

Scenarios Compared	Number of Households with					
	Improvement in Air Quality		No change in Air Quality		Worsening in Air Quality	
	$NO_2$	$PM_{10}$	NO <sub>2</sub>	$PM_{10}$	NO <sub>2</sub>	$PM_{10}$
Do Min 2011 × Do Som 2011	177,250	174,000	26,200	3,400	77,950	70,200
Do Min 2026 × Do Som 2026	119,100	112,050	22,750	1.000	139,550	134,500

Note: totals for  $NO_2$  and  $PM_{10}$  differ because of the application of different weighting factors.

During the ten year period from the Base 2001 to Do Minimum 2011 air quality is predicted to improve in most areas in the absence of the train as a result of improvements in vehicle and fuel technology. The train, will lead to a further increase in the number of households near roads predicted to experience lower NO<sub>2</sub> and PM<sub>10</sub> concentrations in 2011. More properties will be near roads with improved or unchanged air quality than are near roads with worse air quality.

By 2026 a few more households will be near roads with better or unchanged NO<sub>2</sub> concentrations than are near roads with worse, but more households near roads with worse PM<sub>10</sub> concentrations then better. This is thought to be due to added congestion in 2026.

An indication of the relative magnitude of the exposure to pollutant emissions can be gained from the air quality index which is a product of the weighted number of households and the change in roadside air quality for each road link aggregated over the whole study area. A negative value implies an