

# ACTIONS TO IMPROVE AIR QUALITY IN VIETNAM

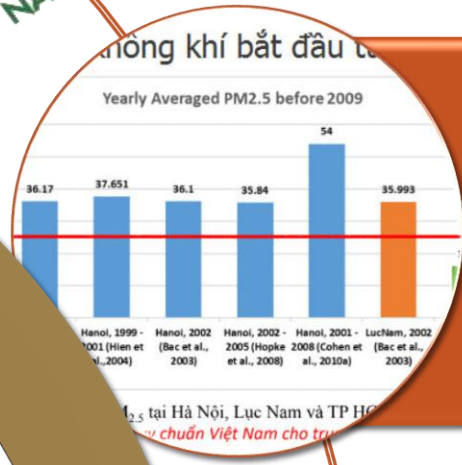
**Presenter: VEA**

*Thailand, March 2025*





# I. Air quality monitoring network



# II. Current status and causes of air pollution in Vietnam



# III. Ongoing work on air quality management



# IV. National Action Plan on Air Pollution Remediation and Air Quality Management for the period 2026-2030, with a vision to 2045



# I. OVERVIEW OF THE AIR QUALITY MONITORING NETWORK

# I. OVERVIEW OF THE AIR QUALITY MONITORING NETWORK

## I.1. Automated, continuous air quality monitoring network.

### □ *At the central level :*

- Implement according to the national environmental monitoring network plan (Decision 224/QĐ-TTg dated March 7, 2024)
- The Ministry of Agriculture and Environment (MAE) manages 37 air quality monitoring stations in 22 provinces and cities, and 4 sensor stations in Ha Tinh, with 100 sensor devices installed in Hanoi, Ha Nam, and Ninh Binh..
- It is planned to continue building 16 more automatic air quality monitoring stations, bringing the total to 53 stations during the 2026-2030 period.

### □ *At the local level :*

- Implement according to the provincial-level environmental monitoring network plan.
- By 2025, 29 localities will have built and operated automatic, continuous air quality monitoring stations. The total number of basic automatic air quality monitoring stations in localities is 104 basic stations and 32 sensor stations..



# I. OVERVIEW OF THE AIR QUALITY MONITORING NETWORK

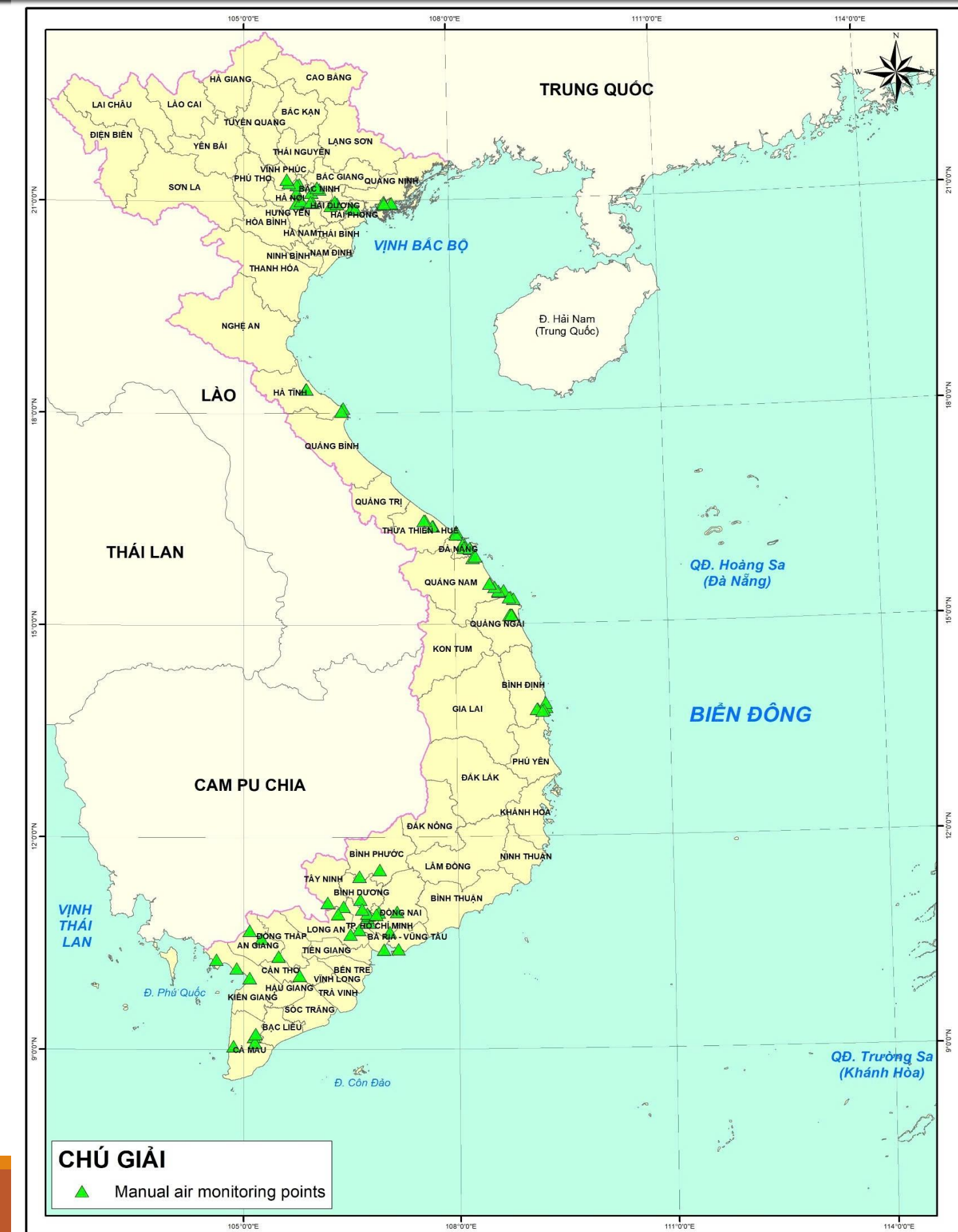
## I.1.2. Automated and continuous air quality monitoring network.

### □ *At the central level :*

- Regional environmental monitoring centers conduct monitoring at 94 locations stretching from North to South across 25 localities.
- Monitoring parameters include: TSP, PM2.5, PM10, CO, SO<sub>2</sub>, NO<sub>2</sub>, Pb and Hg (in rainwater and air).
- Monitoring frequency: 8 monitoring sessions per year..

