Natural and Human Pollution Sources

Natural Sources

Natural sources can release substances that can adversely affect air quality. For example:

- Burning vegetation (including forest fires and wildfires) releases carbon dioxide, carbon monoxide, nitrogen oxides, ammonia, and particulate matter to the atmosphere
- Soil microbial activity releases carbon dioxide, methane and nitrogen oxides to the atmosphere
- Vegetation produces organic compounds for growth and development but some of these compounds, including isoprene, toluene and beta-pinene, can affect air quality
- Volcanic activity releases large quantities of carbon dioxide, sulphur dioxide and particulate matter
- Windblown dust contributes to the concentration of fine particulate matter in the air

Once released, carbon monoxide, methane and nitrogen oxides can undergo photochemical reactions to produce ozone in the troposphere.

Human Sources

Anthropogenic or human sources release a number of substances to the atmosphere including:

- Nitrogen oxides, carbon monoxide, volatile organic compounds and particulate matter are emitted by cars, buses, planes, trucks and trains
- Sulphur dioxide, metals, carbon dioxide and other substances are emitted from stationary sources such as factories, power plants and smelters
- Volatile organic compounds can be emitted by small stationary sources (dry cleaners and degreasing operations)