Canada.ca > Environment and natural resources > Weather, climate and hazards > Air quality. > Air pollution

> <u>Air pollutants</u> > <u>Common air contaminants</u>

Common air pollutants: sulphur oxides

Sulphur dioxide, or <u>SO₂ (Sulphur Dioxide</u>), belongs to a family of sulphur oxide gases (SO_x). It is formed from the sulphur contained in raw materials such as coal, oil and metal-containing ores during combustion and refining processes. <u>SO₂ (Sulphur Dioxide</u>) dissolves in water vapour in the air to form acids, and interacts with other gases and particles in the air to form particles known as sulphates and other products that can be harmful to people and their environment.

Both <u>SO₂ (Sulphur Dioxide)</u> in its untransformed state, and the acid and sulphate transformation products of <u>SO₂ (Sulphur Dioxide)</u>, can have adverse effects on human health or the <u>environment</u>. <u>SO₂ (Sulphur Dioxide)</u> itself can cause adverse effects on respiratory systems of humans and animals, and damage to vegetation. When dissolved by water vapour to form acids it can again have adverse effects on the respiratory systems of humans and animals, and it can cause damage to vegetation, buildings and materials, and contribute to acidification of aquatic and terrestrial ecosystems. When transformed into sulphate particles that are subsequently deposited on aquatic and terrestrial ecosystems, acidification can result, and when sulphate is combined with other compounds in the atmosphere, such as ammonia, it becomes an important contributor to the secondary formation of respirable <u>particulate matter</u> (PM_{2.5}). <u>PM (Particulate Matter)_{2.5} is known to have harmful effects on human health and the environment, and contribute to visibility impairment and regional haze.</u>

- Sulphur oxides: main emission sources
- Sulphur oxides: history

Related Websites:

Canadian Council of Ministers of the Environment/Air Acid Rain CEPA Environmental Registry Transboundary Air Issues Convention on Long-range Transboundary Air Pollution (UNECE)

Date modified: 2013-07-17