

LS 2X03 - Lecture 11 – Air Quality and Human Health

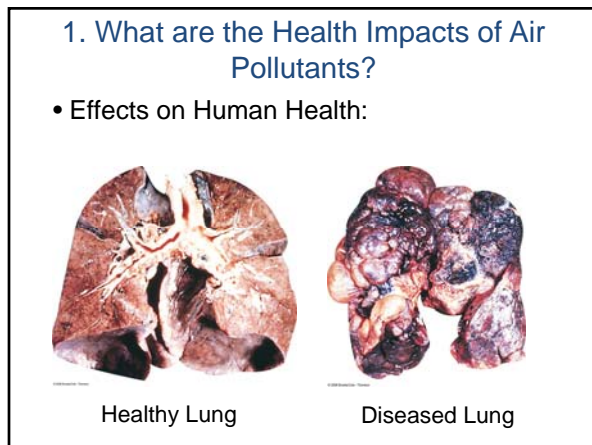
1. What are the Health Impacts of Air Pollution?
2. Major Sources of Air Pollutants
3. Indoor Air Quality
4. Air Quality and Climate Change

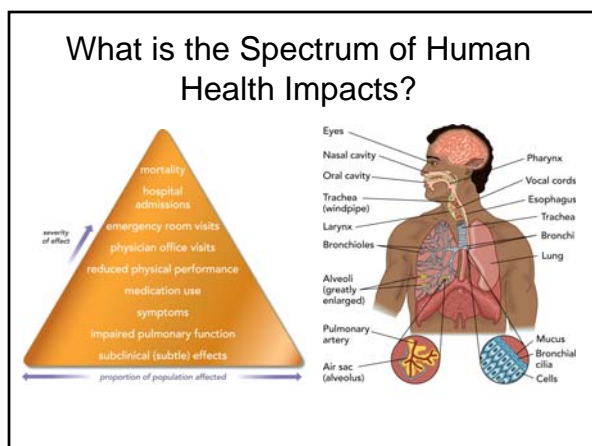
Key Concepts

- Health Impacts of Air Pollution
- Major Sources of Air Pollutants
- Trends in Air Quality in Canada
- Air Quality Worldwide
- Indoor Air Quality: sources of pollution, causes of disease, burden of disease and mortality, populations impacted
- Links between Climate Change and Air Quality

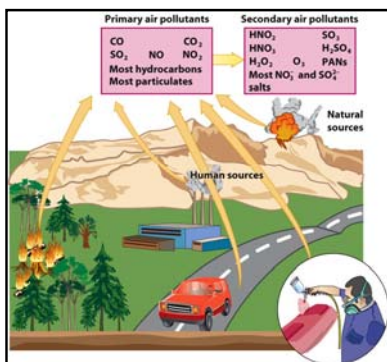






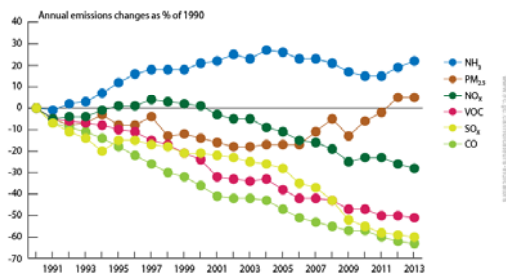


2. Major Sources of Air Pollutants



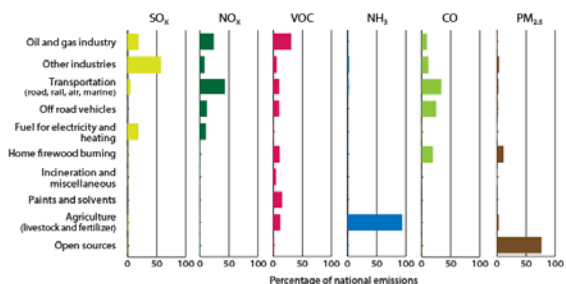
Air Quality in Canada

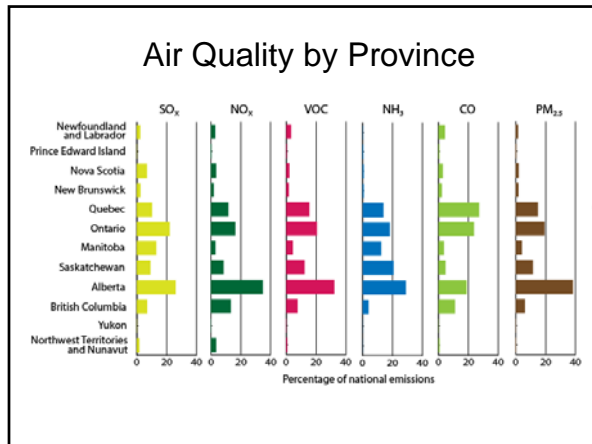
In 2013, emission levels of SO_x, NO_x, VOC and CO were:

