

Air Quality Management in Hong Kong

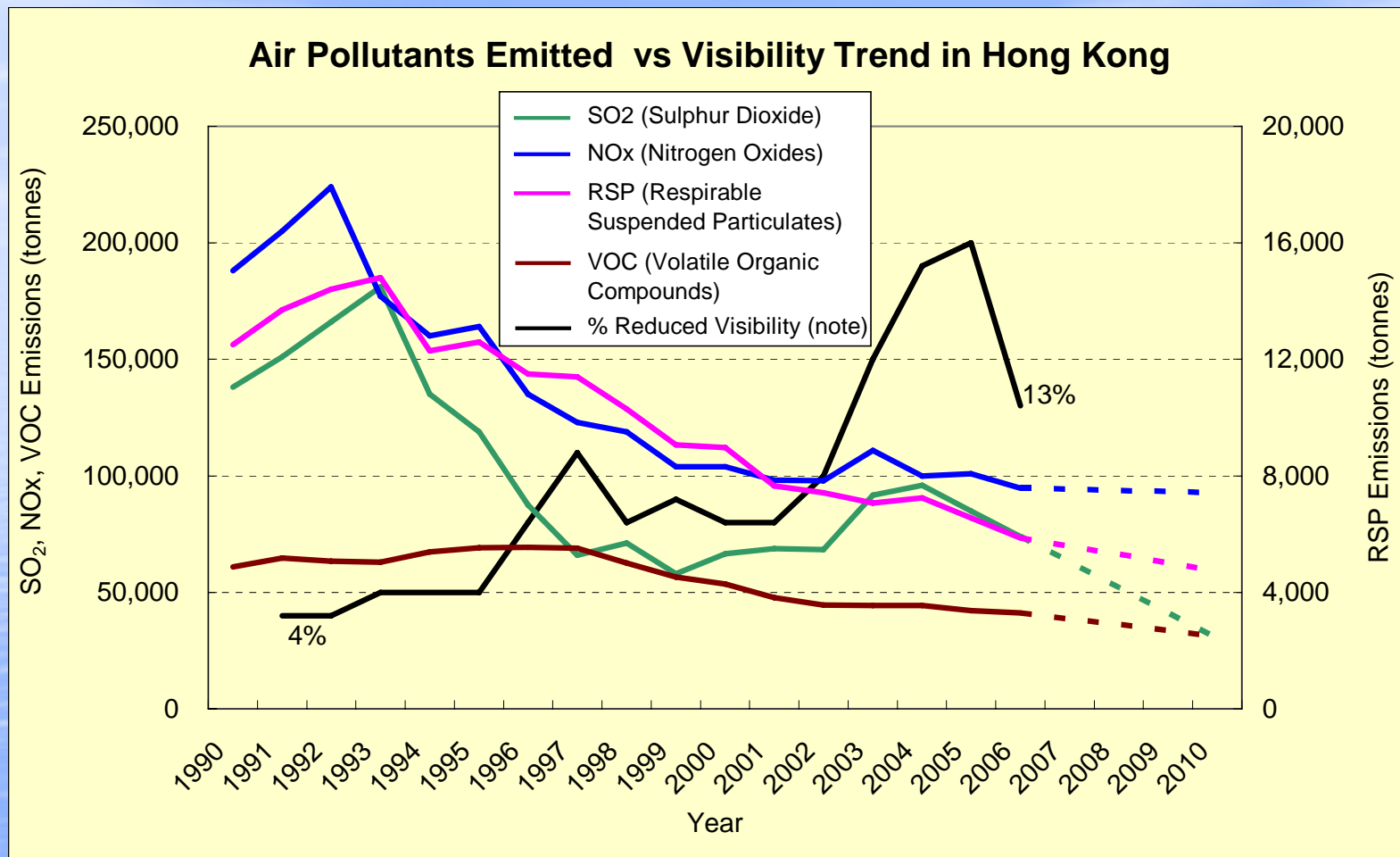
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Air Pollution