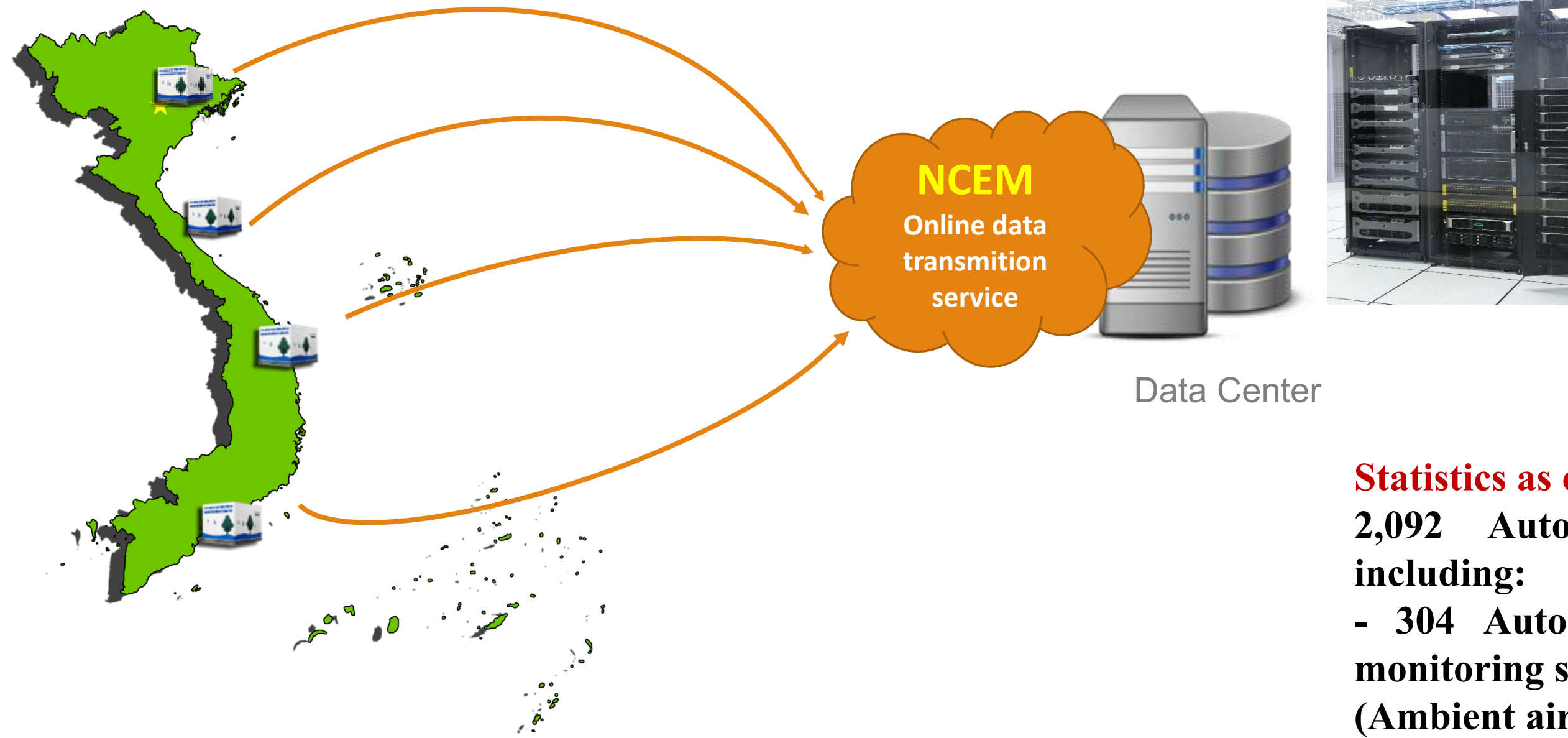
### □ *At the local level :*

- *Provincial CEMs implement*
- Monitoring parameters include: TSP, CO, SO<sub>2</sub>, NO<sub>2</sub>.
- Monitoring frequency: 6 monitoring sessions per year..



# I. OVERVIEW OF THE AIR QUALITY MONITORING NETWORK

## I.1. Automated, continuous air quality monitoring network. Environmental monitoring data is managed centrally.



### Statistics as of April 2025:

**2,092 Automatic monitoring stations, including:**

**- 304 Automatic environmental quality monitoring stations**

**(Ambient air: 215, Surface water: 139)**

**- 1,788 Emission monitoring stations:**

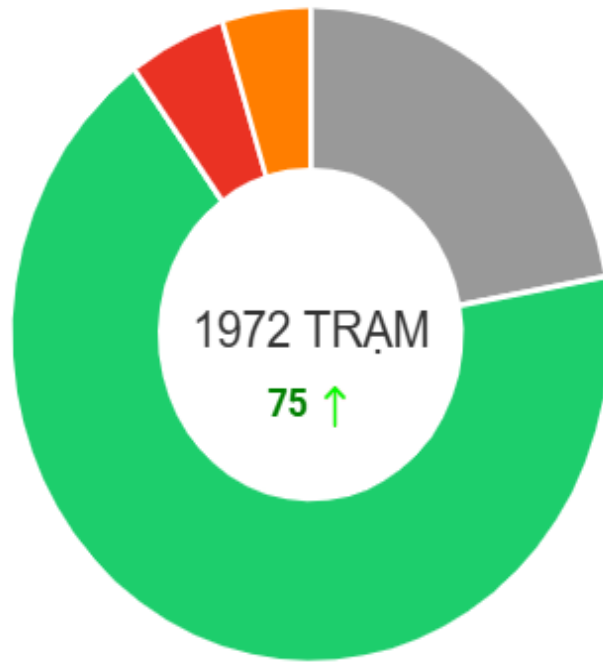
**(Wastewater: 947; Air emissions: 841)**

The Envisoft software system receives and manages data from continuous automatic monitoring stations.

- Trang chủ
- Bản đồ các trạm
- Giám sát trực tuyến
- Tra cứu dữ liệu
- Báo cáo
- Thống kê
- Chỉ số chất lượng
- Quản lý camera trung ương

THỐNG KÊ TỔNG HỢP : Tổng trạm: 1972, Số trạm mất kết nối: 437, Số trạm đang kết nối: 1535 (Số trạm hoạt động tốt: 1338, Số trạm vượt quy chuẩn: 103, Số trạm lỗi thiết bị: 94, Số trạm hiệu chuẩn: 0)

### THỐNG KÊ TỔNG SỐ TRẠM TỔNG QUAN



Mất kết nối	437	127 ↓
Hoạt động tốt	1338	345 ↑
Hiệu chuẩn	0	
Vượt chuẩn	103	50 ↑
Lỗi thiết bị	94	193 ↓
$\Sigma$ Tổng	1972	

