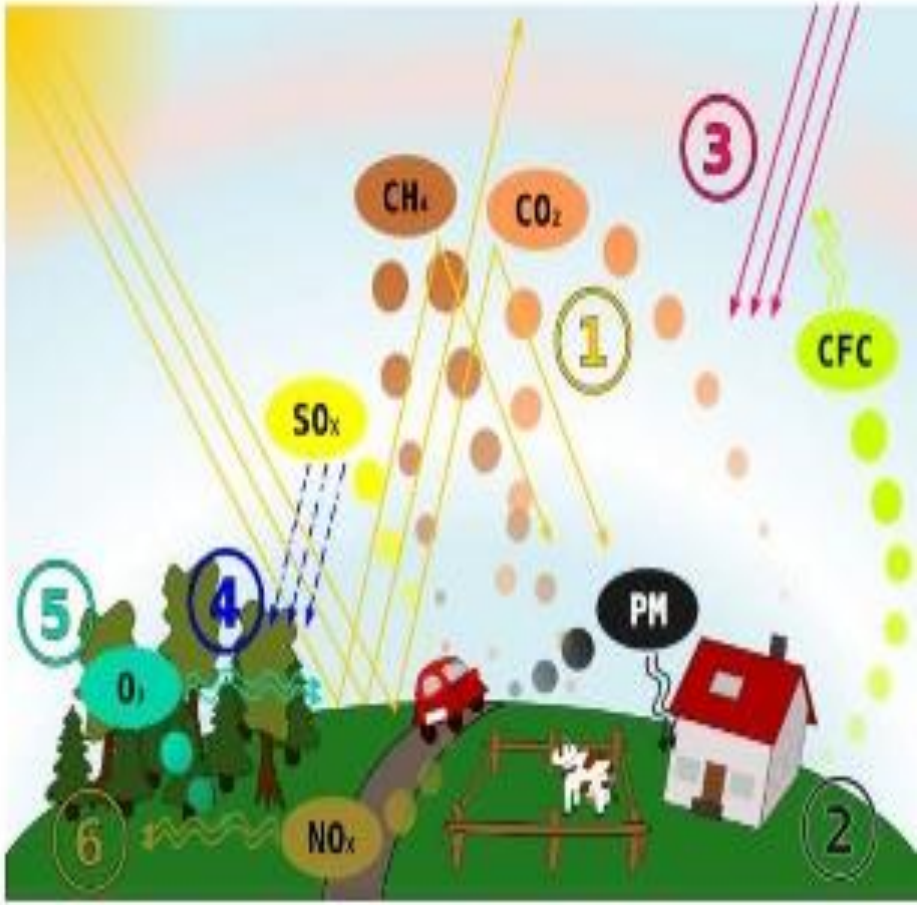
AIR CANCER

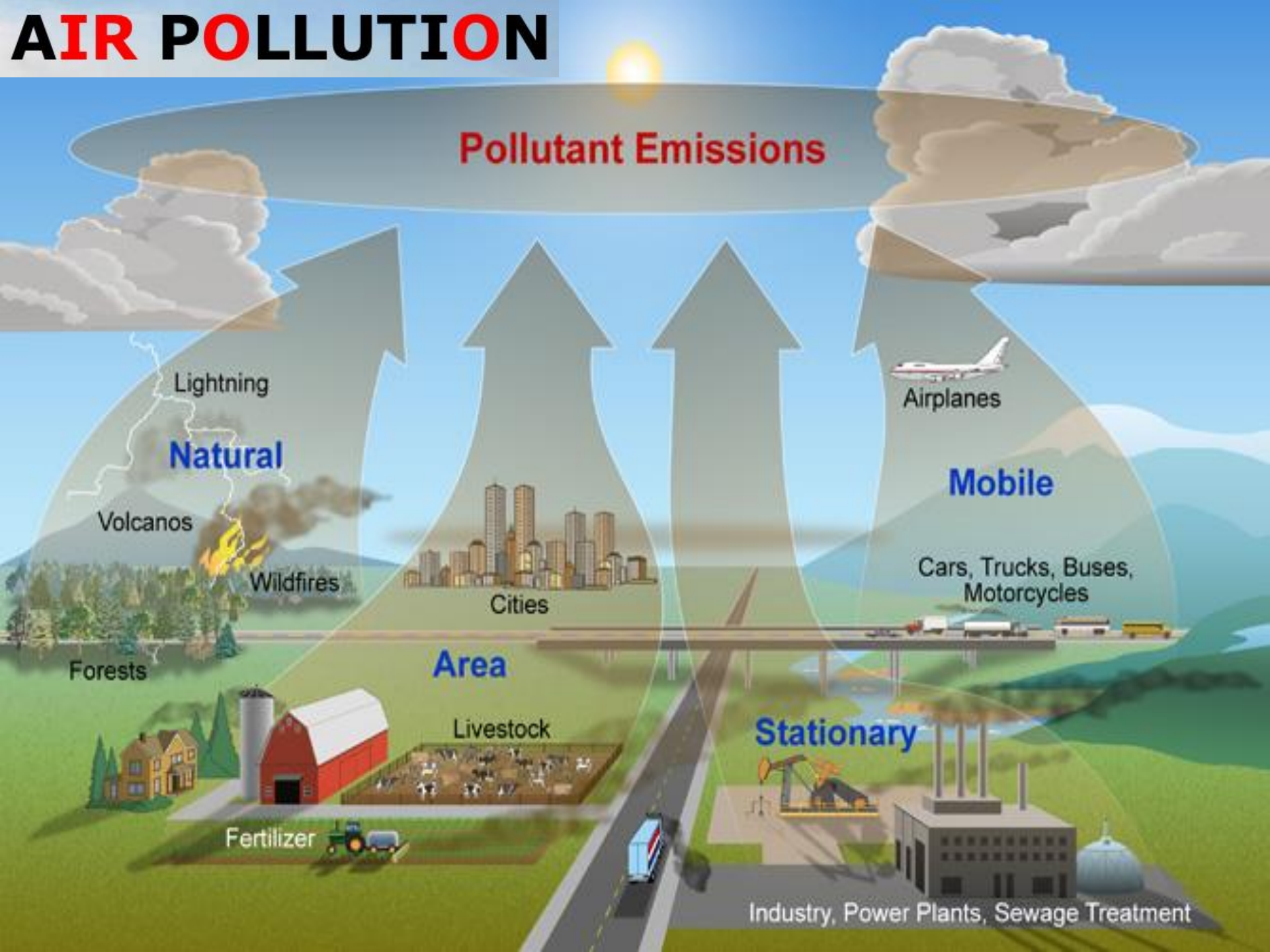
Different types of Air Pollution

- Smog
- Green House Effect
- Accidental Air Pollution
- Industrial Air Pollution
- Transport related Air pollution

