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Biomass burning is a major source of particulate matter in Indian cities

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ABSTRACT

Biomass burning is found to be reported as major source of particulate matter in several places in India, which includes surprisingly both small and mega cities. This study, which is based on the recent reports, suggest that about half of the atmospheric aerosol loading in several places in India is due to incomplete combustion of fuel, which includes domestic cooking (biomass/bio-fuel), open burning practices (of garbage, garden-waste/tree leaves, agriculture-waste, etc.), burning of biomass in brick clinkers (especially in small scale), biomass and waste burnings for heating purposes especially in winter season, etc. These biomass burnings are largely responsible for particulate bound organics (many toxicants in air, such as polycyclic aromatic hydrocarbons (PAHs), nitro-organics, organic acids, alcohols, ketones, etc.) and bulk water-soluble organic carbon (WSOC), organic carbon (OC), elemental carbon (EC) and inorganic ions. More studies especially long-term are needed to better know the sources of bulk biomass burning types in different places/cities in India. A policy/regulation should be in place to control such biomass burning practices in India.

Keywords: Biomass burning, Source of Particulate matter.
