



HTAPC Newsletter

Issue 8, September 2024



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Image: Ferdyboy/Shutterstock

Source: <https://earthjournalism.net/stories/pollution-paralysis-thailands-inability-to-clean-up-its-air>

Accomplished Activities

of Hub of Talent on Air Pollution and Climate (HTAPC)



International Academic Conference title “Invest in Solutions to Reduce Open Burning for Clean Air”



On September 5, 2024, the Hub of Talent on Air Pollution and Climate (HTAPC) under the National Research Council of Thailand (NRCT), Ministry of Higher Education, Science, Research and Innovation, in collaboration with the United Nations Environment Programme (UNEP), United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), Climate and Clean Air Coalition (CCAC), and the Embassy of the Republic of Korea (ROK), organized an international seminar under the theme “Invest in Solutions to Reduce Open Burning for Clean Air” as part of the 5th International Day of Clean Air for Blue Skies. The event took place at the United Nations Conference Centre (UNCC) in Bangkok and was also held online via Zoom meeting.



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The seminar brought together experts from various fields across the Asia-Pacific region to exchange knowledge and discuss critical issues concerning air quality and climate change, with a focus on transboundary haze caused by biomass burning in Southeast Asia. This issue significantly impacts both public health and the environment. The discussions included an analysis of the potential economic costs of inaction and explored advanced technologies and innovations to manage biomass without burning for aiming to reduce these negative effects.



Moderator

Thammasa



Participants also gained valuable insights into the monitoring and assessment of wildfire and open burning impacts, particularly in agriculture. The concept of community-based fire management was highlighted, promoting the involvement of local communities in addressing these challenges. Moreover, the seminar stressed the importance of regional investment strategies aimed at reducing biomass burning and air pollution. It encouraged collaboration between various organizations and emphasized the need for long-term investments in infrastructure and technologies that can decrease biomass burning, fostering a future with cleaner and more sustainable air.



The event also provided a platform for attendees to engage in discussions, ask questions, and exchange ideas on future solutions for air pollution and biomass burning. This collaborative effort is expected to strengthen partnerships between governments, private organizations, and community in addressing the pressing issues affecting air quality and public health.

Emission Inventory of PM_{2.5} in Bangkok Metropolitan Region (BMR)

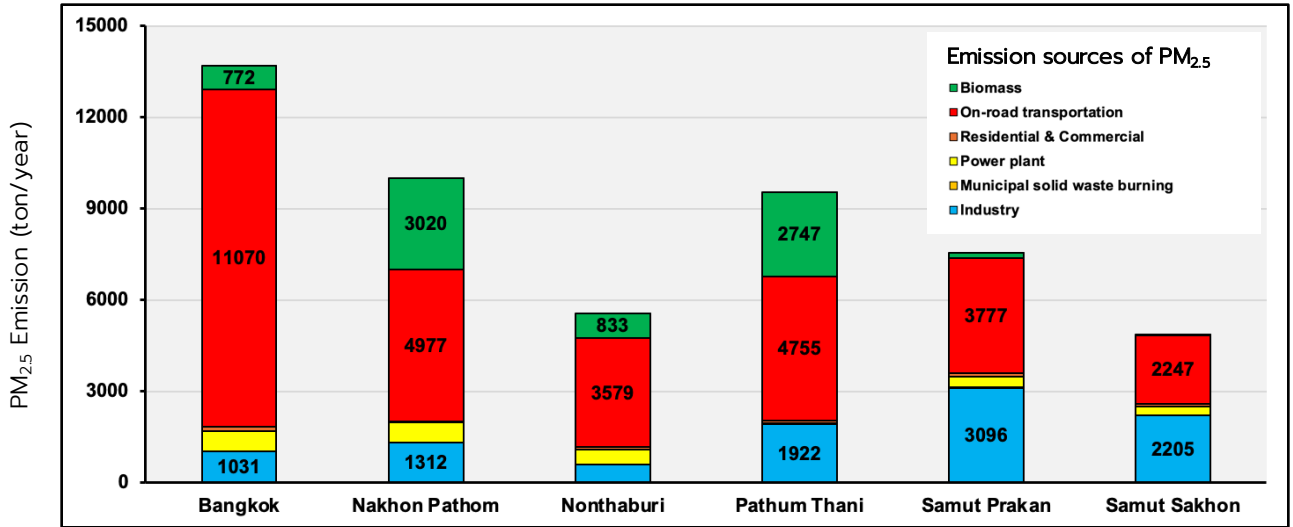
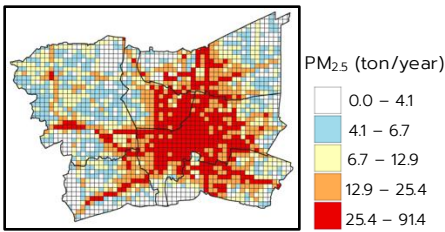


Figure 1 Emission inventory of PM_{2.5} in Bangkok Metropolitan Region for the year 2019

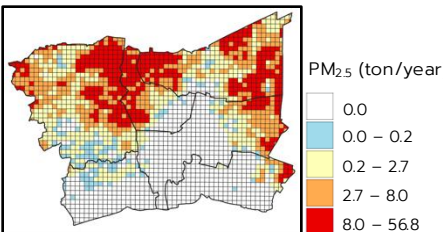
Source: Collaborating Center for Clean Air and Climate Change (CCCACC)

PM_{2.5} issue in Bangkok Metropolitan Region (BMR) is a significant environmental concern impacting public health. Developing a PM_{2.5} emission inventory is essential for shaping effective air quality management policies. The HTAPC and CCCACC compiled a PM_{2.5} emission inventory for the year 2019 identifying six major sources of PM_{2.5} emissions in BMR including biomass open burning, transportation, industry, power plant, municipal solid waste burning, residential and commercial sectors. Bangkok presented the highest emissions at 13.7 kilotons per year, mainly from transportation (80.1%), biomass open burning (5.6%) and industry (7.5%). Nakhon Pathom and Pathum Thani followed with 10.1 and 9.5 kilotons per year, respectively. The emission sources of PM_{2.5} are similar across provinces but vary by local activity data and land use patterns.

1) Transportation



2) Biomass open burning



3) Industry

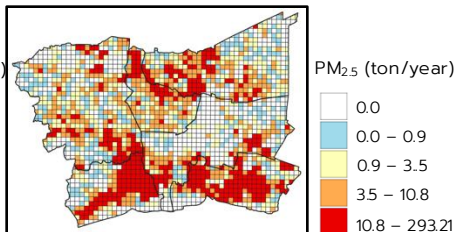


Figure 2 Spatial distribution of PM_{2.5} emissions in Bangkok Metropolitan Region

Source: Collaborating Center for Clean Air and Climate Change (CCCACC)

Based on the spatial distribution of PM_{2.5} emissions in BMR at a resolution of 2x2 kilometers analyzed using land use data from the Land Development Department. The PM_{2.5} emissions from transportation are concentrated in areas with traffic jam such as major roads, urban areas and Bangkok. In contrast, the PM_{2.5} emissions from biomass open burning are distributed in agricultural areas, particularly rice paddies and sugarcane fields, mainly in Nakhon Pathom, Nonthaburi and Pathum Thani. The PM_{2.5} emissions from industrial sources are particularly high in industrial areas and estates such as in Samut Sakhon and Samut Prakan (Figure 2).

We cordially invite you to join us

Hub of Talents on Air Pollution and Climate

HTAPC Membership Form for Experts



Official website of Hub of Talents on Air Pollution and Climate (HTAPC)

<https://www.htapc.inf>



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