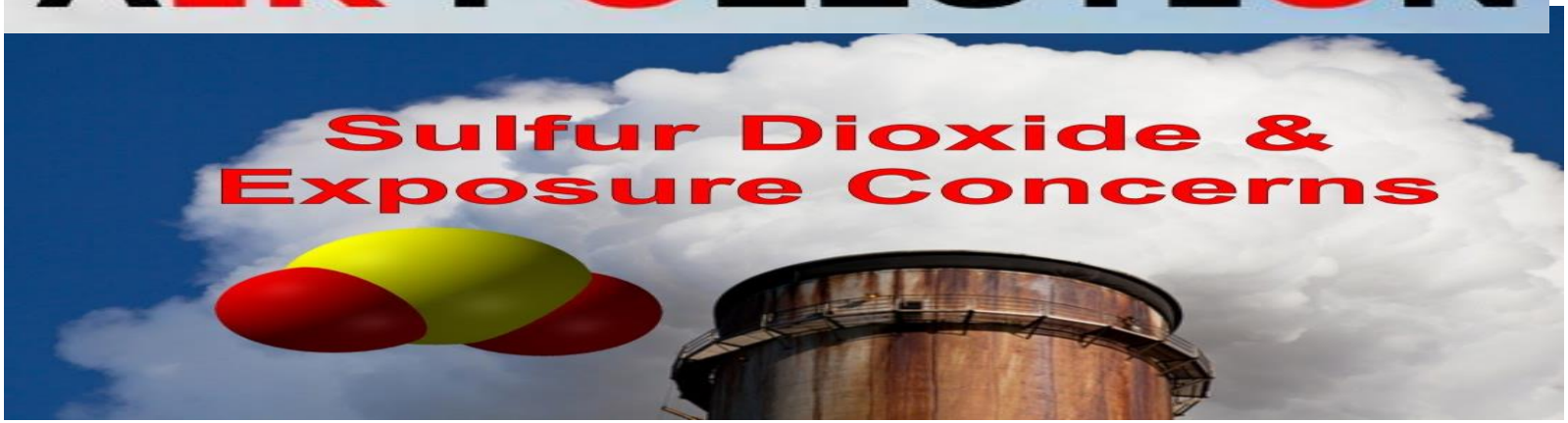


AIR POLLUTION

AIR POLLUTION



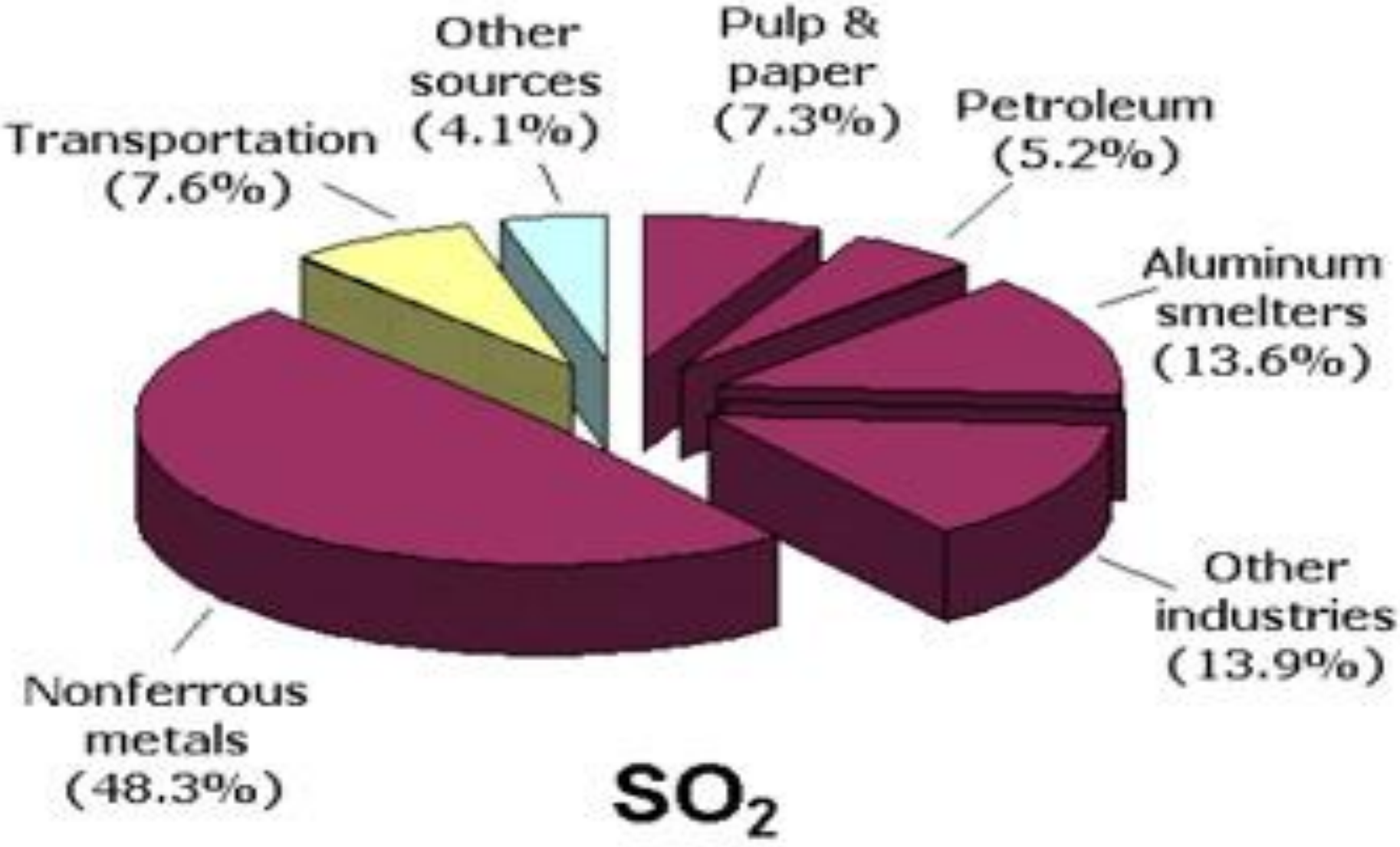
AIR POLLUTION



Sulfur oxides (SO_x) - particularly sulfur dioxide, a chemical compound with the formula SO_2. SO_2 is produced by volcanoes and in various industrial processes. Coal and petroleum often contain sulfur compounds, and their combustion generates sulfur dioxide. Further oxidation of SO_2, usually in the presence of a catalyst such as NO_2, forms H_2SO_4, and thus acid rain.[2] This is one of the causes for concern over the environmental impact of the use of these fuels as power sources.

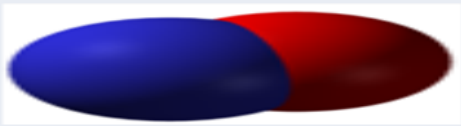
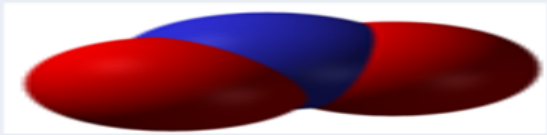
AIR POLLUTION

SULFUR OXIDES (SO_x)



