

Forum on Integrated Approaches to Air Pollution and  
Climate Action: Monitoring, Technology, and Financing

## **Issues from Bangladesh and Potential Project Seed**

**17 February 2026**



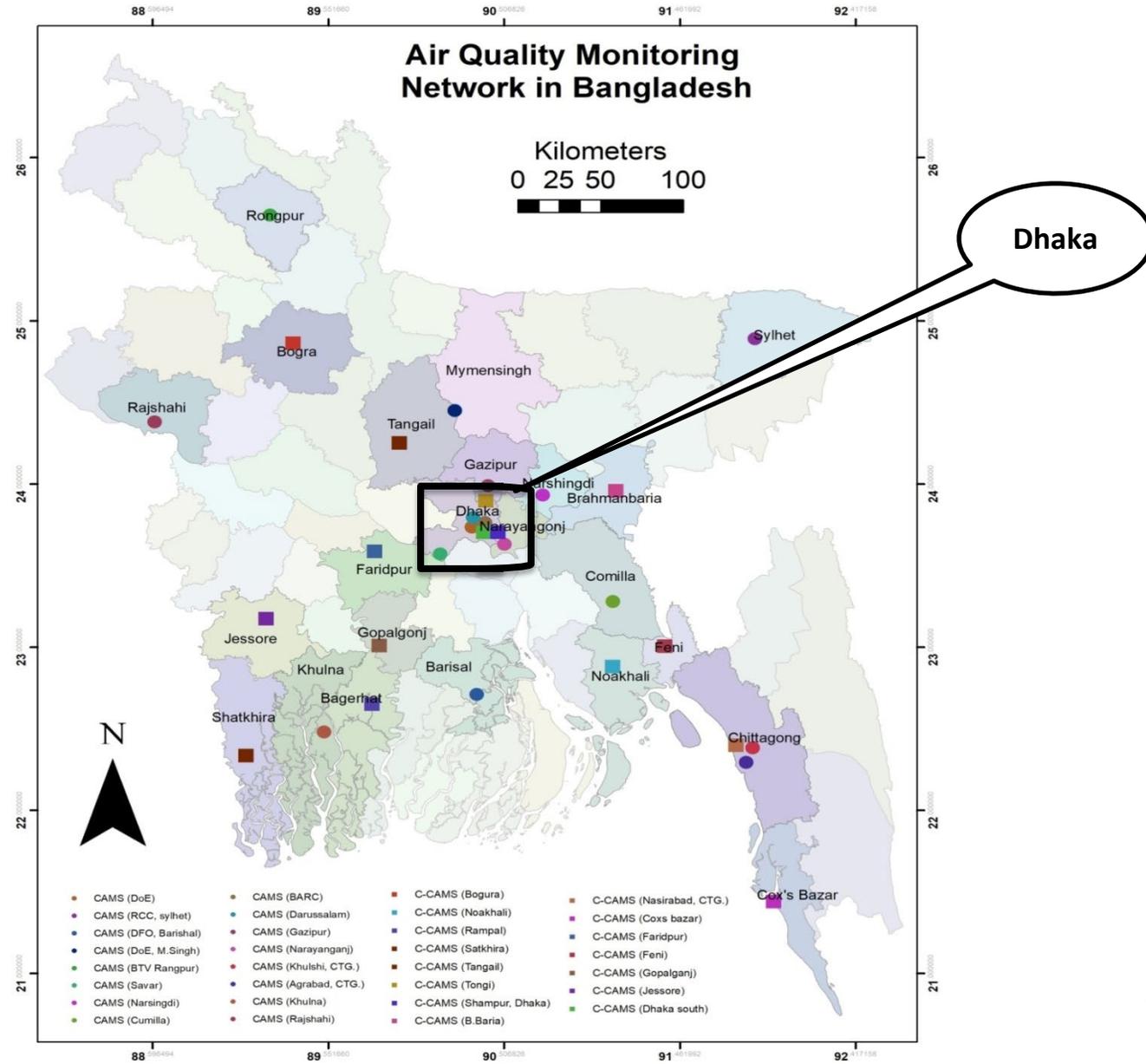
**Sidhartha Sankar Kundu**  
**Deputy Secretary**

