

Class 13b: Air pollution

- Particulate matter
- Acid rain
- Photochemical smog
- Ozone and the ozone layer

Air pollution

- Pollution: concentration of substances that harms living things
- Ash, smoke, dust, pollen
- Fossil fuels, solvents
- 3 million deaths worldwide

Air pollution

- Physical geography
 - Prevailing winds
 - Topography and inversions
- Level of urbanization, industrialization
- Particulate matter or chemical compounds

Particulate matter

- Source: incomplete burning of fuel
- Respiratory problems
- Short transport distance
- Closest to source = most affected

Acid rain

- Source: burning fossil fuels
- Sulfur from coal becomes sulfuric acid
- Terrestrial effects (forests, soils)
- Aquatic effects
- Material effects (buildings, monuments)

Photochemical smog

- Sources: incomplete burning of fuel
- Nitrogen dioxide, hydrocarbons, and sunlight
- Forms ozone at ground level
- Respiratory problems, damage to plants

Ozone layer

- Ozone is necessary at high altitude
- Absorbs UV (ultraviolet) radiation
- CFCs, other chemicals break down ozone
- One of few international success stories