AIR POLLUTION

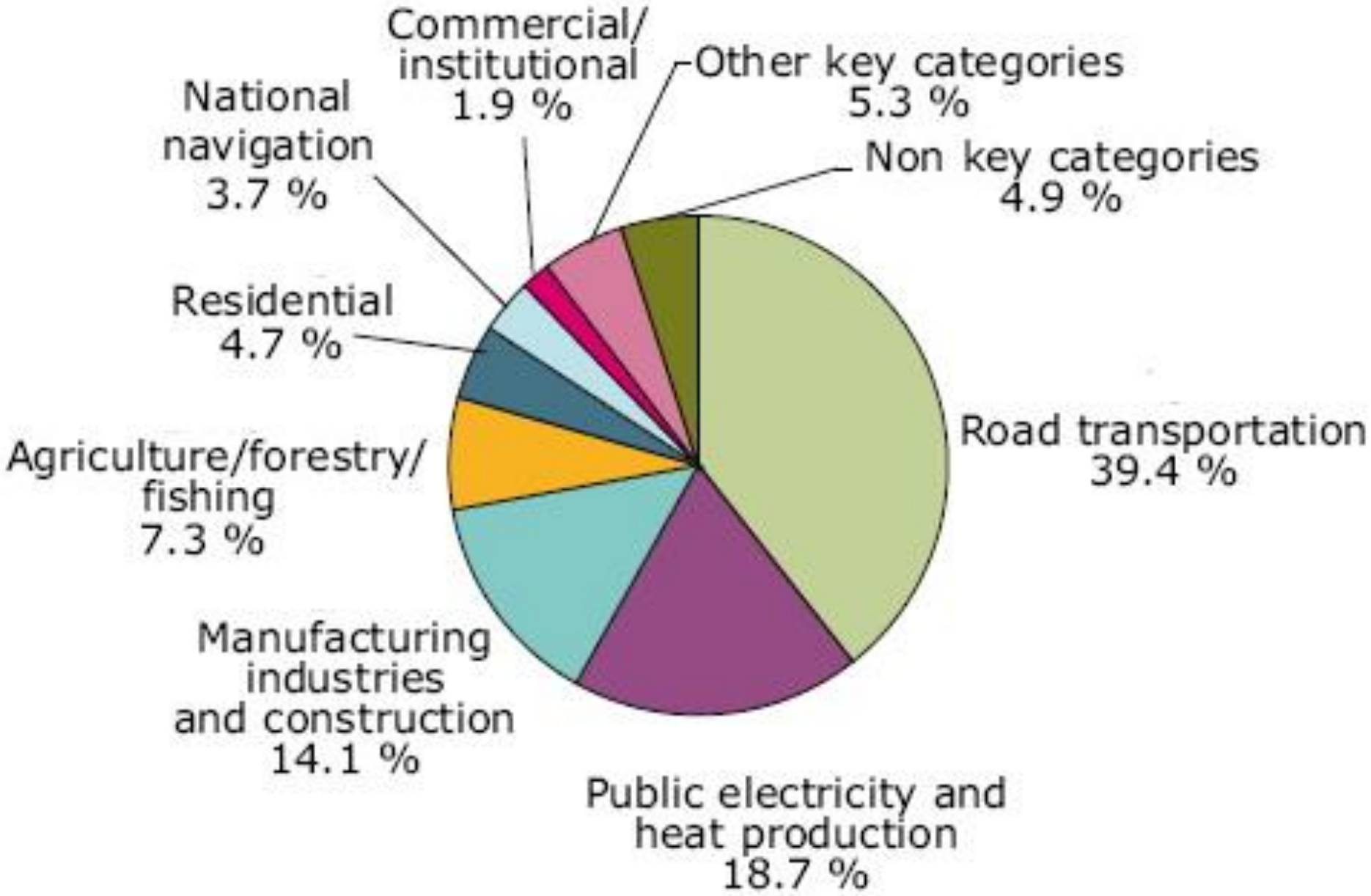
NOx (Nitrogen Oxide)

Nitric Oxide (NO)	Nitrogen Dioxide (NO_2)
	

Nitrogen oxides(NO_x) - Nitrogen oxides, particularly nitrogen dioxide, are expelled from high temperature combustion, and are also produced during thunderstorms by electric discharge. They can be seen as a brown haze dome above or a plume downwind of cities. Nitrogen dioxide is a chemical compound with the formula NO_2. It is one of several nitrogen oxides. One of the most prominent air pollutants, this reddish-brown toxic gas has a characteristic sharp, biting odor.

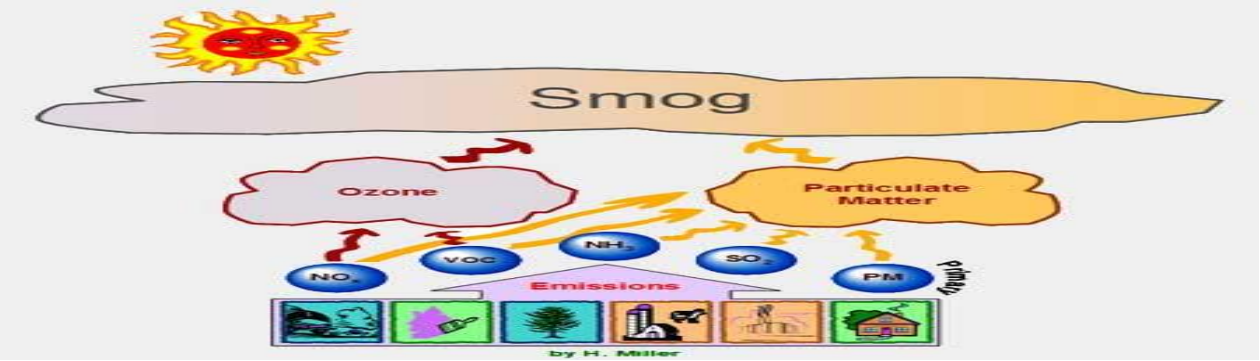
AIR POLLUTION

NITROGEN OXIDES (NOx)



VOLATILE ORGANIC COMPOUNDS (VOC)

