

INTERVENTIONS IN THE GREATER BEIJING–TIANJIN–HEBEI REGION IN ACCELERATING AIR QUALITY IMPROVEMENT

1. The greater Beijing–Tianjin–Hebei (BTH) region¹ is one of the most important economic regions in the People’s Republic of China (PRC), with more than a third of the country’s gross domestic product (GDP).² It is also, however, 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 (CAAP) 2013–2017 to help improve air quality in the core BTH region.³ The CAAP has led to a suite of policies that are driving efforts to reduce pollution and improve air quality. Despite significant progress so far, air quality is still far below national and World Health Organization standards.⁴ Since air pollution problem is multi-sectoral and transboundary in nature, a concerted and comprehensive approach is needed to address the underlying causes, and to make sustainable improvements in air quality in the BTH region. The approach requires high and effective pollution control technologies, measures which cut across sectors, efficient coordination in the BTH region, stricter environmental policy and regulation, a robust result monitoring and verification system, innovative and dedicated financing mechanisms, and suitable social protection measures to protect vulnerable sections of the population.

2. Bilateral and international financial institutions have been providing financial assistance to the BTH region to help address the air quality problem.⁵ Asian Development Bank (ADB) and the World Bank are the major multilateral development banks working in the BTH region. Because of the region’s serious air pollution problems, both the World Bank and ADB have been working with the municipal and provincial governments on air pollution control. Recently, the World Bank approved two program for results loan each of \$500 million the “Innovative Financing for Air Pollution Control in Jing-Jin-Ji” and “Hebei Air Pollution Prevention and Control Program.” ADB also processed two loans which is part of a multi-year and multi-sectoral support for air quality improvement in the greater BTH region.⁶

3. The following initiatives were taken individually.

A. Beijing Municipality

4. Both World Bank’s support to Beijing Municipality was made before year 2000, after that individual project to Beijing was limited.

¹ The greater Beijing–Tianjin–Hebei region (referred to as BTH region) includes Beijing and Tianjin municipalities; Hebei, Henan, Shandong, Shanxi and Liaoning provinces; and Inner Mongolia Autonomous Region.

² While the core BTH region of Beijing and Tianjin municipalities and Hebei Province together account for nearly 10% of the national GDP, the greater BTH region accounts for more than 34% of national GDP (CNY22 trillion in 2014).

³ CAAP aims to cut the level of fine particulate matter in the BTH region by 25%. Annual average concentration of PM_{2.5} in the BTH region declined by 9.8% in 2014 and 11.3% in 2015 respectively, compared to the 2013 level.

⁴ The annual average particulate matter less than 2.5 micrometers in diameter (PM_{2.5}) concentration declined from 43 micrograms per cubic meter (µg/m³) to 73 µg/m³ by end 2015. The air quality standard for PM_{2.5} (GB 3095-2012) in the PRC is 35 µg/m³, compared to 10 µg/m³ for the World Health Organization.

⁵ Development Coordination (Linked Document 6, accessible from the list of Linked Documents in the report and recommendations of the President).

⁶ ADB. 2015. *Report and Recommendation of the President to the Board of Directors: Proposed Beijing-Tianjin-Hebei Air Quality Improvement–Hebei Policy Reforms Program*. Manila; ADB. 2016. *Report and Recommendation of the President to the Board of Directors: People’s Republic of China: Air Quality Improvement in the Greater Beijing–Tianjin–Hebei Region—China National Investment and Guaranty Corporation’s Green Financing Platform Project*. Manila.

Development Partner	Project Name	Year	Amount (million)
World Bank	Beijing Environmental Project	1991	\$125
	Second Beijing Environment Project	2000	\$349

B. Tianjin Municipality

5. The support from ADB and the World Bank to Tianjin Municipality was mainly focused on the urban development and wastewater treatment. ADB has also provided its assistance to its first and one-of-a-kind integrated gasification combined cycle power plant in Tianjin Municipality which helped the Government of the PRC to realize its development agenda on coal gasification technology using domestic gasifier. Korea Eximbank also provided assistance in constructing the road between Tianjin and Baoding.

