Key Messages: Air Quality

- Air quality continues to improve in the region, in response to concerted policy action in both Canada and the US and favourable trends in technology and energy markets.
- Regional, national, and local efforts to improve air quality are having substantial, measurable, and important public health benefits which have an estimated value in the order of USD 2 trillion.
- Robust regulatory systems in Canada and the US have been successful in significantly reducing air pollution in North America, as seen in national trends for pollutant emissions, concentrations and deposition.
- Despite significant progress, improvements in air quality are not evenly distributed in North America, with approximately 140 million people exposed to pollution above regulatory thresholds, exceeding levels considered harmful to public health.
- Providing information to the public about air pollutant emissions, concentrations, and health implications has helped individuals mitigate their own exposure and create public demand for air pollution control.

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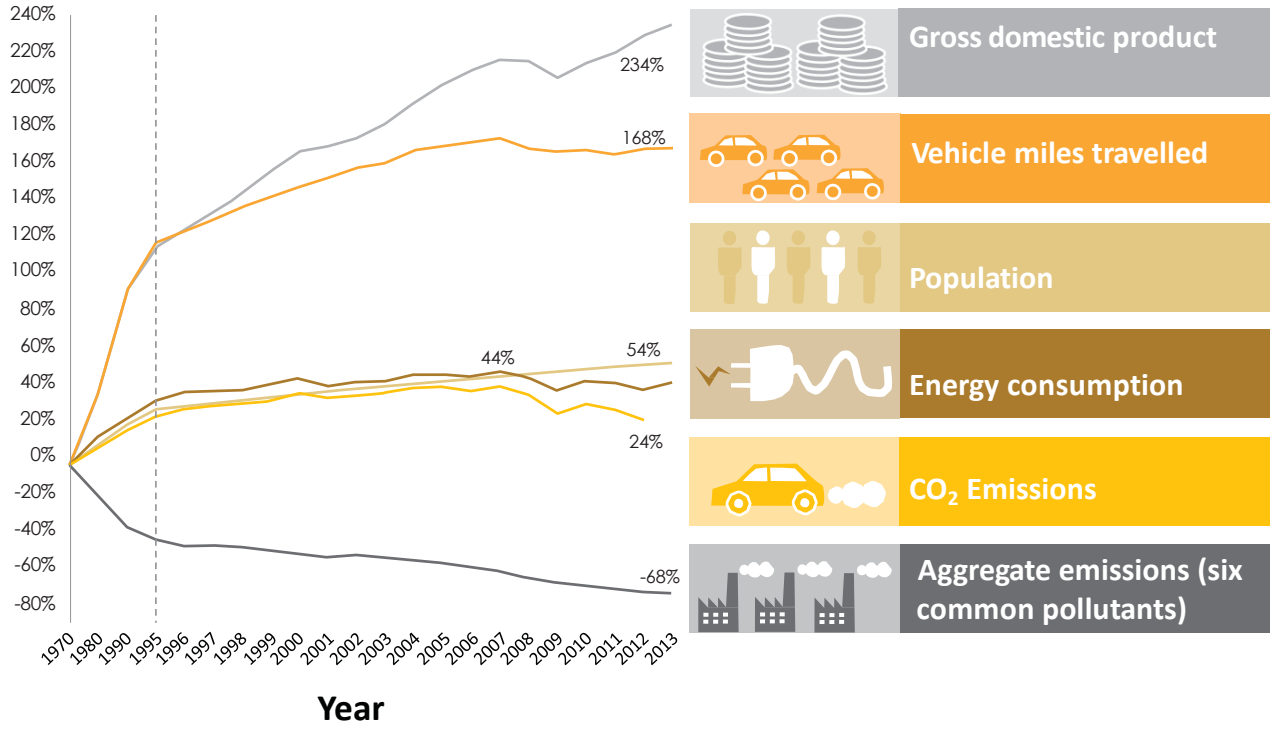
Economic growth and environmental improvement can go together.