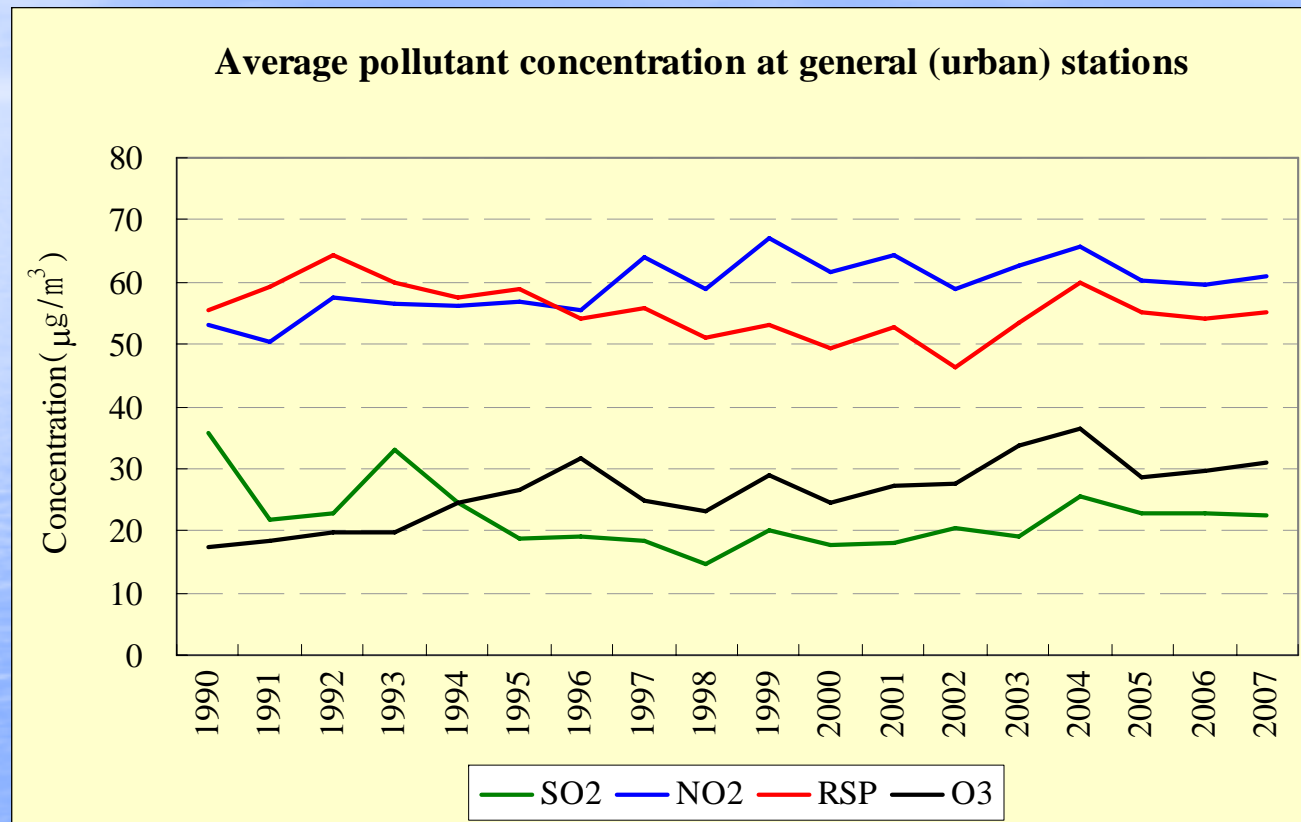
- The most concerned environmental issue in Hong Kong
- Although emissions of key air pollutants in Hong Kong have dropped substantially since 1990's, our visibility has deteriorated significantly

Air Pollutants Emitted vs Visibility Trend from 1990 to 2010



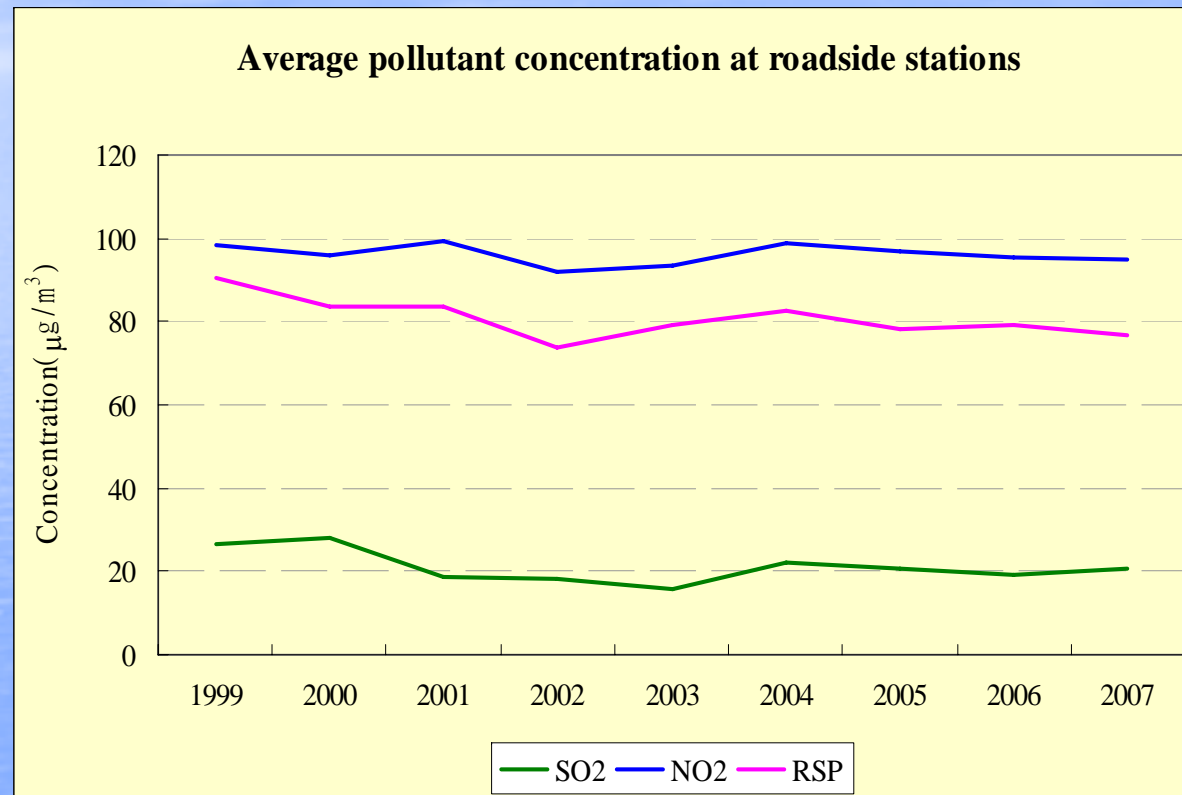
- Percentage of Reduced Visibility refers to the percentage of time in a year with visibility less than 8 km and Relative Humidity not exceeding 80%
- Emission figures beyond 2006 shown in dotted lines are projected data