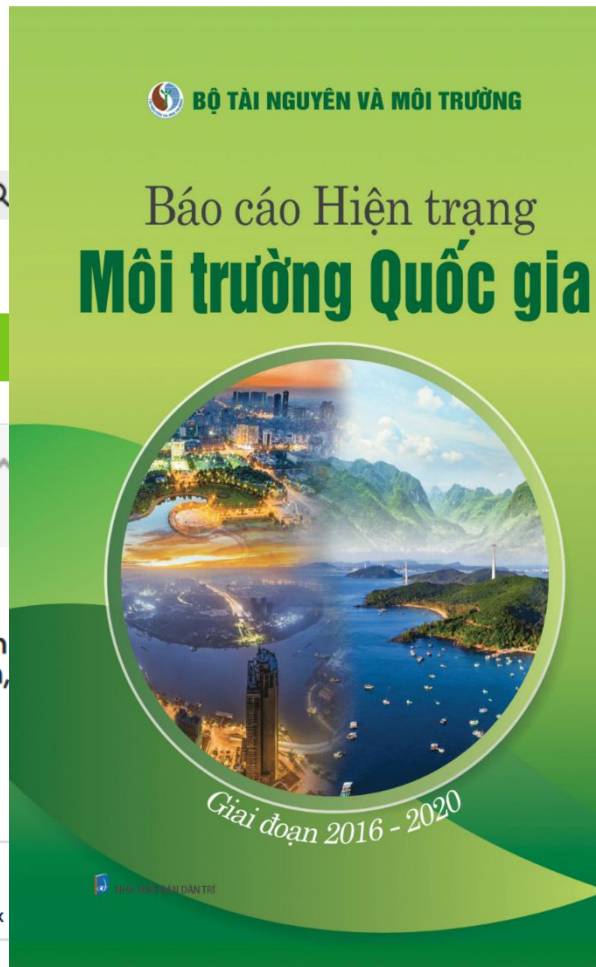
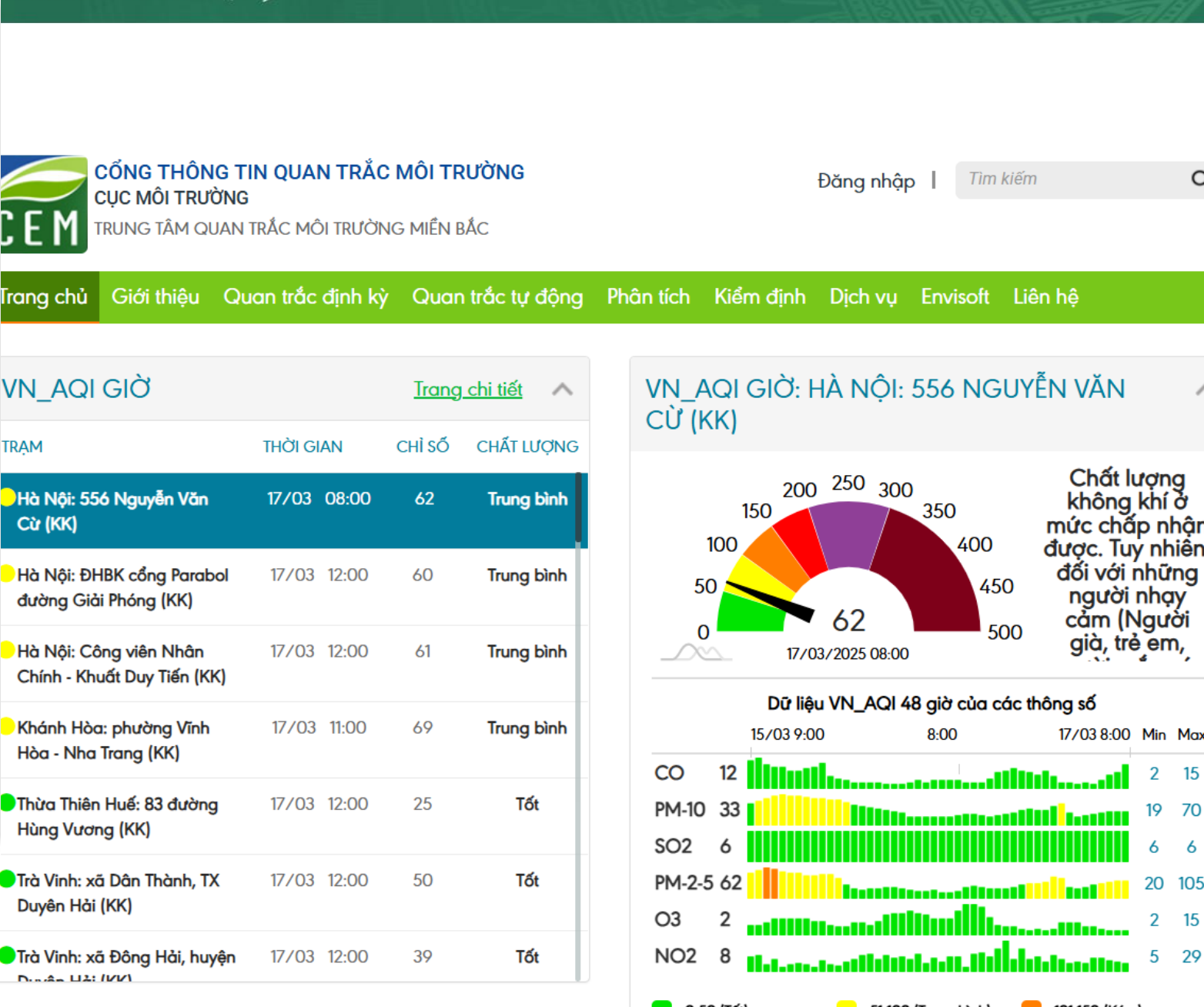
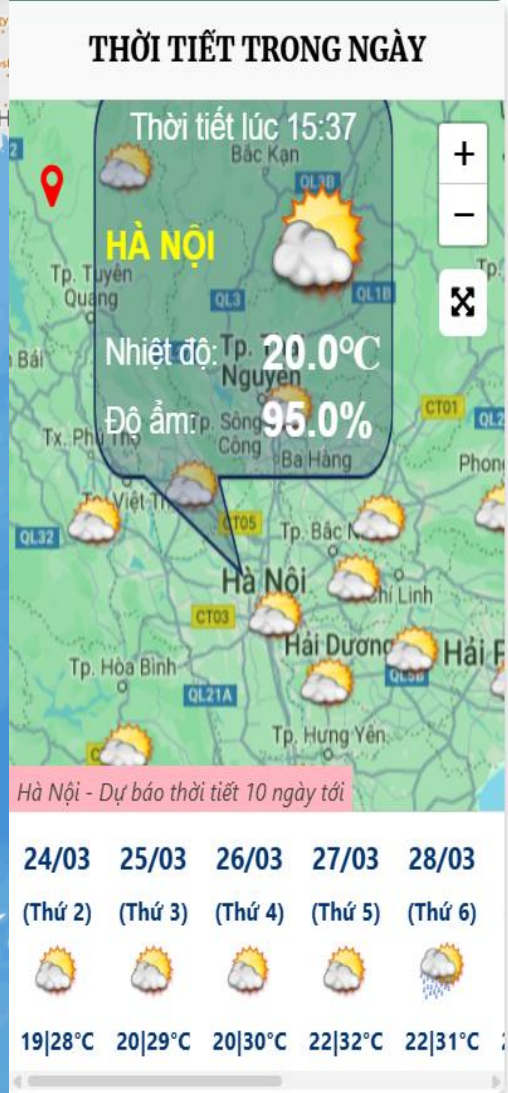
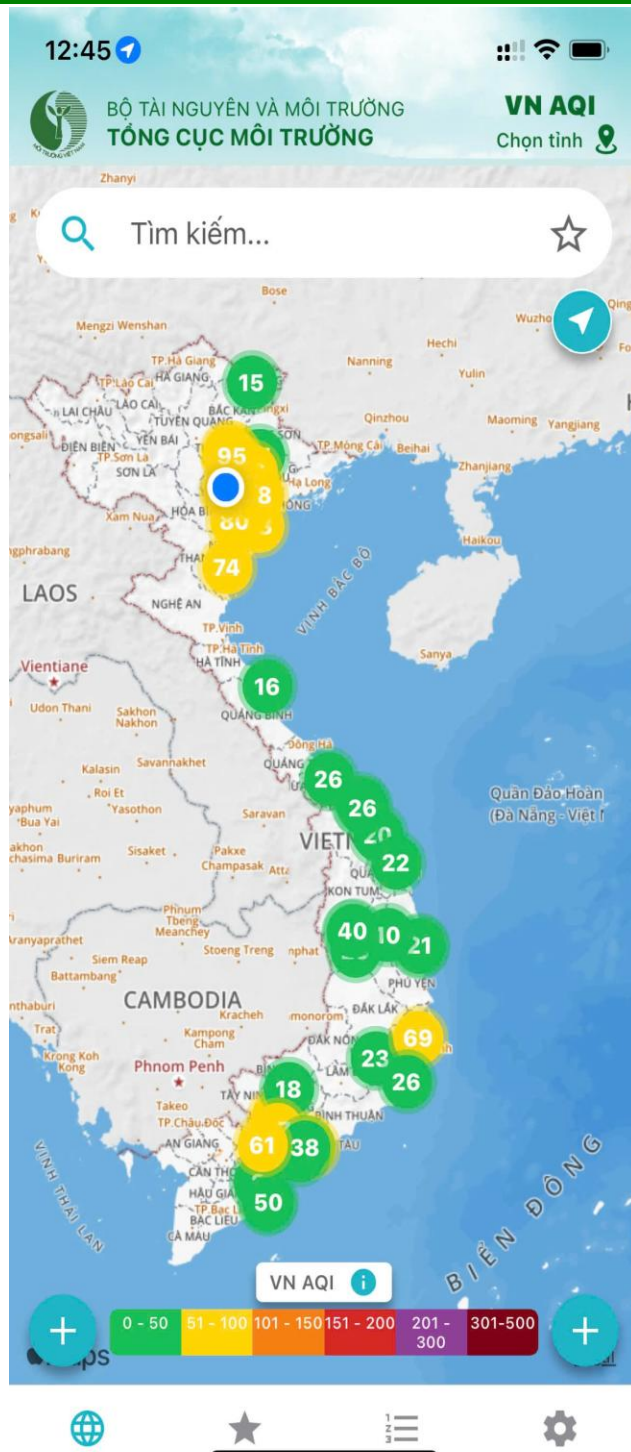
### DANH SÁCH TRẠM THEO TRẠNG THÁI

	Tổng	Mất kết nối	Hoạt động tốt	Hiệu chỉnh	Vượt chuẩn	Lỗi thiết bị	Biểu đồ
Tổng	1972	437	1338	0	103	94	
Nước thải (NT)	909	163	671	0	41	34	
Nước mặt (NM)	139	54	30	0	43	12	
Tham khảo (KK)	55	38	12	0	0	5	
Khí thải (KT)	741	140	578	0	6	17	
Không khí (KK)	128	42	47	0	13	26	

↑ 75 Trạm so với tháng trước (Thay đổi từ ngày 15/03/2025):

- Bắc Ninh: 3
- Ninh Bình: 3
- Gia Lai: 4
- Hải Phòng: 8
- Cần Thơ: 2
- Hà Nội: -1
- Trung tâm QTMB: 2
- Hải Dương: -1
- Bình Dương: 1
- Kiên Giang: 1
- Đắk Nông: 1
- Đồng Nai: 37
- Thừa Thiên Huế: -1
- Tp. Hồ Chí Minh: 14
- Quảng Ngãi: 2

# PUBLICATION OF ENVIRONMENTAL QUALITY INFORMATION



<http://mae.gov.vn/>

<https://enviinfo.cem.gov.vn/>

The background of the slide features a close-up photograph of several long, narrow green leaves, likely from a tropical plant, covered in numerous small, clear water droplets. The lighting is soft, highlighting the texture of the leaves and the glistening of the water. The overall color palette is a range of greens, from deep forest green to a lighter, vibrant green where the droplets catch the light.