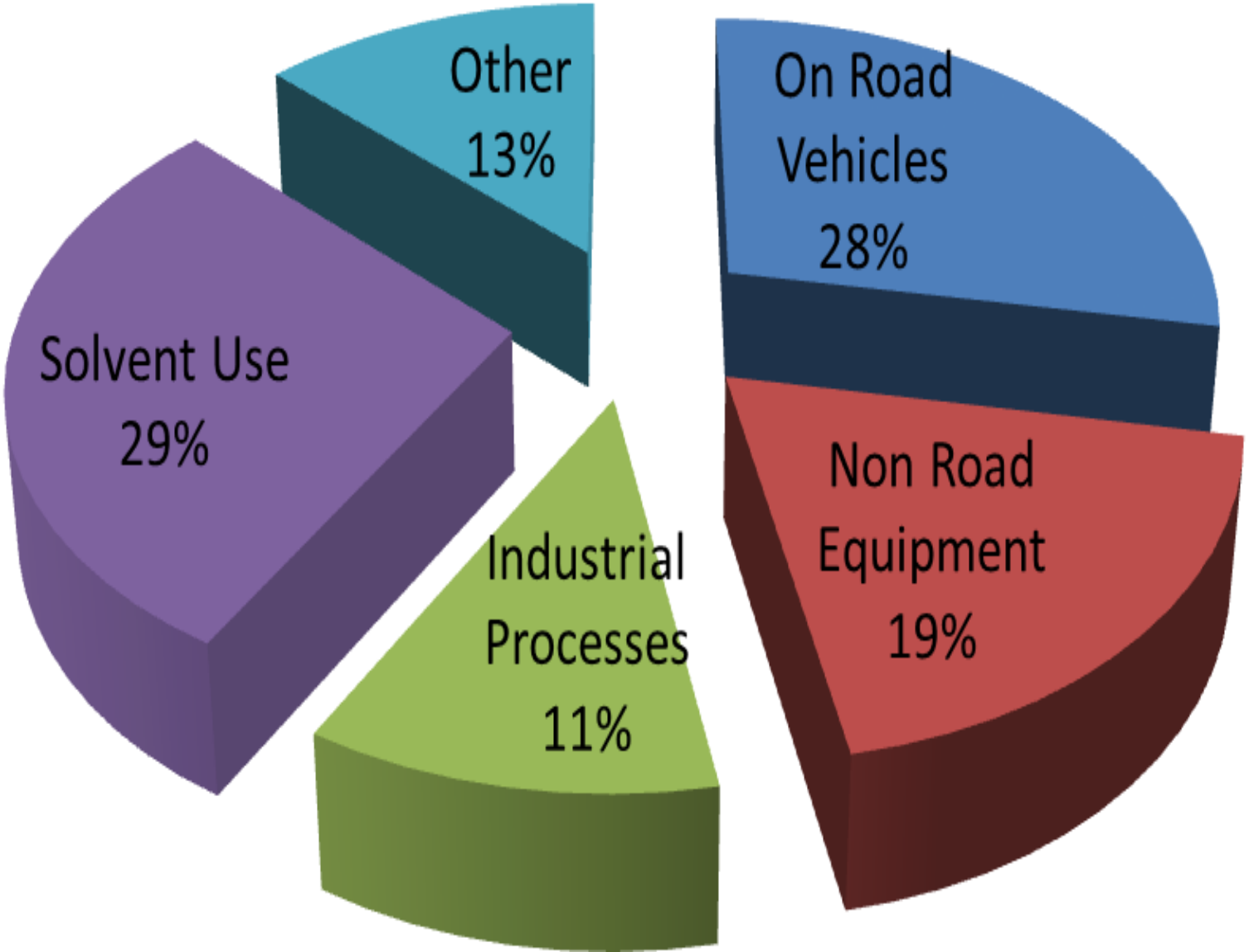
AIR POLLUTION



Volatile organic compounds(VOC) - VOCs are a well-known outdoor air pollutant. They are categorized as either methane (CH_4) or non-methane (NMVOCs). Methane is an extremely efficient greenhouse gas which contributes to enhanced global warming. Other hydrocarbon VOCs are also significant greenhouse gases because of their role in creating ozone and prolonging the life of methane in the atmosphere. This effect varies depending on local air quality. The aromatic NMVOCs benzene, toluene and xylene are suspected carcinogens and may lead to leukemia with prolonged exposure. 1,3-butadiene is another dangerous compound often associated with industrial use.