**Ministry of Environment, Forest and Climate Change**  
**Bangladesh**

# Air Pollution Situation and Impact Bangladesh

- The annual air quality (PM<sub>2.5</sub>) in the country is 60-100  $\mu\text{g}/\text{m}^3$  , Dhaka 90-100  $\mu\text{g}/\text{m}^3$
- Annual average levels of PM<sub>2.5</sub> exceed the WHO AQG by a factor of 10 or more
- Premature death 1,59,000 (2019)
- Working days lost 250 million days
- GDP loss 8.3% (due to ambient and indoor air pollution in 2019)
- Air pollution is the third highest health risk factor in Bangladesh

# Existing Air Quality Monitoring Network (31 Stations) In Bangladesh (PM2.5, PM10, SOX, NOX, O3 and CO Including Weather Parameters)



# AQI

Browser tabs: doe bd - Search, -- পরিবেশ অধিদপ্তর, Real-time Air Q, Microsoft Word, 12 Business Ref, whatsapp web, WhatsApp, foxit pdf reader, Foxit PDF Reader, বাংলা, English

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পরিবেশ অধিদপ্তর

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার  
পরিবেশ অধিদপ্তর  
Real-time Air Quality Index (AQI)



Navigation: HOME STATIONS ▼ FEEDBACK DIGITAL-BOARD NAAQS ARCHIVE CONTACT

Locations: DHAKA DoE BARC BUET DARUSSALAM SAVAR GAZIPUR NAF

CAMS - Dhaka

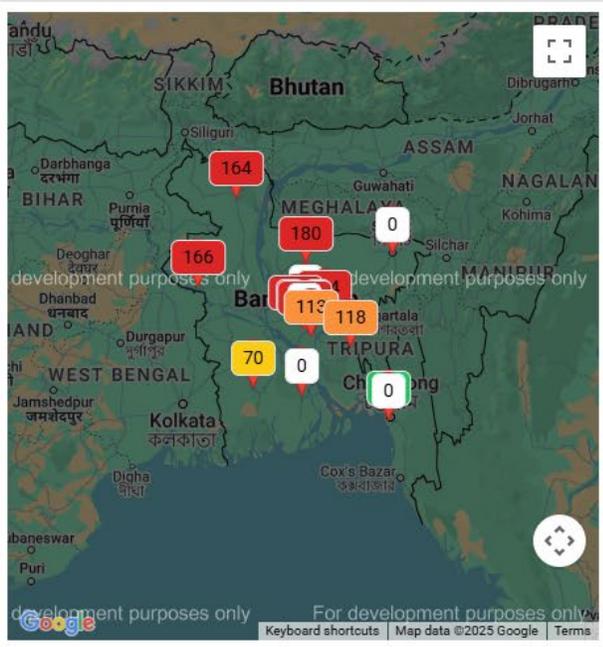
**AQI : 157**

Show AQI Information

Updated on Wednesday 14:05

Responsible pollutant: PM<sub>2.5</sub>





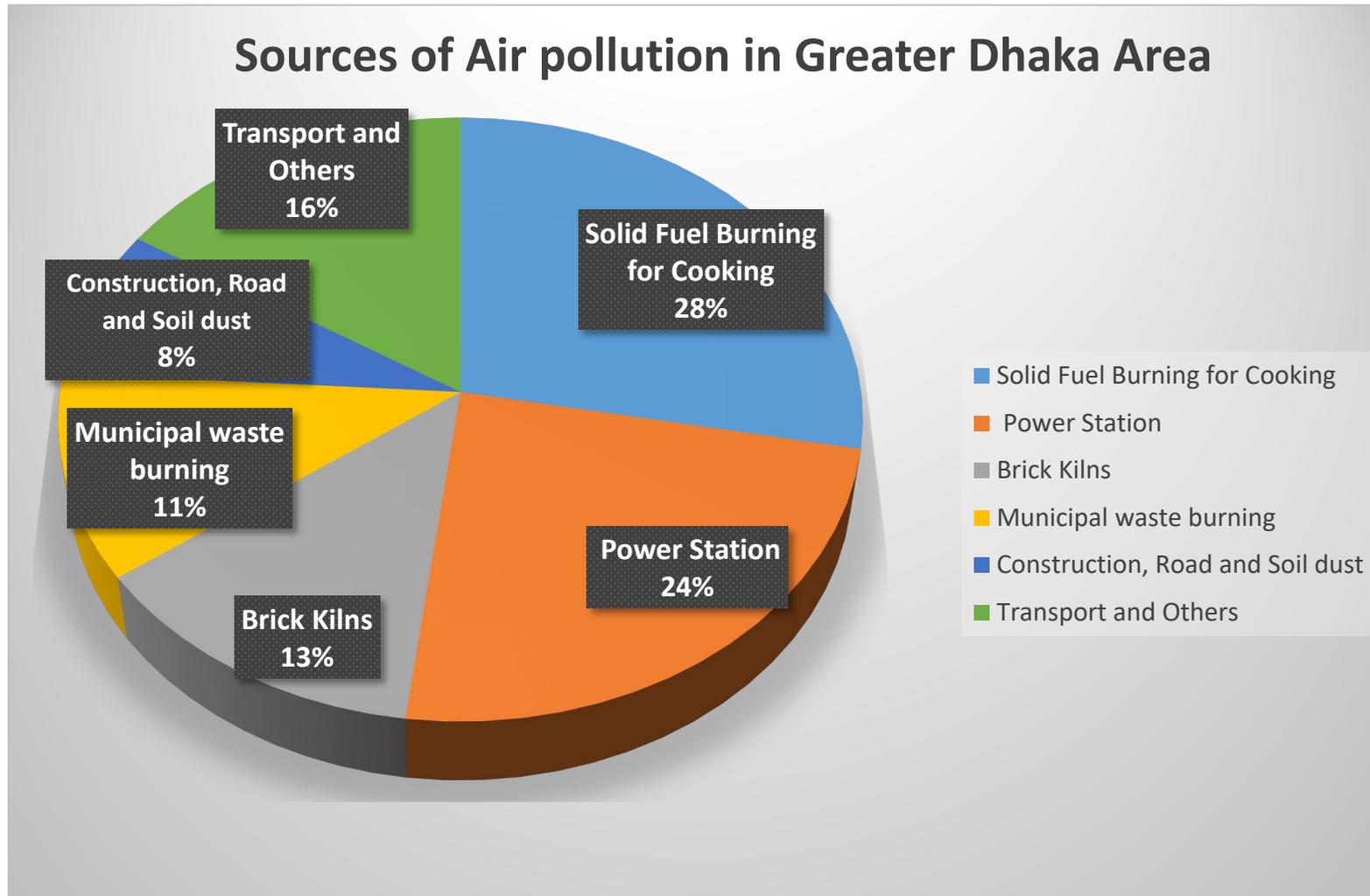
Station	AQI Value
Dhaka	157
Barisal	166
Chittagong	70
Other stations	164, 180, 113, 118, 0

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# Air Quality Monitoring and disclosing system

- 31 (thirty one) Continuous Air Monitoring Stations (CAMS) are in operation located in divisional cities and district towns
- Measuring six criteria pollutants: PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, O<sub>3</sub> including weathers parameters
- Automated public disclosure of data (real time AQI) are presented in DoE website
- Based on the air quality data that refers to the situation of air pollution in terms of health impacts, and this on the real time basis.
- Will be developed a Air Quality forecasting system