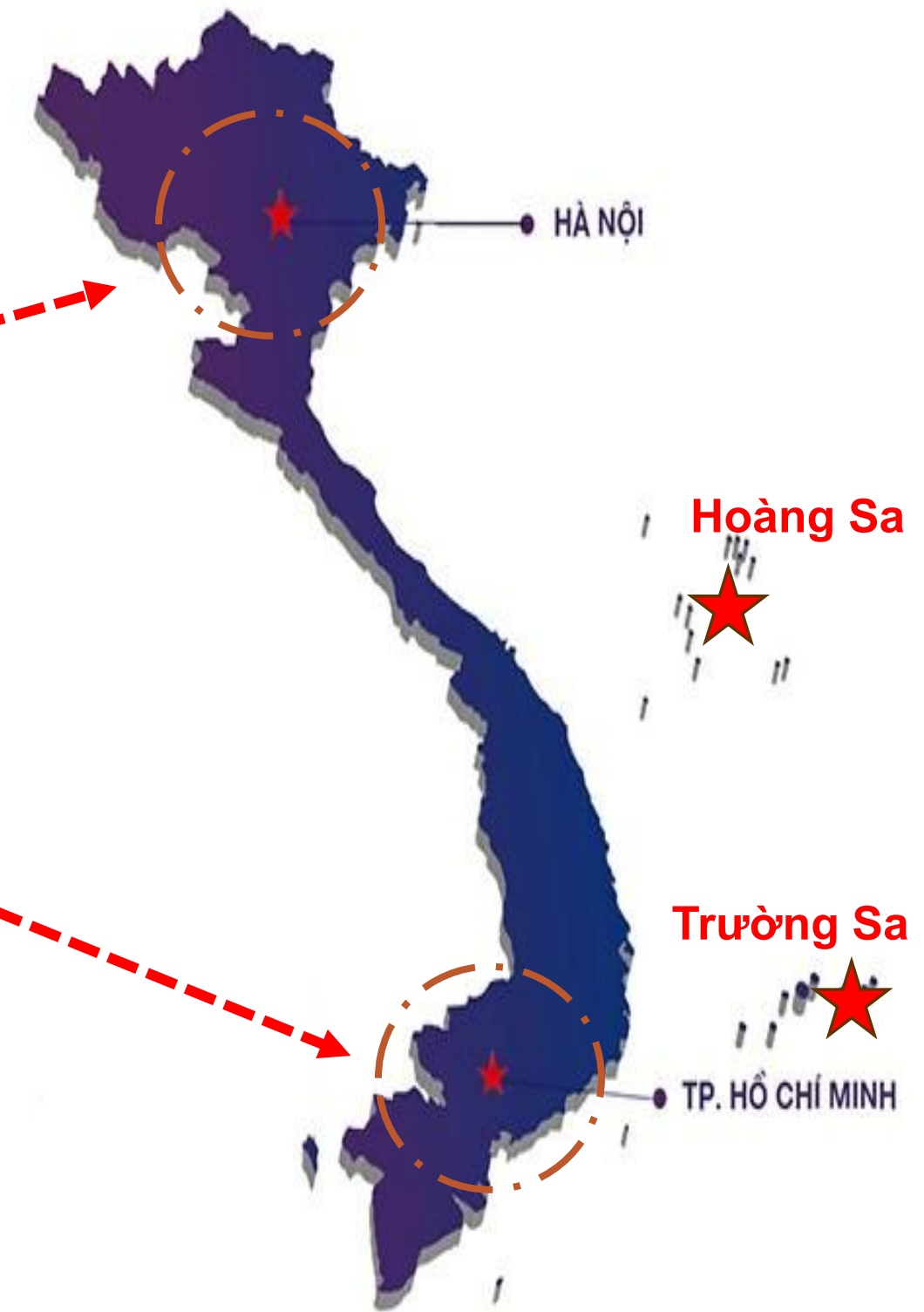
**II. ASSESSMENT OF THE CURRENT  
SITUATION AND CAUSES OF AIR  
POLLUTION IN VIETNAM**



## II. Current status, causes of pollution, and shortcomings in air pollution management

### 1.1. Regarding the current state of air pollution, especially in large cities.

Air pollution is a persistent problem in Vietnam.  
The focus is on two key economic zones:  
+ Northern region (Hanoi city and surrounding provinces)  
+ Southern region (Ho Chi Minh City and surrounding provinces)





## II. Current status, causes of pollution, and shortcomings in air pollution management

### 1.1 Regarding the current state of air pollution, especially in large cities.

Pollution levels increased over the years, especially towards the end of 2024.

The number of days with good air quality accounts for only about 22% of the total number of days in the year.

The VN\_AQI air quality index is at a high level: On some days, the AQI reached 246.

Seasonal and time-of-day pollution patterns

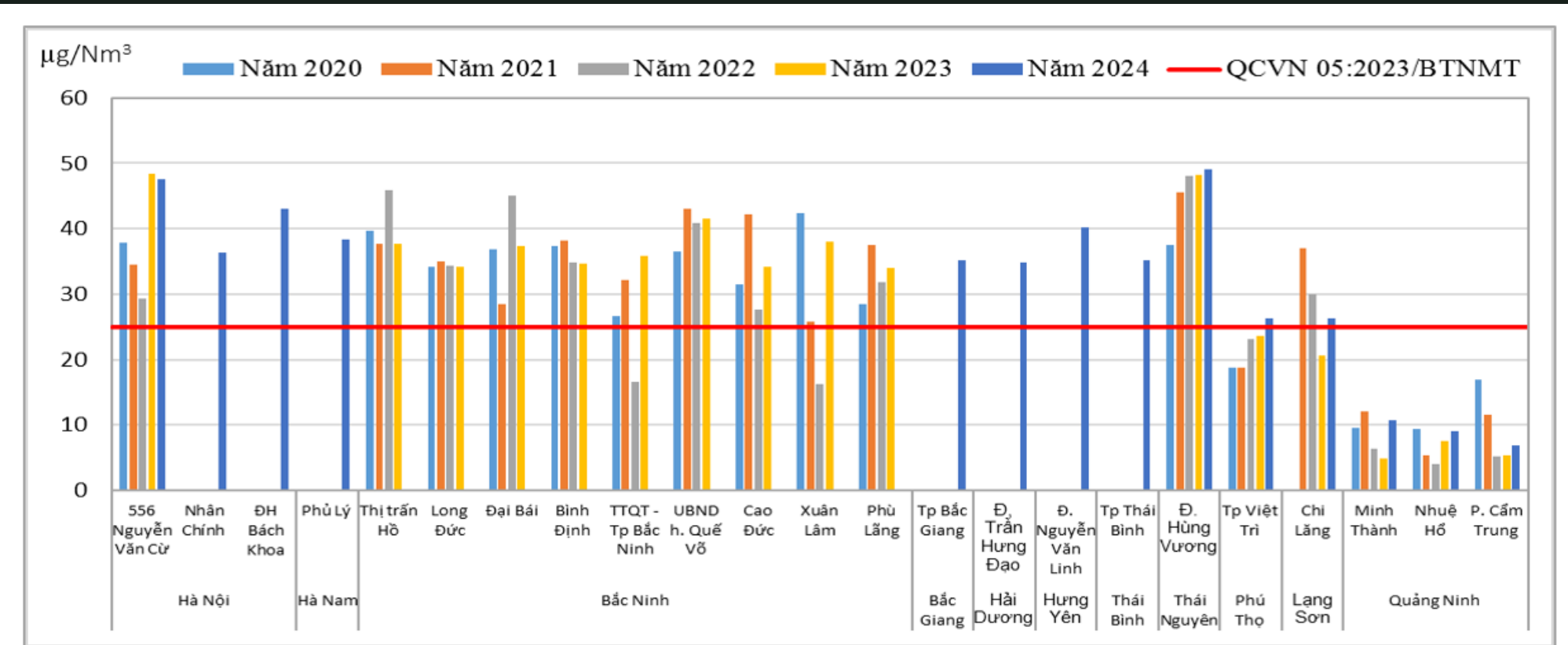
Geographical pattern: Large cities are much more polluted than rural or mountainous areas.