HK's Urban Air Quality from 1990 to 2007



- The general rising trend of ozone (O3) reflects the worsening photochemical smog problem
- NO2 level is highly dependant on O3, hence NO2 is also on a rising trend as O3
- SO2 level is reducing since 1990 due to the restriction of sulphur content in fuels
- RSP level in 2007 was similar to the 1990 level

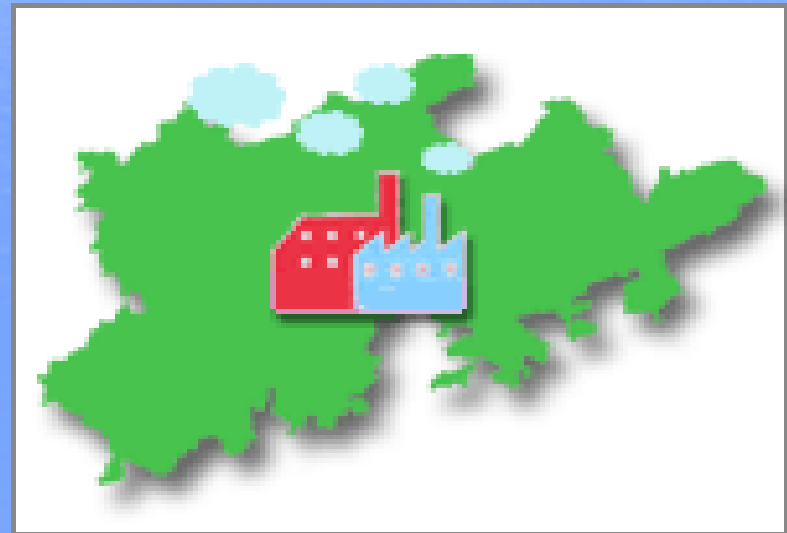
HK's Roadside Air Quality from 1990 to 2007



- Representative roadside data were only available from 1999 onwards after the set-up of Causeway Bay and Central roadside stations
- Roadside RSP, SO₂ and NO₂ levels have shown general reducing trends, reflecting the effectiveness of vehicle emission control measures