# Air pollution sources in Greater Dhaka Area



**World Bank Country Analyses Report, 2023**

# Sources of Air Pollution



**Old Vehicle**



**Brick kiln**



**Open Burning of solid waste**



**Road Dust**

# Sources of Air Pollution



**Indegenous Cooking Stoves**



**Road construction**

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**Agriculture waste Burn**



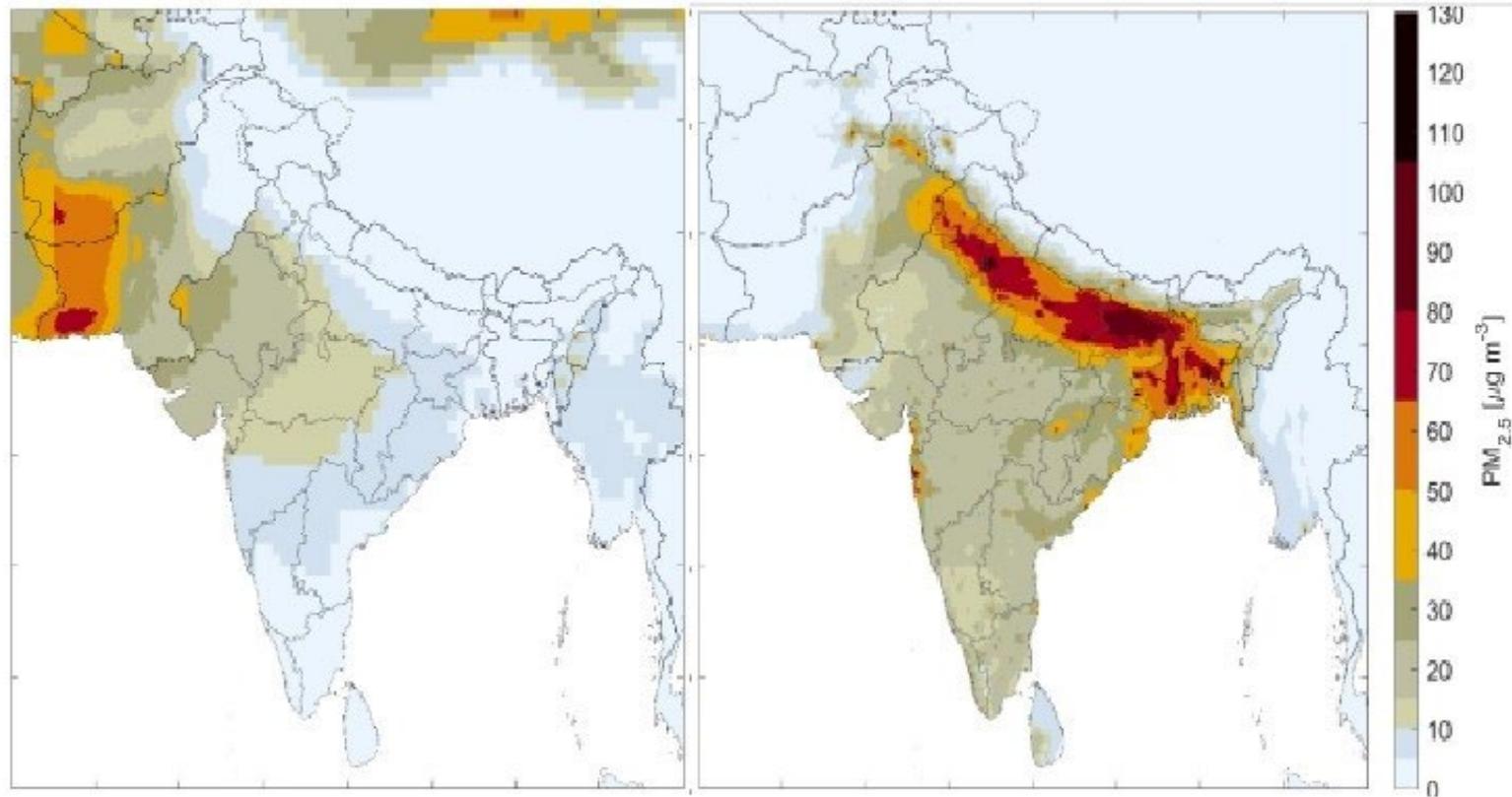
**Industry Pollution**

1242241858

# Regional Air Pollution

A. Contribution of natural sources

B. Contribution of anthropogenic sources



# Yearly Average (PM2.5) in Different City (2024 and 2025)

■ PM2.5 2024 ■ PM2.5 2025

83.90  
79.84

58.78

81.50

40.06

50.32

67.08

55.84

87.62

90.66

58.78

56.55

91.73

81.01

111.03

106.86

Dhaka

CTG

Sylhet

Khulna

Rajshahi

Barishal

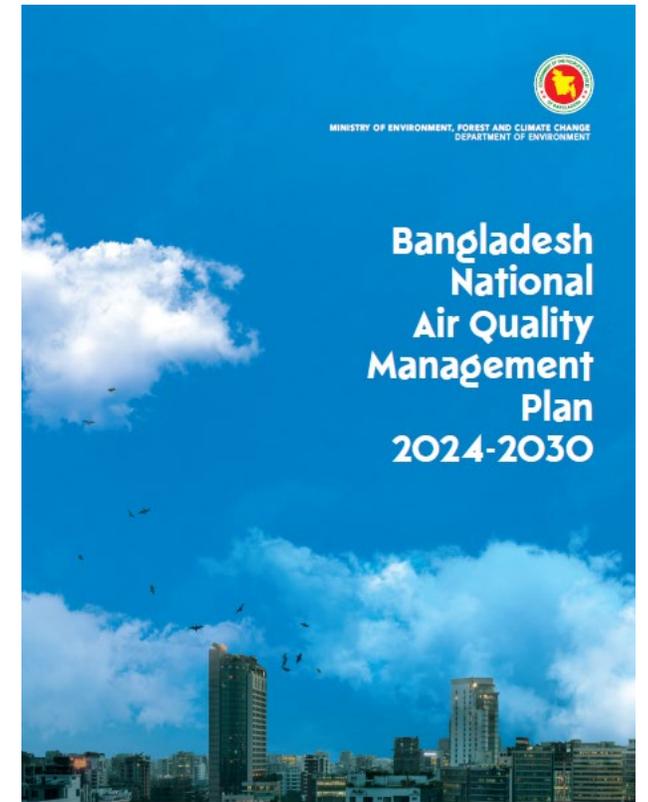
Mymensingh

Rangpur

# Key Policies

- Air Pollution Control Rules, 2022 ( Key provisions)
  - Prepared time bound National Air Quality Management Plan (NAQMP) 2024-30,
  - Declaration of Degraded AirShed for improving air quality of Dhaka and its management
- MoEFCC prepared a comprehensive guideline with 22 directives of what to do by which sector for reducing the air pollution.
- Brick Manufacture and Brick Kiln Set-up (Control) Act, 2013 (Amended in 2019)
  - A Gazette Notification was issued on mandatory use of non-fired blocks in place of fired clay bricks in all government constructions except roads and highways;
- Solid Waste Management Rules, 2021 to address pollution and management of solid waste