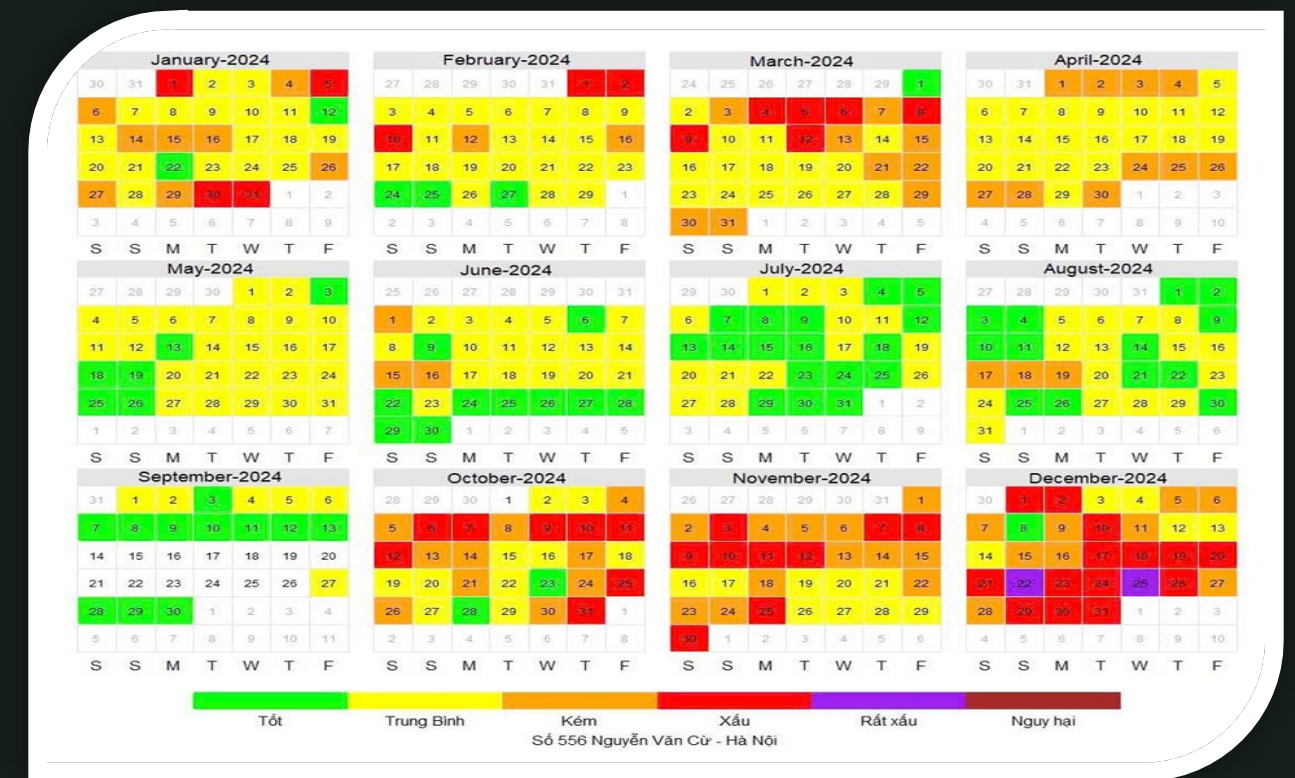
\* Regarding current pollution levels, monitoring results show that:

- Pollution focuses on the concentration of particulate matter, including fine dust (PM<sub>2.5</sub>)
- For parameters NO<sub>2</sub>, O<sub>3</sub>, SO<sub>2</sub> all are within the permissible limits QCVN 05:2023/BTNMT.



Biểu đồ. Diễn biến giá trị Bụi PM<sub>2.5</sub> trung bình năm tại một số trạm quan trắc tự động, liên tục ở khu vực phía Bắc

- Pollution is seasonal (from around October-November of the previous year, lasting until April of the following year).
- They are mainly concentrated in certain areas with high traffic density and a high concentration of manufacturing facilities.





## II. Current status, causes of pollution, and shortcomings in air pollution management

### 1.2. The main causes of air pollution



Traffic

The whole country currently has:  
- **6.8 million cars** in circulation (Hanoi accounts for approximately 1.1 million vehicles; Ho Chi Minh City also has nearly 1 million vehicles in circulation)  
- **77 million motorcycles** and scooters of all types in circulation (Hanoi has approximately 5.6 million, Ho Chi Minh City has approximately 6.3 million vehicles, and Ho Chi Minh City after mergers has approximately 8.6 million vehicles)



Burning operation



Construction activities



Community activities

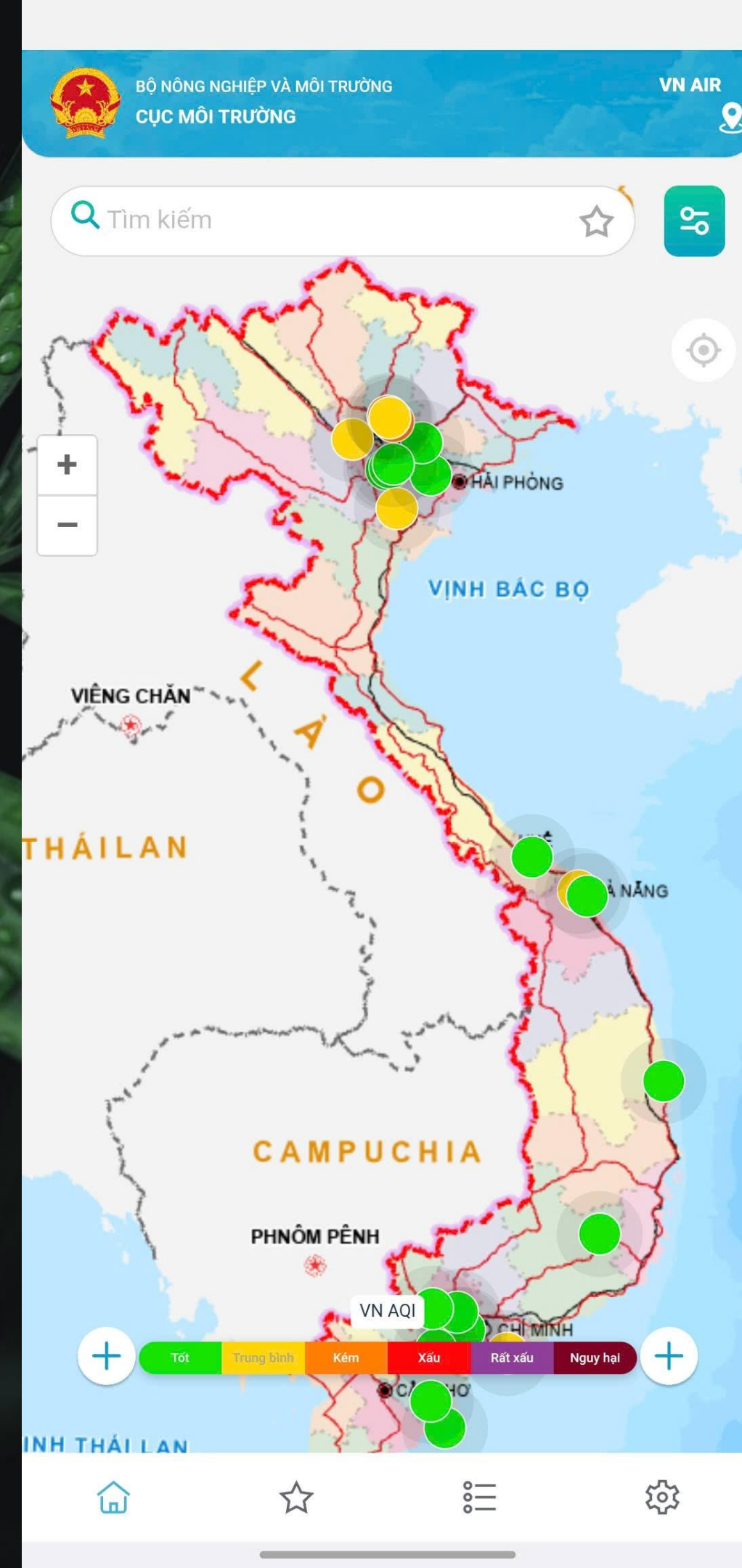


Industrial activities



Climate and weather

# III. ONGOING WORK



Air quality update at 20:30 PM on March 10, 2026, VnAir app.



