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NewsletterHub of Talents on Air HTAPC Pollution and Climate



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HTAPC Accomplished Activities

- Consultation Meeting to Gather Comments and Recommendations on the Action Plan for Addressing PM_{2.5} Pollution in Bangkok, 2027

HTAPC Knowledge dissemination



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HTAPC Accomplished Activities

Consultation Meeting to Gather Comments and Recommendations on the Action Plan for Addressing PM_{2.5} Pollution in Bangkok, 2027



The Hub of Talents on Air Pollution and Climate (HTAPC), in collaboration with Assoc. Prof. Dr. Surat Bualert from the Faculty of Environment, Kasetsart University, organized a consultation meeting on the Action Plan for Addressing PM_{2.5} Pollution in Bangkok, 2027. The plan is part of the Development of an Ad Hoc Plan and Inclusive Clean Air Management Plan for BMA, supported by C40 Cities and the Clean Air Fund.

The meeting aimed to gather recommendations from key agencies of the Bangkok Metropolitan Administration to strengthen the draft 2027 PM_{2.5} Action Plan and ensure its practical implementation. The discussion highlighted the need to organize measures by pollution source and key supporting mechanisms, including transport and traffic control, open burning reduction, construction and urban source management, and integrated management systems such as a Warroom, Super Station, AQHI, Dashboard, and health database.

Key recommendations emphasized a clearer plan structure, responsible agencies, measurable indicators, and continuous monitoring and evaluation. These inputs will be analyzed and synthesized into a proposed Ad Hoc Action Plan for the Prevention and Mitigation of PM_{2.5} Pollution in Bangkok, 2027, to be submitted to the Bangkok Metropolitan Administration by this August.



HTAPC Knowledge dissemination

HTAPC Develops Bangkok's Six-Year Air Pollution Reduction Plan 2027–2032: Advancing PM_{2.5} Solutions to Restore Clean Air for the Public

Bangkok, Thailand's densely populated capital and major economic hub, has long faced serious air pollution challenges and has been designated as a Pollution Control Zone under the Enhancement and Conservation of National Environmental Quality Act B.E. 2535 (1992). This led to the development of the Bangkok Action Plan for Pollution Reduction and Elimination in the Pollution Control Zone, 2027–2032, a six-year framework guided by the vision of "Sustainable and Resilient Bangkok with Clean Air for Good Health." The plan aims to improve Bangkok's air quality by controlling PM_{2.5} and O₃ levels within safe limits, reducing emissions from major pollution sources, and expanding health protection for people affected by PM_{2.5} by 2032.

