

- 10% of private vehicles having zero emissions (electric cars or hybrid vehicles);
- introduction of the Euro IV engine plus diesel catalytic converters with Ultra Low Sulphur Diesel to Heavy Goods vehicles and buses could reduce up to 50% of RSP emissions; 40% of Hydrocarbons (HC) emissions and 30% of NO_x emissions; and
- observed trends of vehicle emissions standards and assumed conservative standards for Passenger Vans, Public Light Buses and Light Goods Vehicles (0.49 gkm⁻¹ for NO_x; 0.12 gkm⁻¹ for VOC and 0.06 for RSP).

High Growth (High End) Scenario with Additional Mitigation Measures

This scenario was taken to represent the worst case conditions and, as such, may represent an upper bound estimate for vehicle and population growth in the SAR in 2016. An appropriate level of infrastructure was assumed in order to meet the objectives for mobility of goods and people within Hong Kong and between Hong Kong and its hinterland. The scenario assumed no constraints on vehicle growth. The above stated measures have been incorporated in addition to the proposed mitigation measures such as Euro III, LPG Taxis and improved motorcycle emission standards. The overall effects on air quality were assessed using the PATH model.

Annual Average Concentrations of Nitrogen Dioxide and RSP

Tables 8.2g and 8.2h present the changes in annual average concentrations of nitrogen dioxide and RSP predicted at each of the AQMS in the SAR in 2016. The results from the Mong Kok AQMS should be treated with caution as the observations are taken from a location within what is widely referred to as a street canyon, whereas the predictions generated by the PATH modelling system are considered more representative of conditions at the ambient AQMS.

Table 8.2g
Annual Average Concentrations of Nitrogen Dioxide (µgm⁻³)

AQMS	1997	Increment	Total
Central/Western	58	1.4	59.4
Mong Kok	85	1.5	86.5
Sha Tin	49	3.4	52.4
Yuen Long	61	6.9	67.9
Tsuen Wan	68	0.8	68.8
Kwai Chung	49	3.9	52.9
Sham Shui Po	71	0.5	71.5
Kwun Tong	74	3.1	77.1
Tai Po	50	-1.5	48.5

The assessment indicates that the predicted air quality under this scenario is likely to deteriorate at eight of the AQMS and that improvements are anticipated at the Tai Po