

Co-benefits of Air Quality Management and Decarbonization

Air Quality Improvement in the Greater Beijing- Tianjin-Hebei Region Program

Yun Zhou

**Senior Environment Specialist
Asian Development Bank**

The views expressed in this presentation are the views of the author/s and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy of the data included in this presentation and accepts no responsibility for any consequence of their use. The countries listed in this presentation do not imply any view on ADB's part as to sovereignty or independent status or necessarily conform to ADB's terminology.



Air Quality Challenges in the PRC

- More than 50% of cities do not meet national air quality standards in 2019
- Average annual PM_{2.5} concentration in the greater Beijing-Tianjin-Hebei (BTH) region in 2020 is more than 3 times that of the PRC Class I standard and more than 8 times that of WHO guideline limit.
- Exposure to high levels of PM_{2.5} contributes to about one million premature deaths annually



ADB's Response – BTH Air Quality Improvement Program

Year	Project name	Loan modality
2015	Loan 3356: Beijing-Tianjin-Hebei Air Quality Improvement—Hebei Policy Reforms Program (\$300 million)	PBL
2016	Loan 3504: Air Quality Improvement in the Greater BTH Region—China National Investment and Guaranty Corporation's Green Financing Platform Project (\$500 million)	FIL
2017	Loan 3629: Air Quality Improvement in the Greater BTH Region—Regional Emission-Reduction and Pollution-Control Facility (\$500 million)	FIL
2018	Loan 3765: Air Quality Improvement in the Greater BTH Region—Shandong Clean Heating and Cooling Project (\$400 million)	Investment Loan
2019	Loan 3879: Air Quality Improvement in the Greater BTH Region—Henan Cleaner Fuel Switch Investment Program (\$300 million)	RBL
2020	Loan 4023: Air Quality Improvement in the Greater BTH Region—Green Financing Scale up Project (\$150 million)	FIL

ADB's Response - BTH Air Quality Improvement Program

- 1st loan - implementation of policy actions through targeted investment in pollution reduction projects
- 2nd loan - green financing platform (GFP) to leverage financing and scale-up investments in green and low emission projects, especially for SMEs
- 3rd loan - technology leapfrogging fund to deliver best available low-emissions technologies in key sectors
- 4th loan - clean heating and cooling to reduce emissions from residential sector in highly polluted areas in Shandong Province
- 5th loan - switch to cleaner fuel by adopting unique funding approach using PPP to meet the huge funding demand
- 6th loan - scale up the GFP and expand to the Yangtze River Delta



ADB's Response – BTH Air Quality Improvement Program

- A programmatic and integrated approach to address the cross-sectoral and region air pollution issues
- Flexible financial modalities
- Leveraging co-financing from other development partners and private sector
- Promotion and demonstration of innovative business models and low carbon technologies
- Aiming at pollution reduction + climate change mitigation

Green Financing Platform Project

Establish a green financing platform and leverage commercial financing for pollution-reduction projects

Lower barriers and scale-up financing for SMEs and ESCOs from the green financing platform

Strengthen the capacity in new financial products and to appraise and implement green financing projects



Financial Products of Green Financing Platform Project

- Credit guarantees to enable commercial financing
- Debt financing through entrusted loans
- Financial leasing for purchasing energy-efficient industrial equipment and other goods to obviate the need for large capital for SMEs and ESCOs
- Short-term equity investment in promising start-up companies specializing in advanced low-carbon technologies to help overcome barriers of lack of credit history and the collateral.



Sample Subproject 1 – entrusted loan

➤ Beijing Sanju Straw Biomass Utilization Project



Annual reductions :

CO₂

38,485.33 tons

SO₂

by 25.04 tons

NO_x

by 135.18 tons

PM

by 719.91 tons.

Sample subjects 2 – financial leasing

By December 2021, the GFP Project has granted CNY800 million to sub-borrowers through four financial leasing companies with total investment of CNY 3.32 billion.



**Beijing E-bus Procurement
Subproject**

**Shandong Wudi
Poverty-alleviation Solar
Power Generation Subproject**

**Shandong Weifang Sanyi
Biogas Upgrading Subproject**

**Shandong Dezhou 100MW
Wind Power Subproject**

Sample Subproject 3 – guarantee

➤ Roof-top solar PV subproject

- Provide guarantee of up to CNY200 million with a term of 12 years to help over 3,000 rural households to install roof-top solar PV for power generation
- Within 20 years, the subproject is expected to generate 1.6 billion kwh of electricity, resulting in reduction of CO₂ by 1.34 million tons.

- Using Fin-Tech to offer efficient financial services to rural residents in different provinces
- Introducing an Online Transaction Platform with a risk control system
- Promoting low-carbon development and inclusive finance in rural areas



Sample Subproject 4 – equity investment

- In 2020, the first clean energy equity investment subproject was approved with total investment of Euro 6.29 million
- The investee's main business covers solar and wind power generation, and clean heating, etc.



- Help the investee optimize its debt structure and achieve sustainable and diversified development.

GFP Project Achievements

- Supported 859 subprojects
- CNY 6.56 billion of cofinancing
- Annual reduction – coal: 1.2 million tons; CO₂: 3.1 million tons; PM: 72,000 tons; NOx: 7,000 tons; SO₂: 29,000 tons



Lessons Learnt from BTH Program

- Strong government commitment
- Sufficient capacity and ownership of the executing and implementing agencies
- Flexible design to address the changes in government policy and priorities

Thank You

