

## عنوان مقاله:

Fuel wastage and pollution due to road toll booth

## محل انتشار:

فصلنامه جهانی علوم و مدیریت محیط زیست, دوره 7, شماره 2 (سال: 1400)

تعداد صفحات اصل مقاله: 14

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## خلاصه مقاله:

**BACKGROUND AND OBJECTIVES:** The study provides an assessment of fuel wastage, particulate matter particles pollution, and noise pollution at three toll booths near district Varanasi, India. The objective of the study is to analyze the effects of vehicle idling conditions on road tolls in terms of pollution and fuel wastage. **METHODS:** The study used mathematical formulation on queuing observations for assessment of fuel wastage due to vehicle idling at toll booths. Handheld device HT-9600 Air Particle counter was used for getting the readings of PM2.5 and PM10. SL10 noise meter of Extech Instruments was used for measuring the noise levels at the selected three toll booths of Dafi Toll Booth, Lalanagar Toll Booth, and Mohania Toll Booth. **FINDING:** The study assessed a greater extent of fuel wastage at all the three toll booths with maximum fuel wastage at Dafi Toll booth due to vehicle idling. In terms of air pollution, severe levels of particulate matter particles were observed over all the three toll booths. The noise levels over the three toll booths were also observed significantly high. **CONCLUSION:** The study suggested that serious measures are required to control and regulate toll booths to avoid vehicle idling, which will lead to savings of fuel and air and noise pollution.

## کلمات کلیدی:

Air pollution, Fuel wastage, noise pollution, Particulate matter (PM10 + PM2.5), Toll booth

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