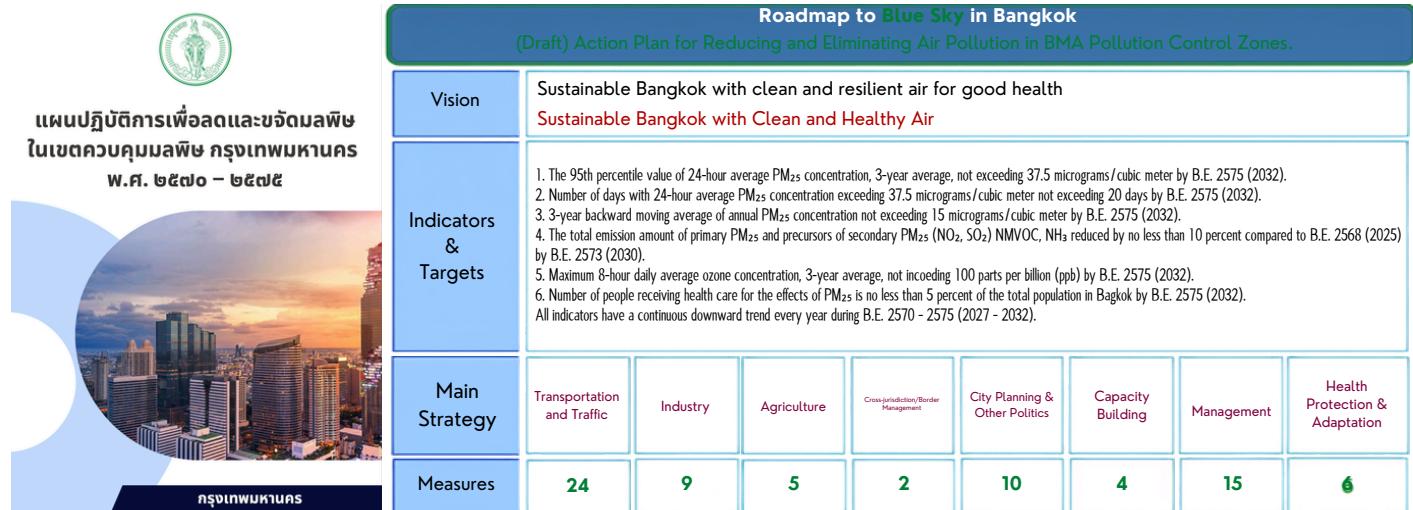


Figure 1. Vision, goals, indicators and targets, key strategies, and summary of the number of measures under the Action Plan for Pollution Reduction and Elimination in the Pollution Control Zone of Bangkok, 2027–2032

The main sources of air pollution affecting Bangkok residents include diesel vehicles, construction activities, industrial facilities, and open burning of biomass in surrounding provinces, especially during the winter season when stagnant weather conditions worsen pollution levels. Although Bangkok has implemented several measures, such as Low Emission Zones, black smoke inspections, work-from-home promotion, and green space expansion, these efforts remain insufficient to address the structural causes of air pollution. Therefore, this Action Plan has been designed to go beyond short-term responses by establishing a systematic and comprehensive approach across the entire chain of pollution sources, both within and outside the city. It promotes integrated collaboration among government agencies, the private sector, and the public through eight key strategies.

Strategy 1: Transport and Traffic aims to reduce PM_{2.5} emissions from the transport and traffic sector by at least 10% from the 2024 baseline by 2032. Key measures include implementing Low Emission Zones (LEZ) across all 50 districts during pollution crisis periods, using licenseplate recognition cameras, considering congestion charging in high-traffic areas, restricting trucks during severe PM_{2.5} episodes, using CCTV for preliminary black smoke detection, introducing an integrated ticketing system to encourage public transport use, promoting electric passenger boats and EV charging stations, and accelerating mass transit rail development.

Strategy 2: Industry targets a reduction of PM_{2.5} and NO_x emissions from the industrial sector by at least 50% from the 2024 baseline by 2032. Key measures include ensuring that factories properly install and operate Continuous Emission Monitoring Systems (CEMS), linking emission data with relevant agencies, enforcing stack emission standards, considering the expansion of measures to factories in surrounding provinces, promoting low-sulfur fuel oil, encouraging low-emission fuels, machinery, and production processes, and supporting clean production technologies, clean energy, renewable energy, and green industry certification.

Strategy 3: Agriculture aims to reduce PM_{2.5} emissions from agricultural biomass burning by at least 20% from the 2024 baseline by 2032, with a focus on Bangkok, surrounding provinces, and nearby areas. Key measures include promoting improved farming practices and production value chains, encouraging cooperation to avoid burning during pollution crisis periods, using satellite imagery and artificial intelligence to monitor agricultural burning, and developing controlled burning systems that consider air quality and the pollution carrying capacity of each area.



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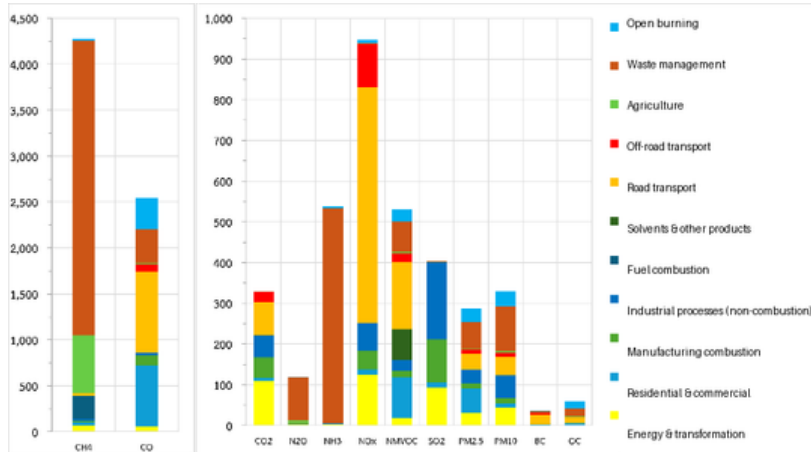


Figure 2. Composition of air pollutant emissions in Bangkok and its metropolitan area in 2024, classified by source