Volatile Organic Compounds

AIR POLLUTION

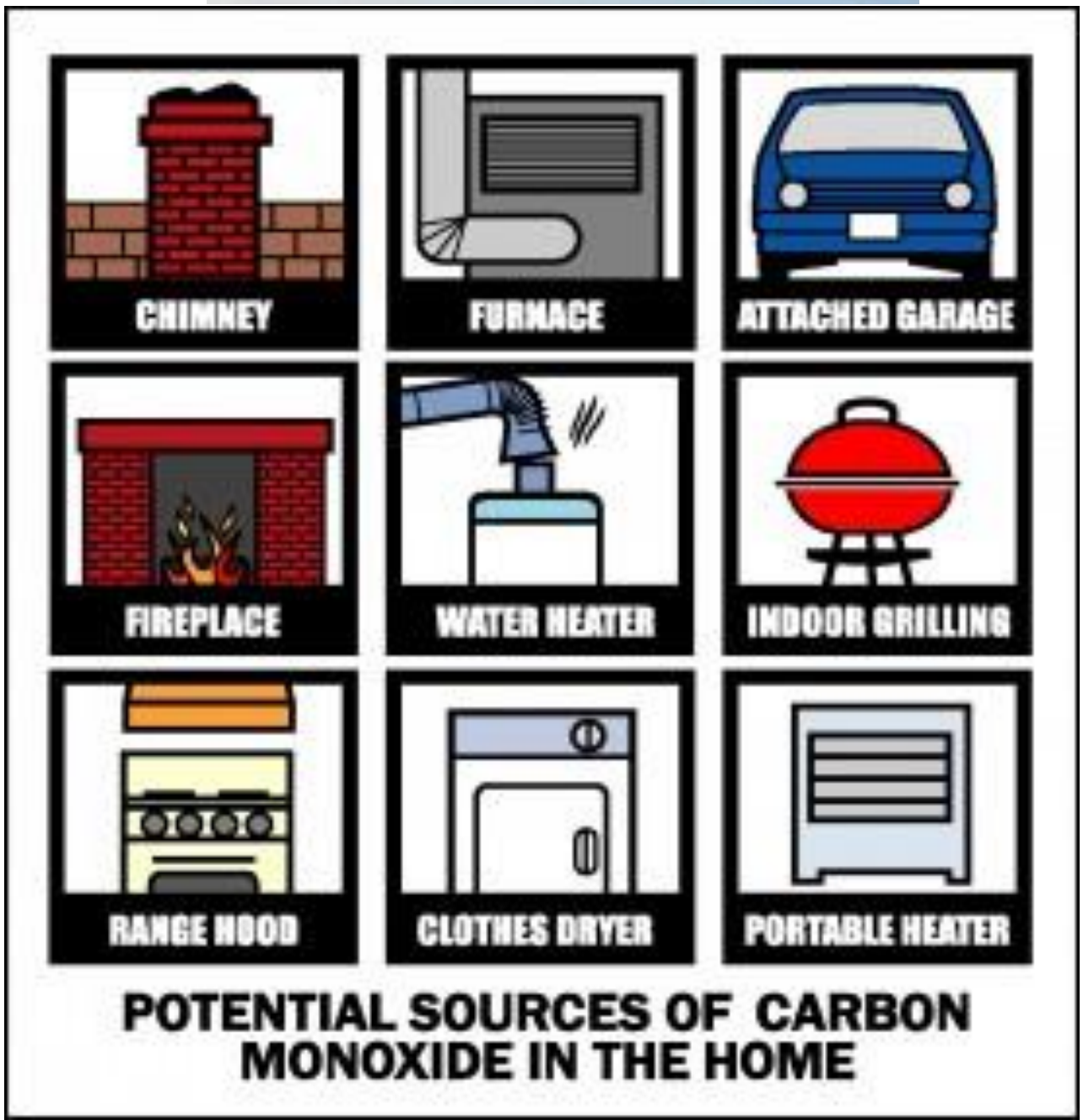


CARBON MONOXIDE (CO)

AIR POLLUTION

Carbon monoxide (CO) - CO is a colorless, odorless, toxic yet non-irritating gas. It is a product by incomplete combustion of fuel such as natural gas, coal or wood. Vehicular exhaust is a major source of carbon monoxide.

