

From Waste to Wheels: ADB Driving Super Pollutant Reduction



Methane



Landfills

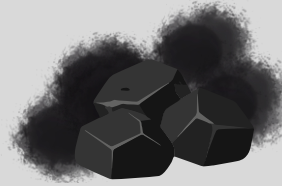


Wastewater



Agriculture
(Rice & Livestock)

Black Carbon



Coal/Biomass
Heating/Burning



Urban Diesel Fleets

HFCs



Rising Cooling Demand

How ADB supports Super Pollutant challenges

1) Financing	2) Policy & Enabling	3) Technical assistance (TA)
<ul style="list-style-type: none">• Sovereign loans & grants for city infrastructure• Non-sovereign loans to private operators (PPP)• Blended finance to crowd-in private capital• Investments that “pay for themselves” via energy savings	<ul style="list-style-type: none">• Reforms that enable clean heating/cooling services• Municipal solid waste standards + service models• Regulatory readiness for low-GWP refrigerants• Urban planning that integrates low-carbon systems	<ul style="list-style-type: none">• Feasibility studies + bankable project design• MRV / monitoring systems and digital tools• Developing business models (e.g., cooling-as-a-service)• Knowledge transfer and capacity building

ADB sector groups: where do super pollutants sit?

Energy

- Clean heating & district energy
- Efficiency upgrades and smart controls
- Grid + renewables reduce fossil combustion

Transport

- Public transport modernization E-mobility enabling infrastructure
- Reduced diesel soot/black carbon

Water & Urban Development

- Solid waste systems
- Waste-to-energy & landfill diversion
- Wastewater and sludge treatment upgrades

Agriculture, Food, Nature & Rural Development

- Methane reduction in rice and livestock
- Waste-to-resource circular models
- Climate-smart practices + MRV readiness

ADB-supported projects: Methane (1)



Municipal Waste to Energy Project (China)

ADB-financed waste-to-energy facility reducing landfill methane through controlled waste combustion.

- Diverts municipal solid waste from landfill
- Avoids methane from uncontrolled anaerobic decomposition
- Modern emission control systems installed
- PPP structure to scale urban waste solutions

ADB-supported projects: Methane (2)



- Regional waste facility at Thilafushi
- Structured collection and transfer system
- Eliminates uncontrolled waste burning
- Reduces methane from unmanaged landfill waste

Greater Malé Environmental Improvement and Waste Management Project (Maldives)

Establishing an integrated national waste management system to reduce open dumping and landfill methane.

ADB-supported projects: Methane (3)



Urban Environment Improvement Investment Project – Luang Prabang (Lao PDR)

Upgrades urban waste and wastewater systems to reduce unmanaged methane emissions.

- Expanded solid waste collection coverage
- Improved sanitary landfill systems
- Wastewater treatment infrastructure upgrades
- Reduced organic waste decomposition in open systems

ADB-supported projects: Black Carbon (1)



- Consolidation of inefficient coal-fired boilers
- High-efficiency district heating systems
- Reduced particulate and black carbon emissions
- Improved urban air quality

Heilongjiang Energy Efficient District Heating Project (China)

Replaced small coal boilers with centralized district heating, reducing soot emissions.

ADB-supported projects: Black Carbon (2)