# National Air Quality Management Plan (NAQMP) 2024-2030



Improvements in annual $PM_{2.5}$ by cost-effective control measures	Sector of Interventions	GDA	Nationwide
		Improvements in annual $PM_{2.5}$	
	Implementation by 2030	30 $\mu\text{g}/\text{m}^3$	15 $\mu\text{g}/\text{m}^3$
	Full implementation	40 $\mu\text{g}/\text{m}^3$	20 $\mu\text{g}/\text{m}^3$

# Key Sectors in NAQMP and Opportunity for the Project

## ❑ 1. Enhancing air quality management

- 1.1 Strengthening the legal and policy framework
  - 1.1.1 Market-based policies and green finance
- 1.2 Strengthening institutional capacity for AQM

## ❑ 2. Reducing emissions from targeted sectors

### ❖ 2.1 Households

### ❖ 2.2 Power Generation

- 2.2.1 Thermal Power Plants
- 2.2.2. Diesel Generators

### ❖ 2.3 Industries

- 2.3.1 Brick and block production
- 2.3.2 Cement factories
- 2.3.3 Iron and steel mills

### ❖ 2.4 Transport

- 2.4.1 Light duty vehicles
- 2.4. 2 Heavy duty vehicles
- 2.4.3 Mass mobility

### ❖ 2.4.4 Electric mobility

### ❖ 2.5 Municipal waste management

### ❖ 2.6 Agriculture and Livestock

- 2.6.1 Ammonia from fertilizers
- 2.6.2 Ammonia from manure
- 2.6.3 Crop residue burning on crop fields

### ❖ 2.7 Construction and road dust

### ❖ 2.8 Energy efficiency

### ❖ 2.8 Indoor air pollution



# JICA Supported on-going Projects for Air Quality Management

## **1. Air Pollution: Grant Aid**

Title: The Project for the Improvement of Equipment for Air Pollution Monitoring

EA: Department of Environment/MoEFCC

Objective: To monitor roadside air quality and assess the contribution of road and transport-related pollution.

Project Activities: The Project will setup 8(Eight) Road site CAMSs.