### III. Ongoing work on air quality management

#### **2.1. Establish a National Steering Committee on Air Pollution Remediation (Focused on Hanoi and Ho Chi Minh City – implementing inter-regional and inter-provincial coordination regulations in air pollution control).**

- Head of the Steering Committee: Deputy Prime Minister
- Deputy Heads: Ministry of Agriculture and Environment; Chairman of the People's Committee of Hanoi City; Chairman of the People's Committee of Ho Chi Minh City
- Members: Representatives from ministries, sectors, and localities adjacent to Hanoi City

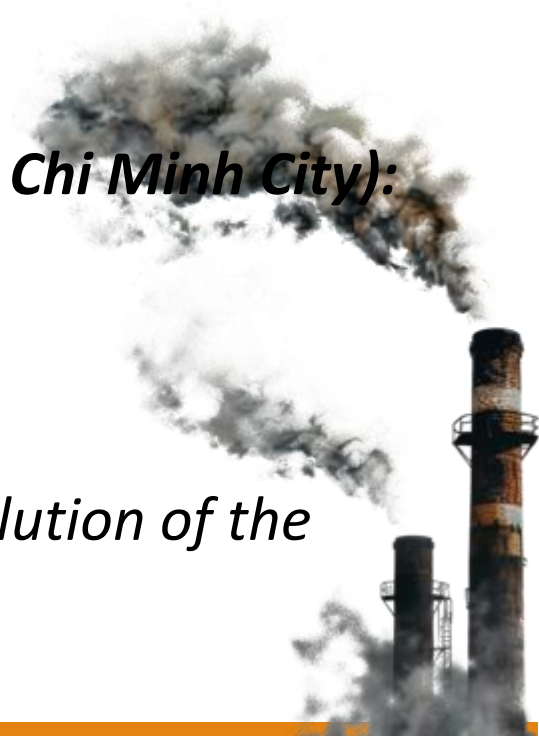
#### **2.2. Road transport vehicle emission control roadmap**

##### ***Roadmap for applying the National Technical Standard on Automobile Emissions (Hanoi & Ho Chi Minh City):***

- *From January 1, 2030: all vehicles in circulation must meet Level 2 or higher.*
- *Vehicles manufactured from 2017: Level 3 (January 1, 2026), Level 4 (January 1, 2027).*
- *Vehicles manufactured from 2022: Level 4 (January 1, 2026), Level 5 (January 1, 2028).*

##### ***Roadmap for applying the National Technical Standard on Motorcycle and Scooter Emissions (Hanoi & Ho Chi Minh City):***

- *July 1, 2027: Emission testing begins.*
- *January 1, 2030: All vehicles must meet Level 2 or higher.*
- *Motorcycles and scooters participating in traffic in the "low emission zone" in Hanoi: comply with the Resolution of the Hanoi City People's Council.*





### III. Ongoing work on air quality management

#### ***2.3. National technical regulations on emissions from motor vehicles participating in traffic and National technical regulations on emissions from motorcycles and scooters participating in traffic.***

##### **Automobiles – QCVN 85:2025/BNNMT (issued June 16, 2025):**

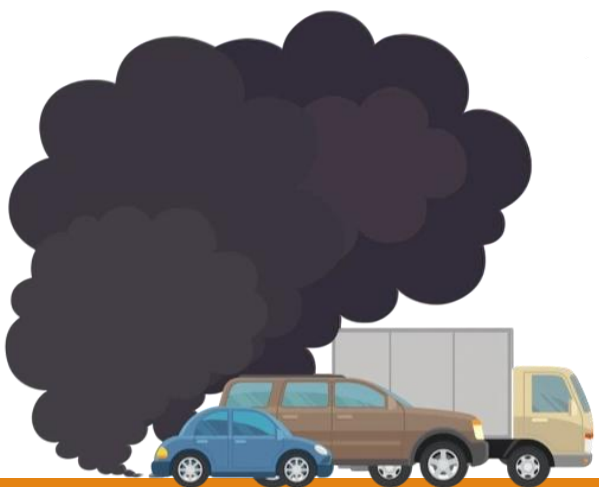
Applicable to automobiles currently in circulation.

Regulations on CO, HC, and smoke smog limits.

##### **Motorcycles and scooters – QCVN 99:2025:**

Four emission standards based on engine type.

Significant reduction in emissions: CO reduced to 2.0%, HC from 2-stroke engines reduced to 2,000 ppm.





### III. Ongoing work

## 2.4. Results of implementing professional work to support the control and treatment of air pollution.

### Air quality monitoring sensor network:

- The total number of sensor devices planned for Hanoi and 8 neighboring localities is 125..
- Hanoi has 76 devices, the rest are in other localities.



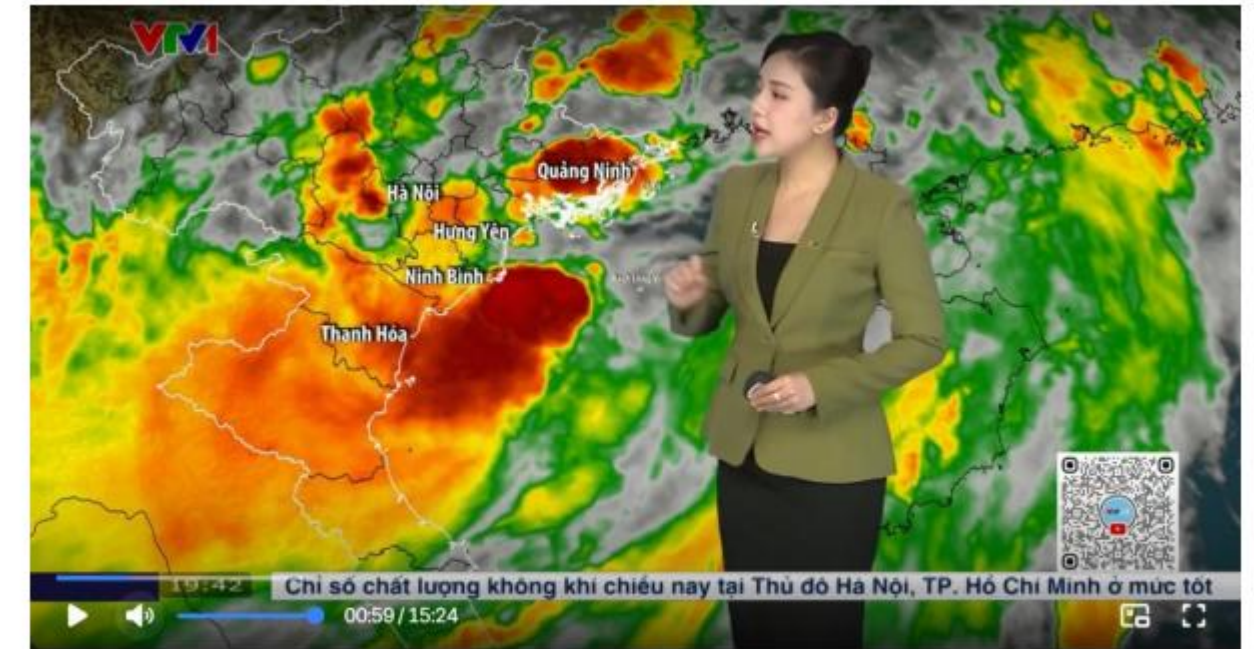
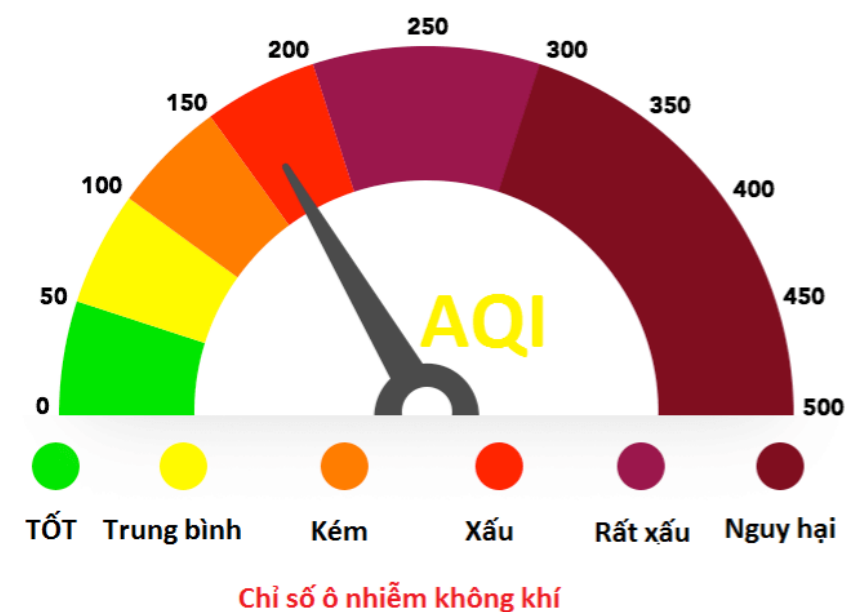


### III. Ongoing work

## 2.4. Results of implementing professional work to support the control and treatment of air pollution.

#### Announcing nationwide air quality forecasts and warnings:

- ✓ Real-time data:
  - Monitoring data and AQI indices are publicly available on the website of the Ministry of Agriculture and Environment (cem.gov.vn) and the VNAIR mobile application.
- ✓ Release of forecast data:
  - A nationwide air quality forecasting system for two days has been developed.
  - We are coordinating with Vietnam Television to provide air quality index (AQI) forecasts for the provinces, updated regularly at 5 PM daily.
  - From August 18, 2025: Weather forecasts for 6 major cities have been displayed as scrolling text on screens during the 7:00 PM News and Good Morning programs (VTV).