Source: Action Plan for Pollution Reduction and Elimination in the Pollution Control Zone of Bangkok, 2027–2032

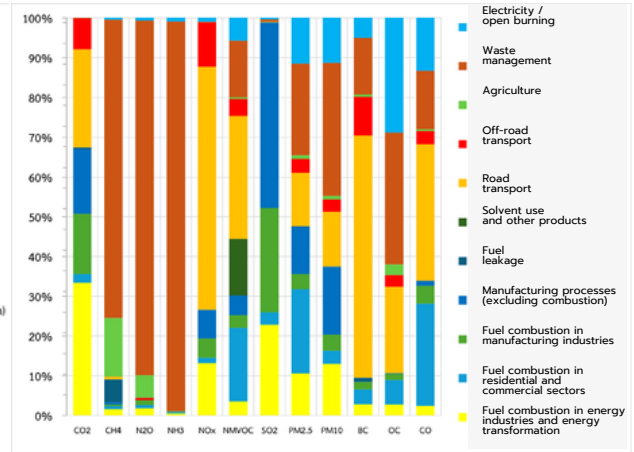


Figure 3. Proportion of air pollutant emissions in Bangkok and its metropolitan area in 2024, classified by source

Source: Action Plan for Pollution Reduction and Elimination in the Pollution Control Zone of Bangkok, 2027–2032

Strategy 4: Cross-boundary and Transboundary Pollution Management aims to reduce the proportion of PM_{2.5} in Bangkok originating from sources outside the city by at least 20%. This strategy focuses on addressing pollution that extends beyond Bangkok's administrative boundaries. Key measures include developing cooperation mechanisms between Bangkok, surrounding provinces, and neighboring areas by 2030 to control PM_{2.5} and precursor pollutants that contribute to secondary pollutants such as PM_{2.5} and ozone. It also promotes international cooperation to address transboundary haze more effectively.

Strategy 5: Urban Areas and Other Sources focuses on preventing the Urban Heat Island Intensity from increasing by 2032. This strategy links air quality management with urban planning and environmental design. Key measures include promoting the replacement of cremators with electric cremators, developing a new Bangkok comprehensive city plan that considers air pollution reduction, increasing and maintaining horizontal and vertical green spaces, developing a tree management database, promoting safe walking and cycling infrastructure, restoring mangrove forests, requiring permeable areas for tree planting in new developments, and supporting clean waste management technologies and smokeless biomass stoves.

Strategy 6: Human Resource Planning and Capacity Building aims to ensure that 100% of Bangkok Metropolitan Administration personnel involved in air pollution management receive training in air quality management by 2032. Key measures include developing a competency management system, defining job descriptions and career development pathways, creating training programmes aligned with the skills needed for air quality management, planning staffing for environmental officers with specialized knowledge in air pollution, and providing continuous training for teachers in Bangkok's schools and child development centers.

Strategy 7: Management System aims to establish a comprehensive air quality management system for Bangkok that meets international standards and can be continuously improved by 2032. Key measures include air pollution and meteorological monitoring, early warning systems especially for vulnerable groups, development of an Air Quality Health Index (AQHI), hourly PM_{2.5} guideline values for health warnings, standards for light-scattering sensor measurements, source apportionment combined with emission inventories, installation of 10 ozone monitoring stations, improved PM_{2.5} forecasting using standardized sensors, analysis of air pollution complaints through Traffy Fondue, and development of an integrated database covering air quality, emission sources, meteorology, health impacts, and economic impacts.

Strategy 8: Health Impact Prevention and Adaptation aims to ensure that at least 5% of Bangkok's population receives health care support related to PM_{2.5} impacts by 2032, with particular attention to high-risk and vulnerable groups during pollution episodes. Key measures include deploying health teams to conduct field health checks, providing telemedicine services and medicine distribution through local pharmacy networks, preparing clean air rooms, personal protective equipment, medicines, and public health response units, opening air pollution clinics during crisis periods, and developing vulnerability maps for air pollution and PM_{2.5} to support targeted public health protection.

Overall, the Action Plan consists of eight key strategies covering all relevant sectors involved in reducing and eliminating air pollution in Bangkok, with a total of 75 measures. Its indicators are expected to show continuous improvement throughout 2027–2032, reflecting Bangkok's commitment to the "Roadmap to Blue Sky in Bangkok" and the goal of restoring clean air for all Bangkok residents.



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Hub of Talents on Air Pollution and Climate (HTAPC)



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