Figure 2.1.1: US trends in drivers and emissions, 1970–2013



Source: Adapted from US EPA Air Quality Trends Report 2014

2016 US AQ Trends Report Released Today

http://www.epa.gov/airtrends
http://gispub.epa.gov/air/trendsreport/2016

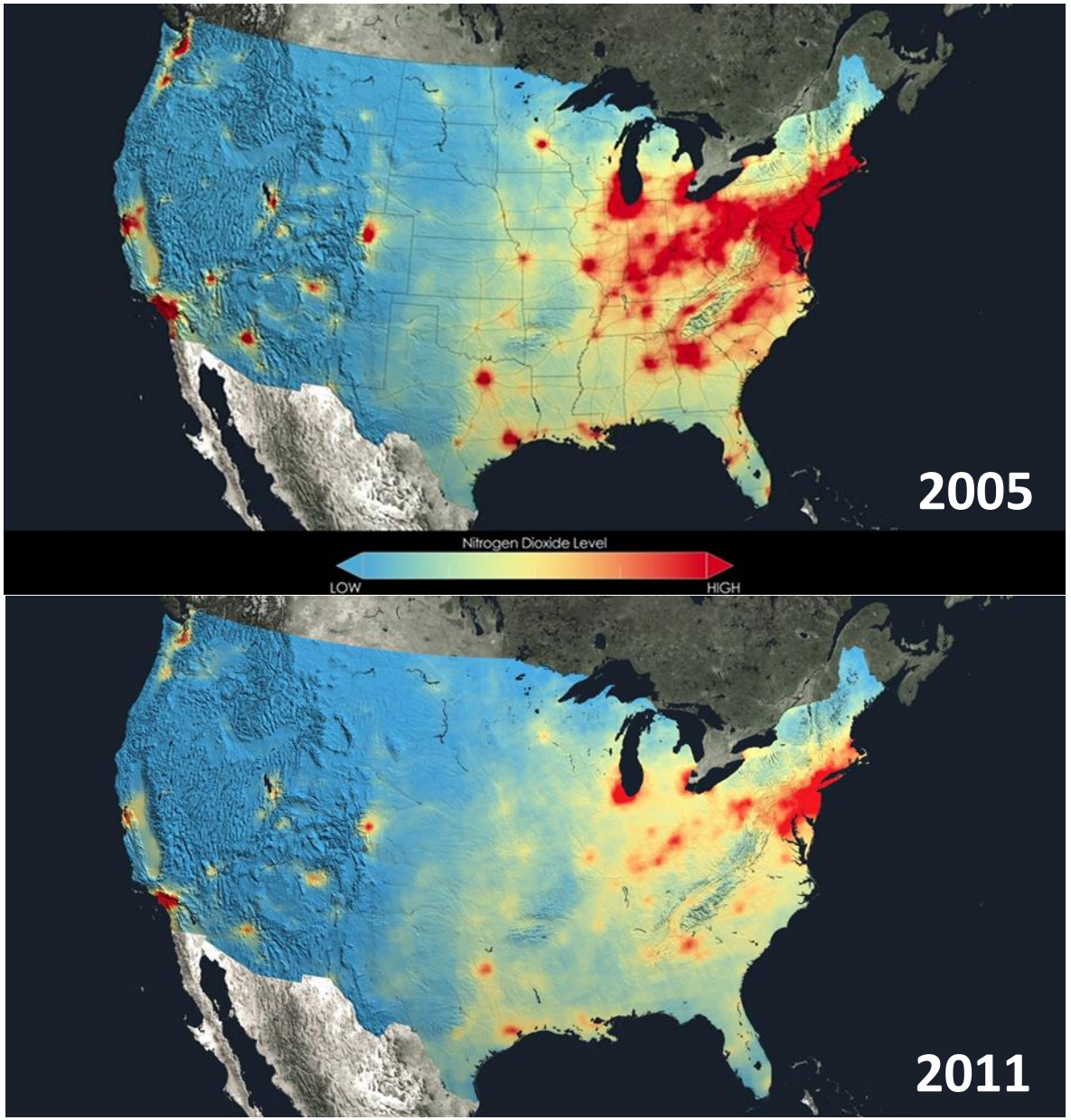
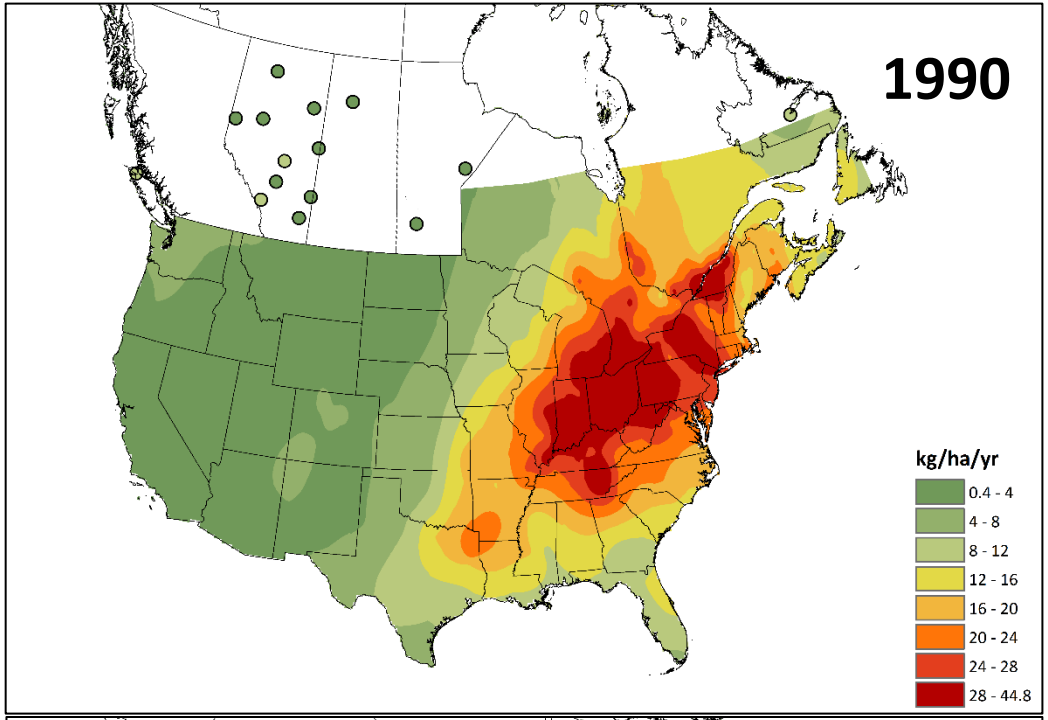