Development Partner	Project Name	Year	Amount (million)
ADB	Tianjin Wastewater Treatment	2000	\$130.0
	Tianjin Integrated Gasification Combined Cycle Power Plant	2010	\$135.0
World Bank	Tianjin Urban Development and Environment Project	1992	\$100.0
Korea Eximbank	Tianjin-Baoding Road Project	2002	\$21.4

ADB = Asian Development Bank.

C. Hebei Province

6. Both ADB and the World Bank have provided extensive support in Hebei Province including a pumped storage project to help the government to do peak shaving therefore allow cleaner energy to be connected to the grid. ADB also supported an energy efficiency and emission reduction project to help the PRC use less coal and emit less emission. ADB and KfW have cofinanced and approved in 2015 their first policy-based loan, the “Beijing–Tianjin–Hebei Air Quality Improvement–Hebei Policy Reforms Program”⁷ which was ADB’s entry point to help address the BTH air quality issue for the most polluted Hebei in the BTH region. The World Bank’s efforts were mainly focused on energy efficiency improvement and adjustment of energy mix to cleaner fuel. In June 2016, the World Bank approved its Program for Results, “Hebei Air Pollution Prevention and Control Program” which seeks to ensure that the emission from coal used in energy efficient power plants are curbed through end-of-pipe measures and effective enforcement of emissions standards. KfW helped Hebei improve housing energy efficiency and the Spanish Agency for International Development Cooperation provided support to Xingtai Steel Company in purifying its coal gas.

Development Partner	Project Name	Year	Amount (million)
ADB	Hebei Roads Development Project	1998	\$180.0
	Hebei Zhanghewan Pumped Storage Project	2002	\$144.0
	Hebei Wastewater Management	2002	\$82.36
	Hebei Small City and Township Development Demonstration Project	2009	\$100.0

⁷ ADB. 2015. *Report and Recommendation of the President to the Board of Directors: Proposed Beijing-Tianjin-Hebei Air Quality Improvement–Hebei Policy Reforms Program*. Manila.

Development Partner	Project Name	Year	Amount (million)
	Hebei Energy Efficiency Improvement and Emission Reduction Project	2011	\$100.0
	Beijing–Tianjin–Hebei Air Quality Improvement–Hebei Policy Reforms Program	2016	\$300.0
AECID	Xingtai Steel Company Ltd. Coal Gas Purification Project	2001	\$2.3
KfW	Tangshan Security Housing Energy Efficiency Upgrading Project	2013	\$25.2
	Beijing–Tianjin–Hebei Air Quality Improvement–Hebei Policy Reforms Program	2016	€150.0
World Bank	Hebei Urban Environment Project	2000	\$150.0
	Shizheng Railway Project	2008	\$300.0
	Zhanghu Railway Project	2012	\$200.0
	Hebei Rural Renewable Energy Development Project	2015	\$71.5
	Hebei Clean Heating Project	2016	\$100.0
	Hebei Air Pollution Prevention and Control Program	2016	\$500.0

ADB = Asian Development Bank, AECID = Spanish Agency for International Development Cooperation.

D. Henan Province

7. ADB's support in Henan Province mainly focused on promoting sustainable agriculture and livestock farming. ADB also provided assistance in wastewater management, water supply, and environmental improvement and ecological conservation, while the World Bank's help is focused on development of thermal power plant in the 1990s.

Development Partner	Project Name	Year	Amount (million)
ADB	Henan Wastewater Management and Water Supply Project	2005	\$100.0
	Henan Sustainable Agriculture and Productivity	2007	\$66.7
	Henan Sustainable Livestock Farming and Product Safety Demonstration	2015	\$69.0
	Henan Hebi Qihe River Environmental Improvement and Ecological Conservation Project	2016	\$150.0
World Bank	Yanshi Thermal Power Project	1992	\$180.0
	Henan (Qinbei) Thermal Power Project	1997	\$440.0

ADB = Asian Development Bank.