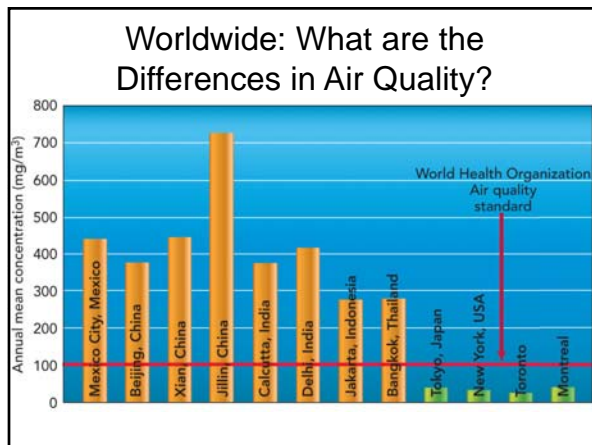


Air Quality in Canada (2)

In 2013, emissions of SO_x, NO_x, VOC, NH₃ and PM_{2.5} were:



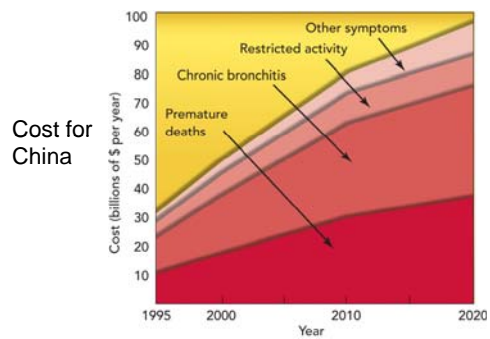








What is the Cost of Air Pollution to Human Health?



Trends in Air Quality in China

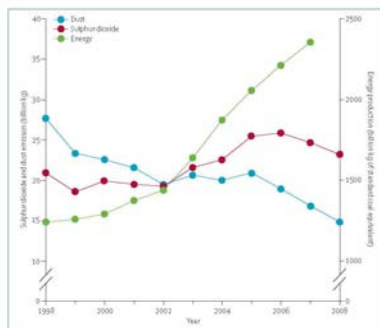


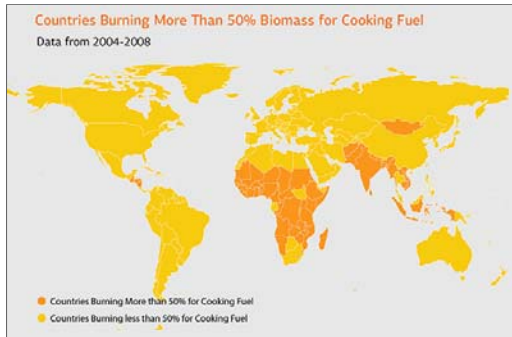
Figure 3: Energy production and emissions of sulphur dioxide and dust in China, from 1998 to 2008
Data from the National Bureau of Statistics of China.¹⁰



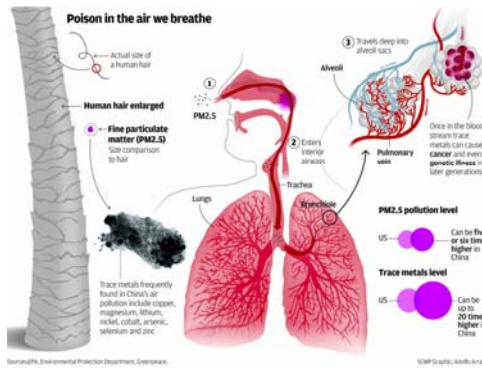




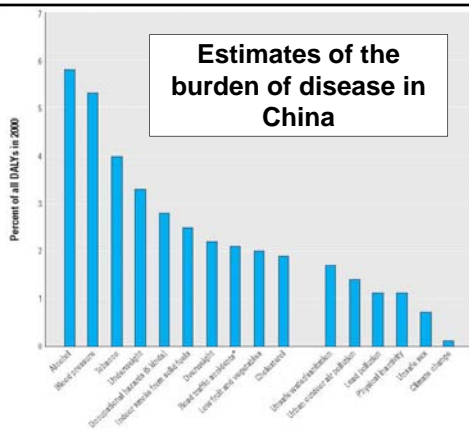
Harmful Effects of Cooking with Biomass



What is PM_{2.5}?



Estimates of the burden of disease in China



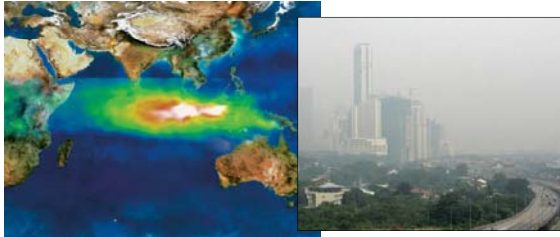






Wildfires & Respiratory illness

- Pollutants from forest fires can affect air quality for thousands of kilometres
- e.g.:



End of Lecture Question

1. While there is a high cost to further measures which would reduce air pollution, many new findings suggest that health effects can be seen at ever lower concentrations of air pollutants

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TO DO!

1. For next Lecture: read Article 11
2. Tutorials next week: Work session in preparation for Group Presentations
3. Group Discussion: print and bring a copy of the Group Discussion Answer Sheet