## **2. Air Pollution; Technical Cooperation Project:**

Title: The Project for the Capacity Improvement for Air Quality Control

EA: Department of Environment

Activities: Capacity Development and Policy preparation support

## **3. Solid Waste Management; Technical Cooperation Project:**

Title: Project for Waste Reduction and Support for Building a Sustainable Society

EA: Local Government Division, Dhaka North City Corporation, Dhaka South City Corporation, Chattogram City Corporation

Activities: Capacity Development and Policy preparation support

# Financial/others Challenges

## ❑ Air Quality Monitoring

- Availability of CAMS Spare parts, Uninterrupted Power, Enough budget
- Network expansion in rural area and Dedicated Skill manpower for AQM
- Uninterrupted Real-time AQM and Forecasting

## ❑ Air Quality Management

- Establishment of adequate vehicle emissions centers and introduces the diesel particulate filters for PM and selective catalytic reduction for  $\text{No}_x$
- Upgradation and renovation of older industries (Iron and steel Mills, Cements factories, Lead Acid Battery etc).
- Transformation of the fired brick to non fired Block and its Raw Material availability (Cement, Sand, Stone etc.) for Block Production
- Conversion of traditional cook stoves to clean cooking (Renewable energy, LPG fuel and electric) Stoves .
- Solid waste management and solution of open burning
- Inter-ministrial and inter-agencies (Stakeholders ) engagement and coordination
- Institutional strengthening and strictly implementation of rules and regulations.

## ❑ Transboundary Air pollution

# Potential Project Seeds

## ❖ **Monitoring**

- Industrial Emission Monitoring, Source Apportionment, Emission inventory & Policy Linkage Project
- Construction Dust Management Initiative
- Integrated Air Quality Forecasting & Health Advisory System

## ❖ **Industries and waste sector:**

- Brick Kiln Emission Reduction Program  
(zigzag → cleaner tech, stack + fugitive emission control, MRV system and promote the alternative )
- Installation the controlling system/devices to control air pollution in the Iron and rerolling mills and other polluted industries.
- Cleaner Production Program for SMEs
- Green Industrial Compliance Incentive Scheme
- Market-based Instruments for Pollution Control  
(carbon pricing pilots, green credit guarantees)
- Results-Based Financing for Clean Technologies

contnd...

# Potential Project Seeds

## ❖ **Transport Sector:**

- Vehicle Emission Inspection & Maintenance (I&M) Strengthening
- Electric Mobility Pilot (Buses / 2–3 Wheelers)
- Mass transport (Metro rail, Mono rail etc. )
- Fuel Quality & Emission Standard Enforcement Project
- Low-emission Urban Transport Zones

contned...

# Potential Project Seeds

## **Solid Waste Management and Stop Open Burning:**

- Integrated Municipal Solid Waste and Medical & Hazardous Waste Management (MSWM) Pilot
- Waste-to-Resource (Compost/RDF) Demonstration Plants
- Hospital-based Surveillance of Pollution-related Diseases
- Air Pollution–Health Impact Assessment Program
- Clean Cooking & Household Air Pollution Reduction Project

## **Regional Cooperation on Transboundary Air Pollution**

# Recommendation for Development Partners cooperation

- ❖ **International Funding Mechanisms for Pilot and Demonstration Projects**
  - Clean transport and industry, green urban planning, waste and dust management.
- ❖ **Capacity Building Training and Knowledge Sharing Platforms**
  - Arrange exchange programs for environmental scientists, public-health experts, and policymakers.
  - Host bilateral or multilateral conferences to share the best practices.
- ❖ **Regional Joint Action Plans and Policy Development**
  - Shared monitoring zones and joint inspections in border regions plans for transboundary pollution.
  - Coordinate agricultural burning schedules, industrial emissions reporting, and emergency response protocols.
  - Collaborate on policies for industrial emissions, vehicle standards, waste management, and control of agricultural burning.
- ❖ **International Partnerships**
  - Engage global technology companies working on clean-technology solutions.
  - Encourage investment in clean transport, industrial pollution controls, and alternative energy systems.

# Others AQM Partners of Bangladesh

## ❖ **ESCAP**

- Cooperation and support to capacity development and Air Quality Management in Asia and the Pacific

## ❖ **EU and GIZ**

- Working to start European Union (EU) funded intervention on alternative bricks in Bangladesh and clean air.

## ❖ **UNDP**

- Working to start Collaboration on Air Quality Awareness initiative in Dhaka

## ❖ **ICIMOD**

- On going program on Air Quality Monitoring and capacity development
- World Bank and ICIMOD try to develop regional cooperation and platform to improve **Indo-Gangetic Plain (IGP)** Region (South Asia) Air Quality.

THANK YOU