E. Inner Mongolia Autonomous Region

8. ADB provided support to help the Inner Mongolia Autonomous Region improve its environment, and promote of district heating while the World Bank is mainly focused on energy efficiency in industry and the promotion of renewable energy.

Development Partner	Project Name	Year	Amount (million)
ADB	Inner Mongolia Environmental Improvement	2006	\$120.0
	Inner Mongolia Autonomous Region Environment Improvement Project (Phase II)	2010	\$150.0
	Inner Mongolia Road Development Project	2013	\$200.0

Development Partner	Project Name	Year	Amount (million)
World Bank	Low-Carbon District Heating Supply in Hohhot in Inner Mongolia Autonomous Region	2014	\$150.0
	China Tuoketuo Thermal Power Project	1997	\$400.0
	Follow up to CRES Phase I	2006	\$86.33
	China Energy Efficiency Promotion in Industry	2011	\$4.0

ADB = Asian Development Bank.

F. Liaoning Province

9. Both ADB and the World Bank focused their efforts on improving the environment in Liaoning Province. ADB also provided two loans in assisting Liaoning's development in a small city and township. The World Bank provided support in developing urban transport for Liaoning.

Development Partner	Project Name	Year	Amount (million)
ADB	Liaoning Environment Improvement Project	2004	\$70.0
	Liaoning Small City and Township Development Demonstration Project	2009	\$100.0
	Integrated Development of Key Townships in Central Liaoning	2012	\$150.0
World Bank	Liaoning Environment Project	1994	\$110.0
	Liaoning Urban Transport Project	1999	\$150.0

ADB = Asian Development Bank.

G. Shandong Province

10. Both ADB and the World Bank provided support to Shandong Province in promotion of energy efficiency projects. ADB also provided assistance in controlling water pollution, and promotion of distributed energy and low-carbon district heating, and ground water protection in Shandong, while the World Bank provided assistance for emission reduction in Shandong.

Development Partner	Project Name	Year	Amount (million)
ADB	Shandong Hai River Basin Pollution Control	2006	\$80.0
	Taiyuan-Zhongwei Railway	2006	\$300.0
	Risk Mitigation and Strengthening of Endangered Reservoirs in Shandong Province	2010	\$29.8
	Shandong Energy Efficiency and Emission Reduction	2010	\$100.0
	Qingdao Smart Low-Carbon District Energy	2015	\$130.0
	Shandong Groundwater Protection Project	2016	\$150.0
	World Bank	Rural Health and Medical Education Project	1987
World Bank	Zouxian Thermal Power Project	1992	\$310.0
	Shandong Environment Project	1997	\$95.0
	Shandong Flue Gas Desulfurization	2008	\$50.0
	Shandong Energy Efficiency Project	2011	\$150.0

ADB = Asian Development Bank.

H. Shanxi Province

11. Both ADB and the World Bank provided support in urban transport development to Shanxi Province. ADB also provided assistance in promoting energy efficiency, integrated

agriculture and township development while the World Bank provided help in efficiently utilizing the gas.

Development Partner	Project Name	Year	Amount (million)	
ADB	Shanxi Road Development II	2002	\$124.0	
	Xi'an Urban Transport Project	2003	\$270.0	
	Xi'an-Zhengzhou Passenger Railway Development	2005	\$400.0	
	Shanxi Integrated Agricultural Development in Valley and Watershed Areas	2009	\$100.0	
	Shanxi Small City and Township Development Demonstration Project	2009	\$100.0	
	Xi'an Urban Road Network Improvement Project	2011	\$150.0	
	Shanxi Energy Efficiency and Environment Improvement	2012	\$100.0	
	World Bank	China: Taiyuan Urban Transport Project	2010	\$150.0
		Shanxi Gas Utilization	2014	\$192.4

ADB = Asian Development Bank.