Thông tin hiện trạng chất lượng không khí được chạy trong chương trình Thời sự lúc 19h00 ngày 18/8/2025



Thông tin dự báo chỉ số AQI được chạy trong chương trình Thời sự lúc 19h00 ngày 18/8/2025



### III. Ongoing work

#### 2.5. Other key activities

- Control of open burning and construction activities: Coordinate with the National Remote Sensing Agency using drones to monitor the burning of straw in suburban areas and the dispersal of dust from large construction sites, and immediately transmit the results to local authorities for handling.
- Establish inter-agency inspection teams: Coordinate with Hanoi and relevant ministries to establish surprise inspection teams at hotspots for construction, traffic, and areas at risk of burning waste and agricultural by-products, in order to strictly handle violations.
- Coordinate with VTV, VOV Traffic, social media platforms, and iHanoi to disseminate information and issue warnings when pollution hotspots are identified.
- Drafting Regulations on Inter-regional and Inter-provincial Coordination and Emergency Action Plans in Case of Serious Pollution.



# Learning from Beijing's experience



A technical delegation from the Environmental Protection Agency will learn from Beijing's experience in air quality management (May 2026).



Minister Tran Duc Thang and Minister Hoang Nhuan Thu signed a MoU on cooperation in ecological and environmental fields between the Ministry of Ecology and Environment of China and the Ministry of Agriculture and Environment of Vietnam in November 2026.

The background of the image is a close-up photograph of green, elongated leaves, possibly from a tropical plant, covered in numerous small, clear water droplets. The lighting is soft, highlighting the texture of the leaves and the glistening of the water. The overall color palette is dominated by various shades of green, from deep forest green to bright, vibrant green.

# **IV. NATIONAL ACTION PLAN ON AIR POLLUTION REMEDIATION**

**(Decision No. 2530/QĐ-TTg issued on November 19, 2025)**



# III. National Action Plan on Air Pollution Remediation

## 3.1. Structure and basic content of the NAP

*The decision is structured into 3 articles and 2 detailed appendices, ensuring its legal validity and feasibility in implementation.*



THỦ TƯỚNG CHÍNH PHỦ CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM  
Độc lập - Tự do - Hạnh phúc

Số: 2530/QĐ-TTg

Hà Nội, ngày 19 tháng 11 năm 2025

### QUYẾT ĐỊNH

Phê duyệt Kế hoạch hành động quốc gia về khắc phục ô nhiễm và quản lý chất lượng môi trường không khí giai đoạn 2026 - 2030, tầm nhìn đến năm 2045

### THỦ TƯỚNG CHÍNH PHỦ

Căn cứ Luật Tổ chức Chính phủ ngày 18 tháng 02 năm 2025;

Căn cứ Luật Bảo vệ môi trường ngày 17 tháng 11 năm 2020;

Căn cứ Nghị định số 35/2025/NĐ-CP ngày 25 tháng 02 năm 2025 của Chính phủ quy định chức năng, nhiệm vụ, quyền hạn và cơ cấu tổ chức của Bộ Nông nghiệp và Môi trường;

Căn cứ Nghị định số 08/2022/NĐ-CP ngày 10 tháng 01 năm 2022 của Chính phủ quy định chi tiết một số điều của Luật Bảo vệ môi trường;

Căn cứ Nghị định số 05/2025/NĐ-CP ngày 06 tháng 01 năm 2025 của Chính phủ về sửa đổi, bổ sung một số điều của Nghị định số 08/2022/NĐ-CP ngày 10 tháng 01 năm 2022 của Chính phủ quy định chi tiết một số điều của Luật Bảo vệ môi trường;

Căn cứ Nghị quyết số 01/NQ-CP ngày 08 tháng 01 năm 2025 của Chính phủ về nhiệm vụ, giải pháp chủ yếu thực hiện kế hoạch phát triển kinh tế - xã hội và dự toán ngân sách nhà nước năm 2025;

Căn cứ Quyết định số 611/QĐ-TTg ngày 08 tháng 7 năm 2024 của Thủ tướng Chính phủ phê duyệt Quy hoạch bảo vệ môi trường quốc gia thời kỳ 2021 - 2030, tầm nhìn đến năm 2050;

Căn cứ Quyết định số 450/QĐ-TTg ngày 13 tháng 4 năm 2022 của Thủ tướng Chính phủ phê duyệt Chiến lược bảo vệ môi trường quốc gia đến năm 2030, tầm nhìn đến năm 2050;

Theo đề nghị của Bộ trưởng Bộ Nông nghiệp và Môi trường.

### QUYẾT ĐỊNH:

**Điều 1.** Phê duyệt "Kế hoạch hành động quốc gia về khắc phục ô nhiễm và quản lý chất lượng môi trường không khí giai đoạn 2026 - 2030, tầm nhìn đến năm 2045" với các nội dung chủ yếu sau:



### 3.2. Objectives of the plan

**“The overall objective is to “decisively and comprehensively strengthen solutions to improve the effectiveness and efficiency of air quality management nationwide, gradually overcome and improve the pollution situation in major cities, with the goal of protecting public health and promoting green and sustainable economic development.”**

**Air quality indicators have improved.**

**The causes of air pollution are being controlled.**

**Improving and enhancing environmental quality is linked to building civilized urban areas.**



## IV. National Action Plan on Air Pollution Remediation

### 3.2.1 Specific objectives of the plan

Air quality indicators have improved.

Provinces neighboring Hanoi (Thai Nguyen, Bac Ninh, Hung Yen, Hai Phong, etc.)

Reduce the average annual  $PM_{2.5}$  concentration by at least 10% by 2030 compared to 2024.

Ha Noi

- Control and gradually reduce air pollution
- Reduce the number of days with VN\_AQI at "bad" or higher by 20% compared to 2024
- Reduce the average annual  $PM_{2.5}$  concentration by 20% by 2030 compared to 2024
- Maintain other parameters in compliance with standards.

Ho Chi Minh City and other cities

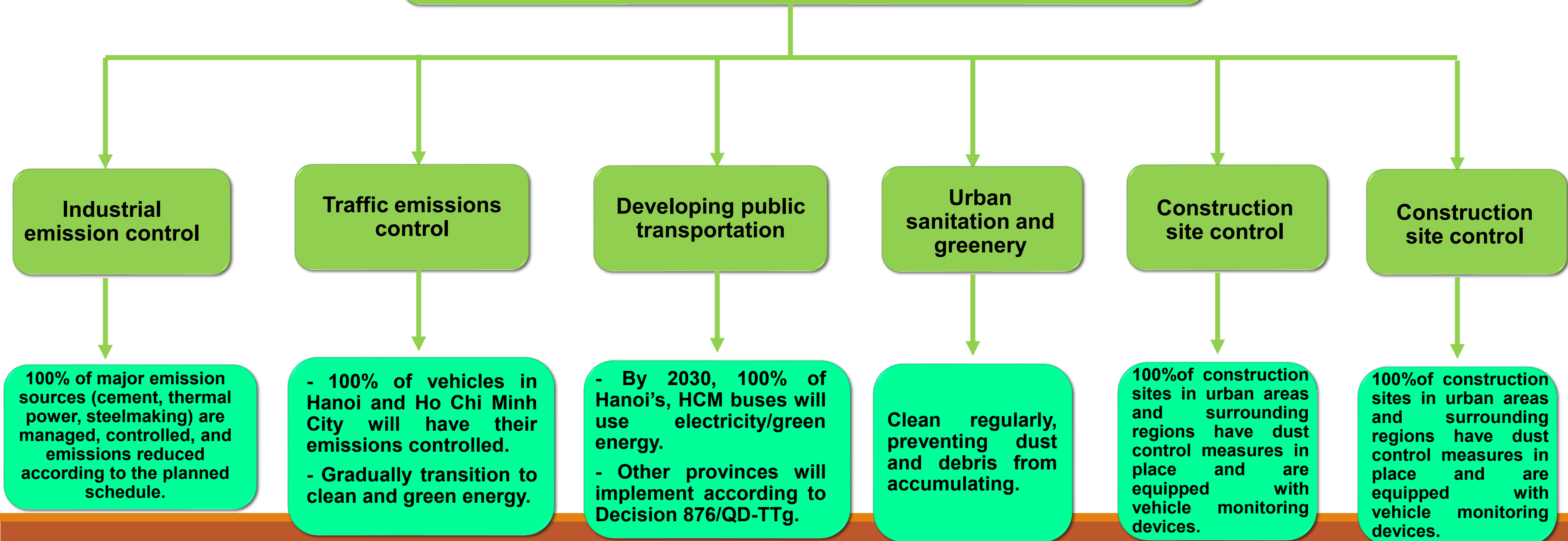
Air quality is continuously improving, with the VN\_AQI index better each year than the previous year.



