Pune, India

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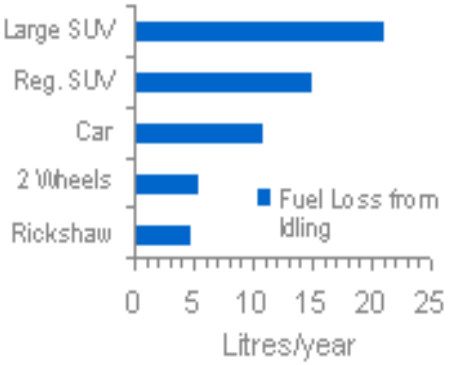
Using vehicle numbers from the Pune Municipal Corporation Environment Status Report, emission factors for various pollutants from SIM-air and some assumptions about vehicular usage, the **impact of idling** were estimated for Pune. Analysis results are staggering and highlighted in the local newspaper (below) for further public awareness.

On a daily basis, assuming a vehicle idles for just 2 minutes every day -- the total fuel wasted by idling cars, two wheelers and rickshaws amounts to an incredible 19 thousand litres per day! Emissions of greenhouse gases amount to 45 tonnes/day.

Vehicle Type	Total Fuel Loss from Idling lt/yr	Total CO_2 tons/yr	Total PM_{10} tons/yr	Total SO_x tons/yr
Cars	1,625,500	3,899	9.75	4.8
2 Wheelers	4,959,000	11,901	4.86	4.9
3 Wheelers	333,200	800	3.05	1.9
Total (ktons)	**6,917,700**	**16,600**	**17.66**	**11.52**



From, Times of India, Pune July 25th 2008

City Wastes Rs 34 Crore Every Year Due To Idling, Finds Study

Switch off at signals, save fuel

Aditi Utpat | TNN

Pune: Every Punekar wastes at least Rs 100 worth of fuel per year by not switching off his/her vehicle at traffic junctions, as per a study conducted by Punekar, Suvrat Kher. Applying this equation to entire Pune, Kher says the entire city wastes about Rs 34 crore due to idling of vehicles. A geologist by profession, Kher was inspired to study the relationship between pollution and idling of vehicles by the maddening traffic jams he faced everyday in the city.

Suvrat Kher

"I cross the Law College road junction everyday. The situation there is appalling. I studied the Pune Municipal Corporation's (PMC) annual environment status report, and realised that it did not provide any relevant data. That was when I embarked on this study," said Kher.

Assuming that each vehicle idles for about two minutes per day (which, he confesses, is a very conservative estimate), vehicles in the city waste up to 19,000 litres of fuel every day and emit 45 tonnes of greenhouse gases, said Kher.

The study finds that idling vehicles waste upto 19,000 litres of fuel and emit 45 tonnes of greenhouse gases every day in Pune

Elucidating on the methods used for calculation, Kher described how he used the annual environment status report of the PMC to obtain the statistics. He further obtained a carbon calculator for vehicles created by the Canadian Office of Energy Efficiency and multiplication factors from World Bank Energy report. "I thought the calculations will be very complex. But after obtaining the tools, I realised that it was a matter of mere multiplication," said Kher.

He added that for the purpose of calculation, he had estimated that most engines of vehicles were produced in the years between 1980 and 2000. "The efficiency of vehicles changes with usage, and also depending on the level of maintenance. Since the vehicles in the city are neither brand new nor very old, I chose this period." Kher stressed that while the emphasis is on carbon dioxide emissions, other pollutants like sulphur dioxide are as harmful, if not more. While the effects of carbon emissions will be visible in the medium to long term, effects of particulate pollutants are immediately visible in terms of health hazards.

"We must accept that no one is going to stop using their vehicles very soon. But simple acts like switching off your vehicle while waiting for the signal to turn green can help you and the environment in a big way. There are western countries that use hybrid cars — cars that switch to electric engines while idling. But it is still a long way off for India," said Kher.

Kher has uploaded his findings on his website. "A lot of people have downloaded the graphs I have created for their personal usage. While I did the study to satisfy my curiosity, I am happy if it is being used as a resource by someone. Reporters from Pakistan and US have written to me, as also students from all over the world," said Kher.

The study while elementary in nature and made using very conservative estimates, proves the benefits of switching to fuel-efficient ways of driving for the city. According to the study if all Punekars reduced their idling time by one minute everyday it will have benefits equivalent to removing 9,250 cars off the roads of Pune.