Two Distinct Pollution Sources

- Local pollution sources
- Regional pollution sources



Local Pollution Sources

Electricity generation

Largest source of SO₂, NO_x and RSP emissions

Road transport

Second largest source of NO_x, RSP and VOC emissions

Navigation

Second largest source of SO₂ emissions

Civil aviation

A relatively minor source of emissions

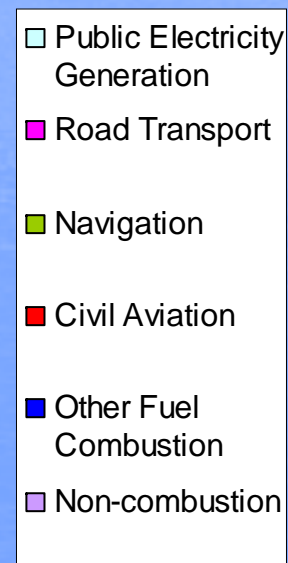
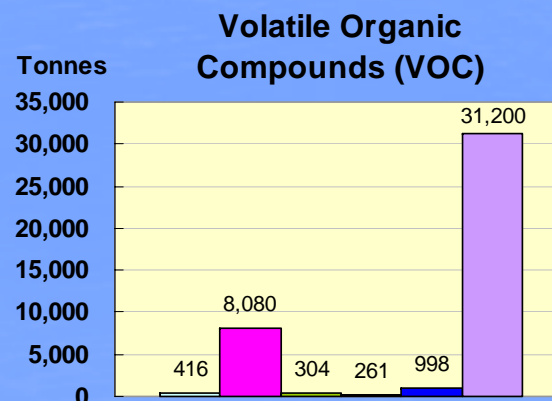
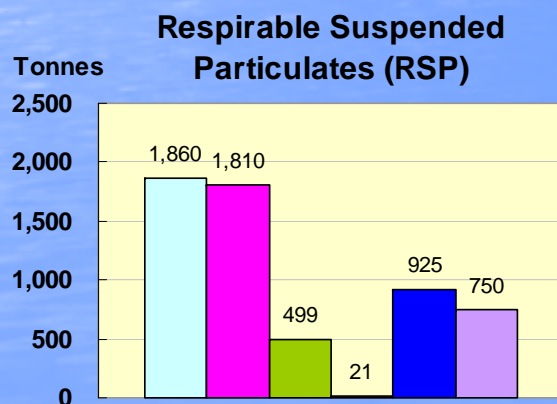
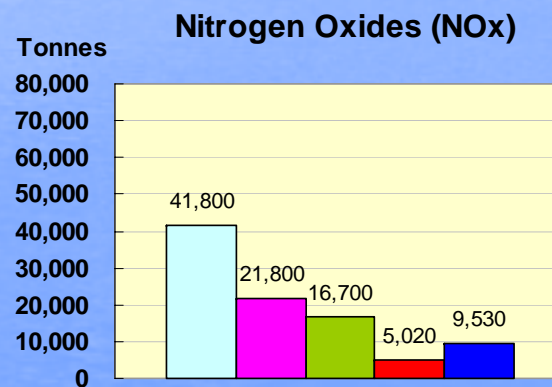
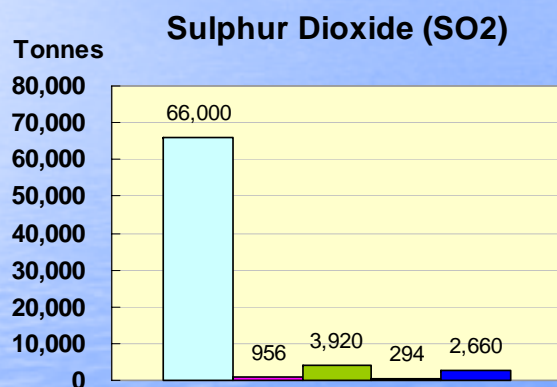
Other fuel combustion sources

A relatively large source of RSP emissions

Non-combustion sources

Largest source of VOC emissions

Breakdowns of Emissions in 2006 by Source



Electricity Generation – Control Over Power Plants

- **New coal-fired power plant banned since 1997**
 - **Tighten emission caps**
 - **Enable emission trading**
 - **Link profit level to environmental performance**
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- **1990 : 118 000 t of SO₂**
 - **2006 : 66 000 t of SO₂**



Electricity Generation – Demand Side Management

Existing measures:

- Promote energy efficiency and conservation
- Enhance building efficiency

New measures under public consultation:

- Mandatory compliance with the Building Energy Codes
- Mandatory Energy Efficiency Labelling Scheme

Road Transport

Existing measures:

- A world-class public transportation system
- LPG taxis and light buses



Road Transport

Existing measures:

- Stringent vehicle emission and fuel standard to Euro IV
- Require pre-Euro diesel vehicles to install emission reduction devices
- Provide \$3.2 billion to expedite replacement of pre-Euro and Euro I commercial diesel vehicles with Euro IV models
- Provide tax concession for vehicles with low emissions and high fuel efficiency



Road Transport

New measures:

- Consult the public on banning idling vehicles with running engines
- Strengthen the control of emissions from petrol and LPG vehicles by remote sensing equipment and advanced emission test
- Adopt Euro V standards



Navigation

Existing measure:

- Use ultra low sulphur diesel in government vessels since 2001

New measures:

- Explore the feasibility of requiring all vessels plying the harbour to use high-quality fuel
- Explore with GD on more stringent measures to control emissions from vessels in PRD Region for inclusion in the Regional Air Quality Management Plan
- Participate in International Maritime Organization and support development of emission control measures for ports and ocean liners



Other Major Measures

Existing measures:

- Require vapour recovery system for vehicle refueling to be installed in all petrol stations
- Impose mandatory emission limits for volatile organic compounds in architectural paints, printing ink and selected consumer products

New measure:

- Mandate the use of ultra low sulphur diesel in all industrial and commercial processes



Thank You

