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HO CHI MINH CITY'S CLEAN AIR ACTION PLAN

BAOQ
BETTER AIR QUALITY
CONFERENCE



BAQ 2023
BETTER AIR QUALITY
CONFERENCE 15-17 NOV • MANILA



HO CHI MINH CITY'S CLEAN AIR ACTION PLAN



AIR POLLUTION IN HO CHI MINH CITY

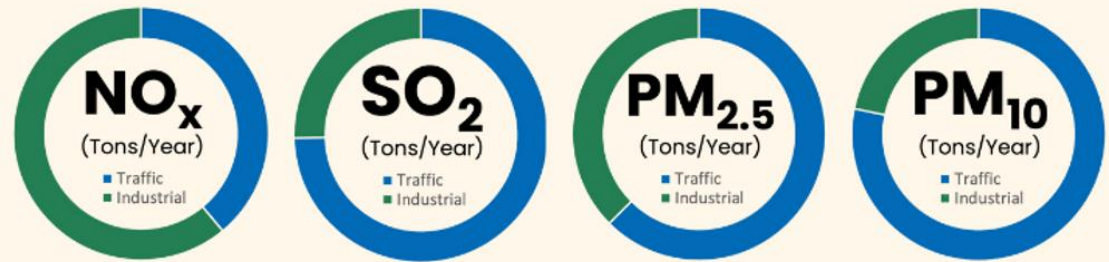
- The key sources of pollution in HCMC are **road transport** and **industries**
- **Waste burning** and **construction sites** also contribute to pollution

Road transport is the greatest source of calculated emissions of pollution

Heavy trucks & motorcycles are the most polluting vehicle types

- There are also likely to be **pollution sources outside the city** contributing to pollution experienced in the city

MAIN SOURCES OF AIR POLLUTION



	NO _x (Tons/year)		SO ₂ (Tons/year)		PM _{2.5} (Tons/year)		PM ₁₀ (Tons/year)	
	Emission	%	Emission	%	Emission	%	Emission	%
Traffic	65,917	39%	5,543	75%	3,866	63%	16,653	78%
Industrial	103,428	61%	1,886	25%	2,318	37%	4,635	22%
Total	169,345	100%	7,428	100%	6,184	100%	21,287	100%

(TA-9608 REG: City Clean Air Action Plan)



PLAN FOR AIR QUALITY MANAGEMENT IN HCMC (2023-2025)

By 2025

- Reduce **85% of additional air pollution** (in the period of 2021-2025) **due to transport activities.**
- Ensuring that a minimum of **98% of industrial plants** have qualified air treatment system and **100% of major industrial air polluters** install **automatic continuous air emission monitoring equipment.**
- Ensuring that a minimum of **90% of construction sites** comply with regulations on environmental protection, minimizing dust and air emissions during construction works.
- Efficiently control emissions from agricultural and residential activities, aiming to **zero open burning** (household waste and agricultural residues).

Environmental Protection
Law 2020

Decree No. 08/2022/NĐ-CP
dated 10/01/2022

Decision No. 1973/QĐ-TTg
dated 23/11/2021,
approving the national
action plan on air quality
management period 2021-
2025

Directive No. 03/CT-TTg
dated 18/01/2021 on
strengthening control of air
pollution.

National technical regulation
on ambient air quality and
source emissions



KEY ACTIONS FOR CLEAN AIR IN HO CHI MINH CITY



Improve Public Transport Infrastructure

- Assess current public transport infrastructure & identify areas for improvement
- Continue to invest in EV buses to supplement the current fleet
- Develop long-term plans for improvements to public transport infrastructure, with a focus on enhancing the bus network & last-mile connectivity



Promote and support the uptake of electric motorcycles

- Review the current electric vehicle (EV) fleet and infrastructure provision
- Public information/awareness raising campaign to encourage uptake of EVs
- Introduce incentives to support the uptake of EVs, particularly motorcycles
- Install charging infrastructure across HCMC to service ~5,000 EV motorcycles



Improve enforcement of industrial emission standards and controls

- Disseminate & enforce current (national) industrial emissions standards
- Increase emissions monitoring requirements & enforce
- Improve processes for monitoring and enforcing emissions standards
- Work with local operators to encourage and incentivize the use of improved technologies for emissions control



Improved management of dust from construction sites

- Review existing processes for monitoring & inspections of construction sites
- Introduce requirements for construction operators to monitor their sites
- Introduce requirements for construction site operators to implement appropriate dust mitigation measures



Installation of a continuous air quality monitoring network

- Determine the appropriate location for the monitoring stations & identify and Review the existing information available on air pollution levels in HCMC
- Determine appropriate continuous ambient air monitoring station technology
- Once installed, make the data available to the public, alongside a public information and communications campaign

1. Prevention and reduction of air pollution emissions

Transport sector

Industrial sector

Agriculture

Domestic activities

Municipal waste treatment

2. Enforcement the air pollution control regulation; improve capacity of emission compliance inspection.

3. Capacity building for monitoring, forecasting, and issuing warnings about air quality

4. Public awareness raising

5. Increasing public parks, green areas

2016 - 2020: reduce 72% TSP, 83% NO_x, 119% CO additional pollutant from transport

HCMC'S PRIORITY ACTIONS ON AIR QUALITY

1. **Emissions Inventory** and air polluter database building
2. **Building continuous monitoring system** → forecasting, monitoring and early warning system
3. **Green Transportation** (public transport improvement; public bike; public buses and private vehicles electrification; private vehicles emission inspection..)
4. **Industrial Emissions Reduction Program**
5. **Sustainable Municipal Waste-to-Energy Initiative** (for compostable wastes)
6. **Zero Open Burning** (domestic and agricultural wastes)
7. **Awareness raising and air pollution warning system** for public

Funding sources:

- *Government budget allocation*
- *Private sector investment*
- *International collaboration funding*
- *Corporate Social Responsibility Funding*

OPPORTUNITIES - CHALLENGES

1. City government commitment to air quality improvement
2. Legal framework for air pollution control, air quality management
3. International collaborations

1. Inadequate implementation and enforcement of environmental regulations
2. Limited human resources capacity
3. Challenges in securing budget for air quality improvement projects

Thank you for your attention!