## IV. National Action Plan on Air Pollution Remediation

### 3.2.2. Specific objectives of the plan

Indicators for controlling the causes of air pollution.





## IV. National Action Plan on Air Pollution Remediation

### 3.2.3. Specific objectives of the plan



Indicators for building civilized urban areas and improving environmental quality.

Greening construction projects

The goal is to have 1,200 green buildings nationwide by 2030.

Applying new technologies

- Pilot testing of air filtration devices and ventilation systems in buildings, evaluating their effectiveness for wider implementation.
- Application of AI in air quality management.

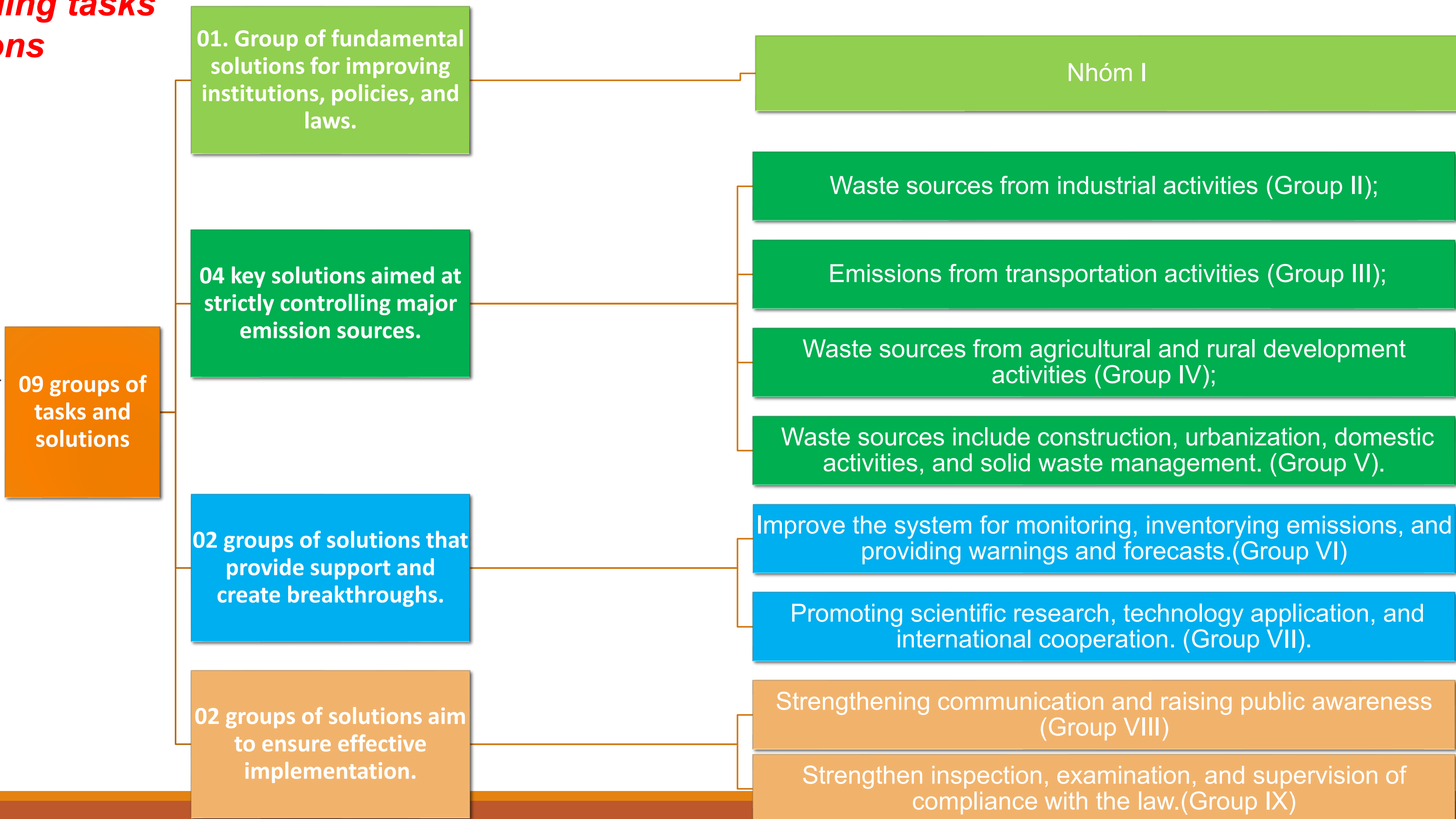
Enhance support tools

- Inter-sectoral and inter-regional coordination.
- Emergency response to pollution.
- Application and transfer of science and technology.
- Strengthening international cooperation and community communication.



# IV. National Action Plan on Air Pollution Remediation

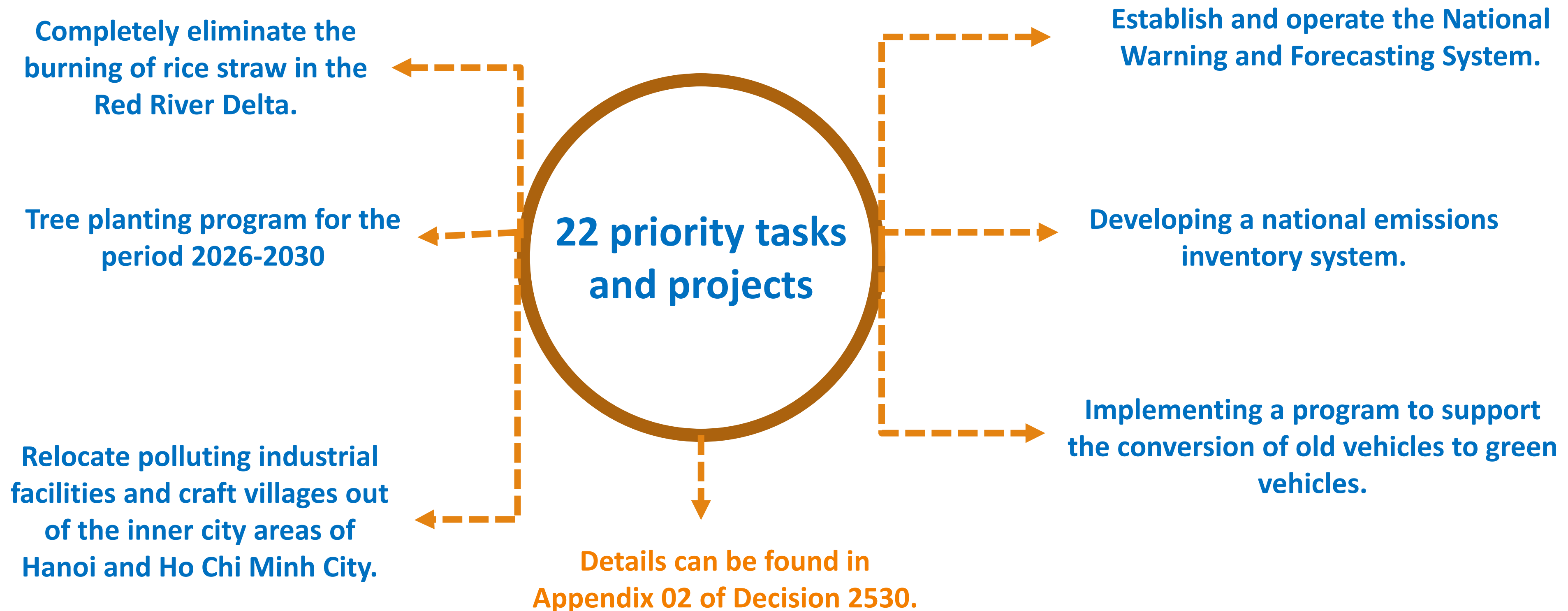
## 3.3. Regarding tasks and solutions





## IV. National Action Plan on Air Pollution Remediation

### 3.3. Regarding tasks and solutions



**THANK YOU SINCERELY**



**LET'S JOIN HANDS TO PROTECT THE BLUE SKY**