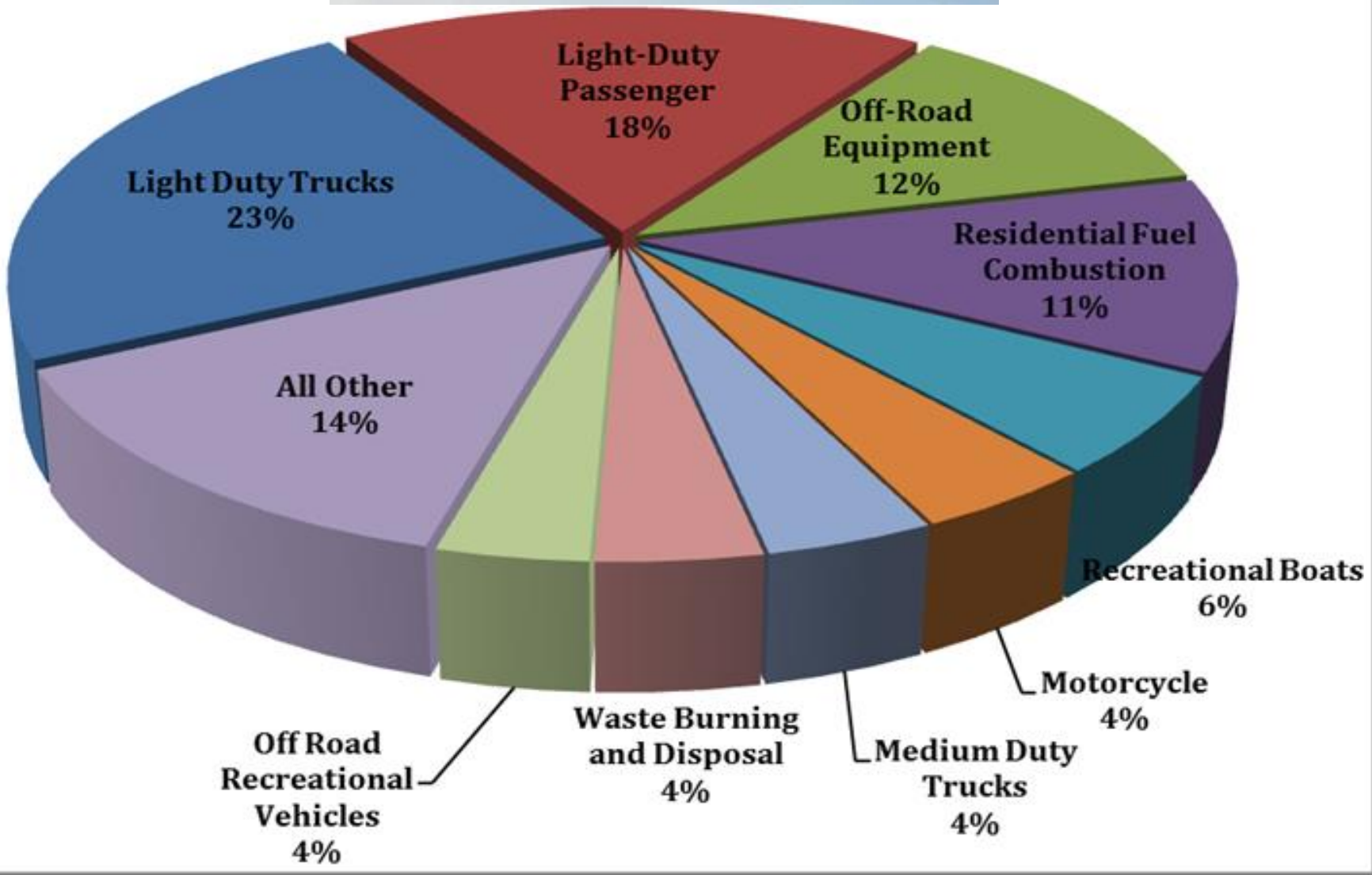
AIR POLLUTION



Carbon Monoxide 2009

(39,472.1 Tons/Yr)

AIR POLLUTION



AIR POLLUTION

PARTICULATES

Particulates, alternatively referred to as particulate matter (PM), atmospheric particulate matter, or fine particles, are tiny particles of solid or liquid suspended in a gas. In contrast, aerosol refers to combined particles and gas. Some particulates occur naturally, originating from volcanoes, dust storms, forest and grassland fires, living vegetation, and sea spray. Human