

Quantification of household emissions in non-attainment cities of Punjab, India

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Air pollution has become a grave problem in recent times throughout the world, especially in north India. Studies have shown that household emissions is one of the major contributors to PM_{2.5} in north India. In this study, a bottom-up emission inventory for household emissions from non-attainment cities in Punjab is developed. Emissions from household fuels such as wood, brushwood, straw, grass, coal, coal briquette, charcoal, dung, natural gas, LPG (Liquified Petroleum Gas), biogas and electricity have been quantified. The conclusions from this emission inventory is used to modify the European Union' s EDGAR emission inventory. With this modified emission inventory, the contribution of PM_{2.5} due to household emissions in Punjab is predicted using Weather Research and Forecasting model coupled with Chemistry (WRF-Chem). Results indicate significant contribution from household emissions calling for an urgent action to control PM_{2.5} in this region.

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