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NASA Research Project Confirms Biomass Burning as Major Contributor to Air Pollution in Northern Thailand

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Recent findings from the ASIA-AQ Science Team Meeting have revealed that biomass burning is a significant contributor to PM2.5 dust pollution in northern Thailand. The meeting, which brought together scientists from universities and research institutes across Thailand, including the Geo-Informatics and Space Technology Development Agency (GISTDA), with NASA researchers led by James H. Crawford, focused on preliminary data analysis from the ASIA-AQ project.

The analysis, which incorporated data from NASA's airborne instruments, ground-based monitoring data from the Republic of Korea in Chiang Mai, and atmospheric compound measurements, strongly suggests that biomass burning plays a crucial role in the formation of PM2.5 dust particles in the region.

The research distinguishes between primary aerosols, directly emitted from sources, and secondary aerosols, which form through chemical reactions in the atmosphere. Initial findings indicate that a significant portion of PM2.5 dust particles in northern Thailand are secondary aerosols, primarily resulting from human activities and residual smoke from biomass burning. This emphasizes the critical need to understand and address the full impact of combustion processes on air quality.

Pakorn Apaphan, Director of GISTDA, emphasized the importance of this research collaboration. "Over the past year, GISTDA has closely collaborated with a team of Thai scientists and worked together with NASA to gain in-depth data on the factors contributing to air pollution in Thailand," stated Pakorn. "The research results will be included in a joint GISTDA-NASA report, which is scheduled for public release in late

February 2025. Ongoing scientific verification will continue to ensure the public gains a comprehensive understanding of air pollution dynamics in Thailand, based on scientific evidence and reliable research outcomes.”