activities, such as the burning of fossil fuels in vehicles, power plants and various industrial processes also generate significant amounts of aerosols. Averaged worldwide, anthropogenic aerosols—those made by human activities—currently account for approximately 10 percent of our atmosphere. Increased levels of fine particles in the air are linked to health hazards such as heart disease, altered lung function and lung cancer.

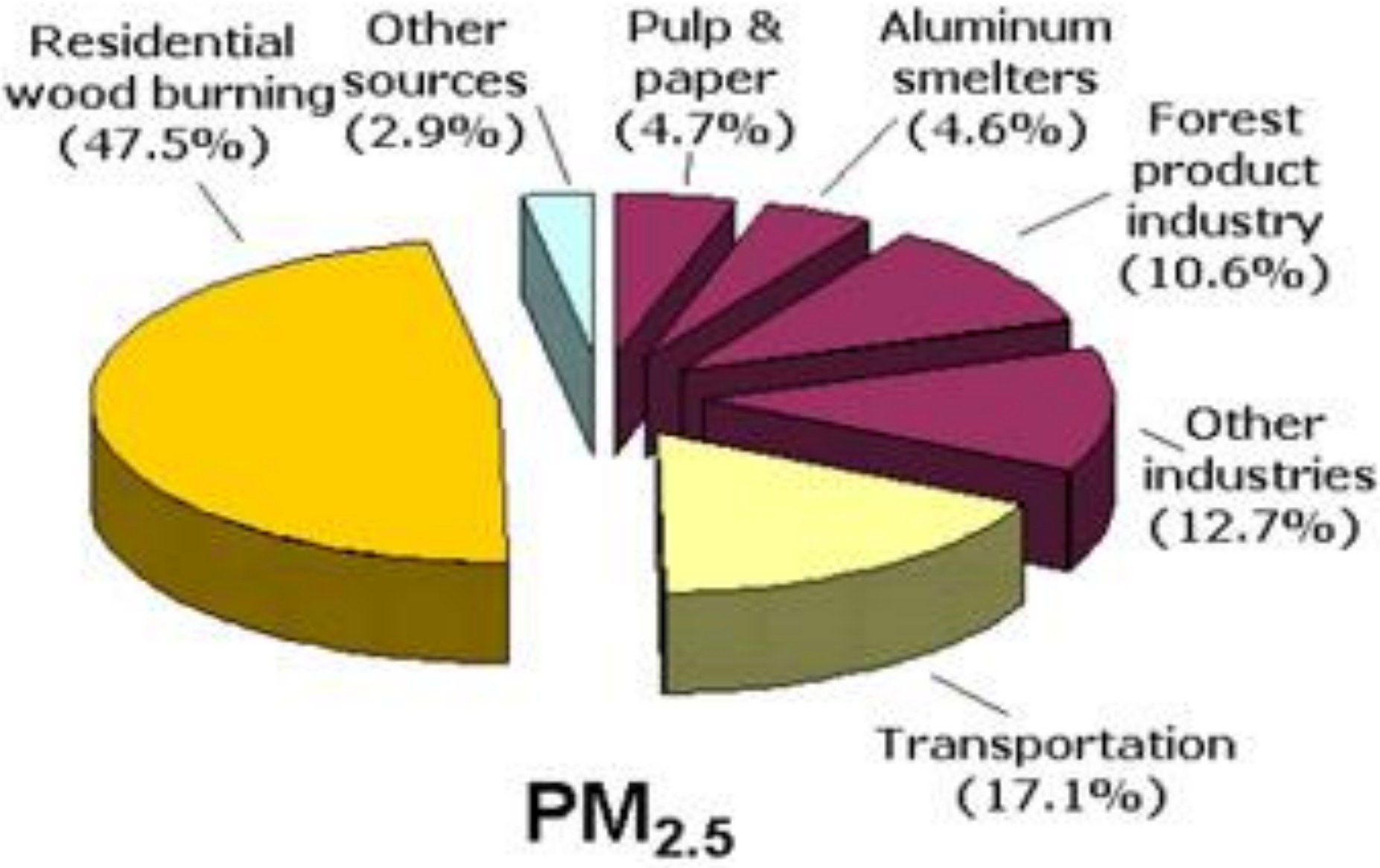
AIR POLLUTION

Suspended particulate matter (SPM)