Figure 2.1.5:

The impact of emissions controls on the annual average tropospheric nitrogen dioxide (NO_2) column as seen from space

(NASA, 2015).



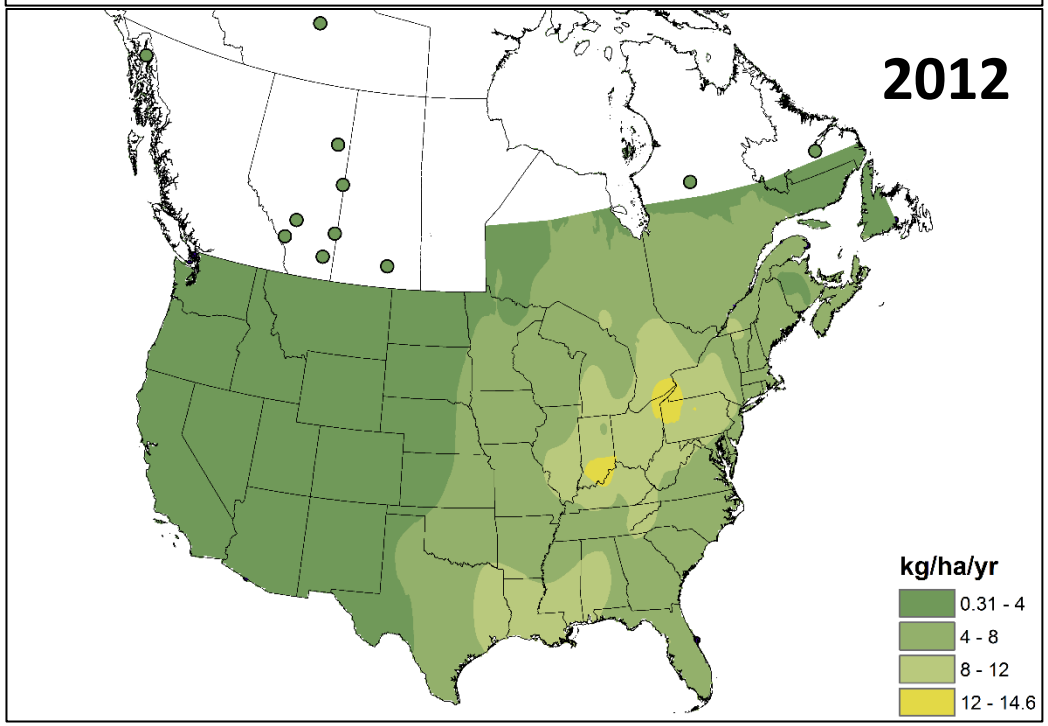


Figure 2.1.6a,b:

The impact of emissions controls on the annual wet sulphate deposition

(EC, 2012; NADP, 2012).

Notable Trends Driving AQ

- Urbanization and Smart Growth
- Oil & Gas Development
- Real Time Data and Small Sensors

AQ Management Challenges

- Adapting to global changes in climate and emissions
- Integrated management of multiple pollutants
- Addressing elevated exposures of sensitive, vulnerable, or disadvantaged sub-populations
- Protecting ecosystems from cumulative impacts
- Managing smaller, more diffuse emissions sources

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