Karachi Bus
Rapid Transit
(Red Line),
Pakistan



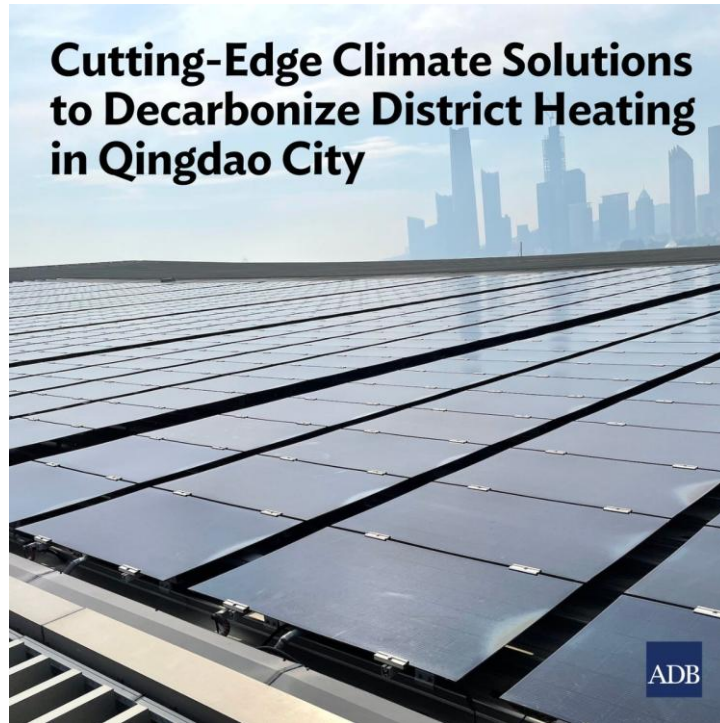
Davao City Public
Transport
Modernization
Project
(Philippines)



**Electric Buses to Reduce
Bishkek's Air Pollution**

Urban Transport
Electrification Project
(Kyrgyz Republic)

ADB-supported projects: HFCs (1)



- Integrated heating and cooling platform
- Reduced standalone AC demand
- Lower refrigerant leakage risk
- Reduced indirect electricity emissions

Qingdao Smart Low-Carbon District Energy Project (China)

Centralized district energy reduces fragmented, inefficient air-conditioning systems using high-GWP refrigerants.


What's next: ADB's direction for super pollutants

Scaling what works

- Waste systems + WTE / diversion to avoid methane
- Heating modernization to cut soot/black carbon exposure
- Climate-friendly cooling models that can be replicated across cities
- Digital platforms and monitoring to improve performance

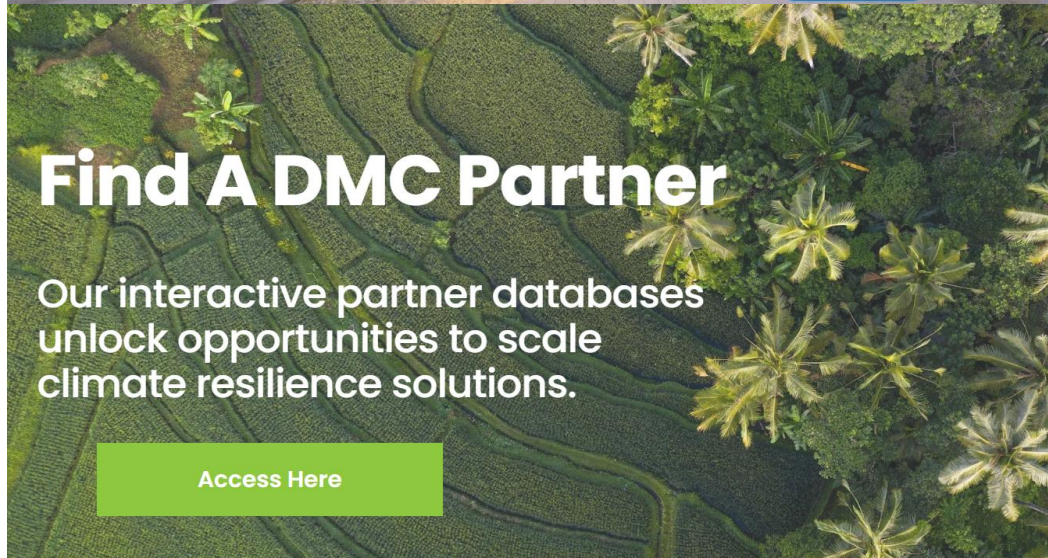
Enablers: policy + institutions

- Green district heating/cooling transformation supported through multiple projects and TA
- Example: TA 6564-KAZ supporting renewable-technology-inclusive heat supply legislation (Kazakhstan)
- Financing innovation: service-based models and bankable PPP structures



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