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Title:	Will open waste burning become India's largest air pollution source?
Authors:	Sharma, Gaurav (/jspui/browse?type=author&value=Sharma%2C+Gaurav) Annadate, Saurabh (/jspui/browse?type=author&value=Annadate%2C+Saurabh) Sinha, Baerbel (/jspui/browse?type=author&value=Sinha%2C+Baerbel)
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Abstract:	India struggles with frequent exceedances of the ambient air quality standard for particulate matter and benzene. In the past two decades, India has made considerable progress in tackling indoor air pollution, by phasing out kerosene lamps, and pushing biofuel using households towards Liquefied Petroleum Gas (LPG) usage. In this study, we use updated emission inventories and trends in residential fuel consumption, to explore changes in the contribution of different sectors towards India's largest air pollution problem. We find that residential fuel usage is still the largest air pollution source, and that the <10% households using cow dung as cooking fuel contribute ~50% of the residential PM2.5 emissions. However, if current trends persist, residential biofuel usage in India is likely to be phased out by 2035. India's renewable energy policies are likely to reduce emissions in the heat and electricity sector, and manufacturing industries, in the mid-term. PM2.5 emissions from open waste burning, on the other hand, hardly changed in the decade from 2010 to 2020. We conclude that without strong policies to promote recycling and upcycling of non-biodegradable waste, and the conversion of biodegradable waste to biogas, open waste burning is likely to become India's largest source of air pollution by 2035. While our study is limited to India, our findings are of relevance for other countries in the global South suffering from similar waste management challenges.
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