendations**

7. Continued knowledge sharing among stakeholders is essential to accelerate air quality improvement in the greater BTH region in a concerted manner. The proposed RBL program adopts a unique approach that involves (i) the private sector, (ii) rapid adoption of modern technology for biogas production, and (iii) a gender-focused awareness campaign for cleaner fuel delivery to people in semi-urban and rural areas. Lessons and experience from successful completion of the RBL program will be valuable for rural and semi-urban areas in the other provinces. The program implementing agencies will conduct, in cooperation with ADB, an impact evaluation study in 2024 to assess changes in energy use behavior over time, factors for such changes, and the impacts on the beneficiaries of the switch to cleaner fuel.

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<sup>10</sup> The International Energy Agency estimates that the average cost of conserved energy in the PRC is less than \$220 per ton of oil equivalent and therefore far lower than, for example, in the Republic of Korea or Europe, where the average cost of conserved energy is more than \$350 per ton of oil equivalent. International Energy Agency. 2015. *World Energy Outlook 2015*. Paris.

<sup>11</sup> ADB. 2018. *Evaluation of the Air Quality Improvement Program in the People's Republic of China supported by the Asian Development Bank, 2015–2026*. Manila.