Dust	• About 100 microns in diameter • Removed in the nasal passages • e.g. coal dust, cement dust
Fumes	• Suspended solids, <I micron in diameter. • Zinc or lead oxides
Mist	• Liquid droplets, diameter <2.0 microns • e.g. Sulphuric acid mist
smoke	• Solid particles, 0.05 – 1.0 microns • Incomplete combustion of fossil fuels
Aerosol	• Liquid or solid aerosols, <1.0 micron.

AIR POLLUTION

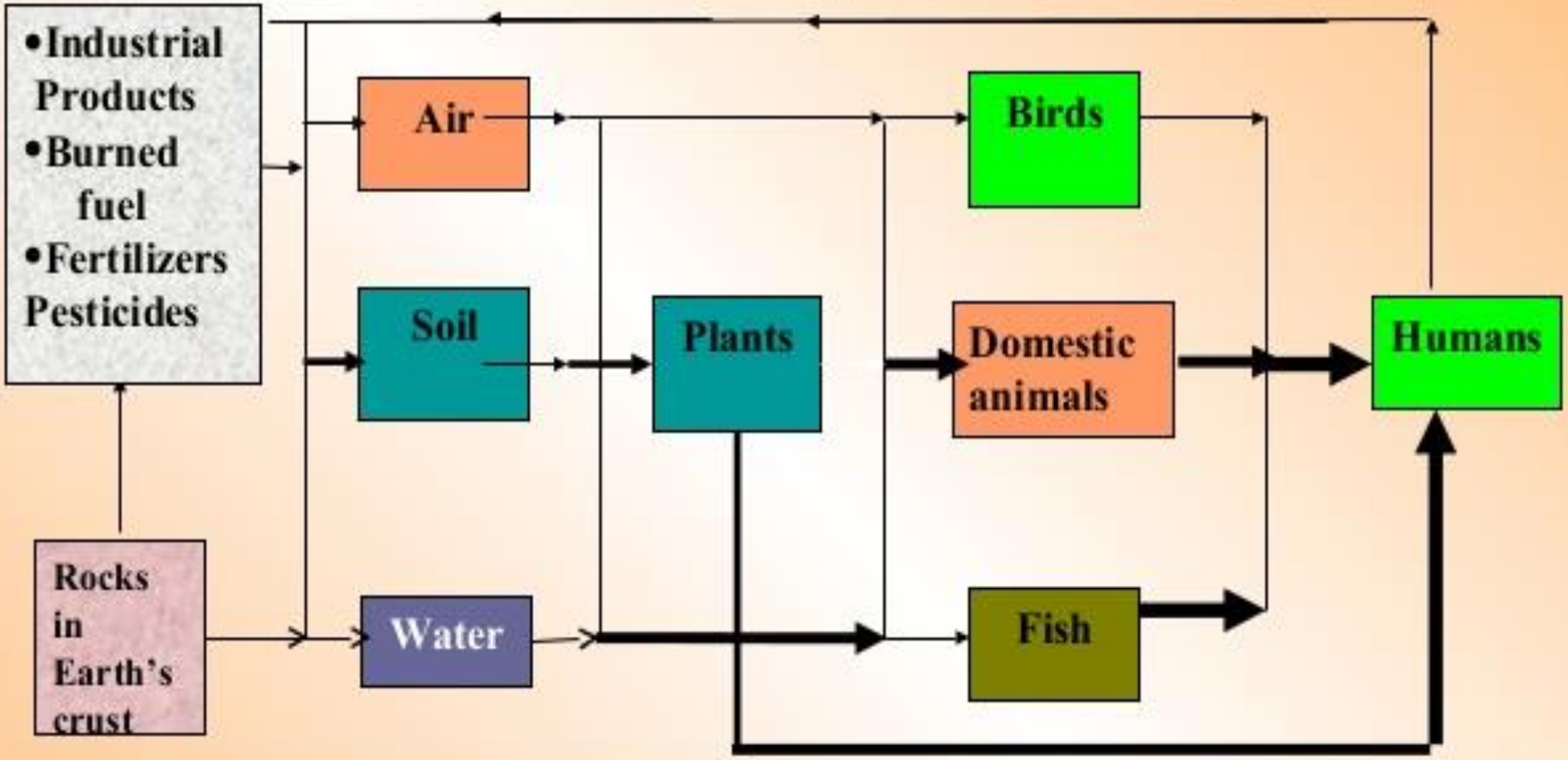
PARTICULATES



AIR POLLUTION

TOXIC METALS,
such as lead and mercury,
especially their compounds.

Sources of heavy metals and their cycling in the soil-water-air organism ecosystem



It should be noted that the content of metals in tissue generally builds up from left to right, indicating the vulnerability of humans to heavy metal toxicity

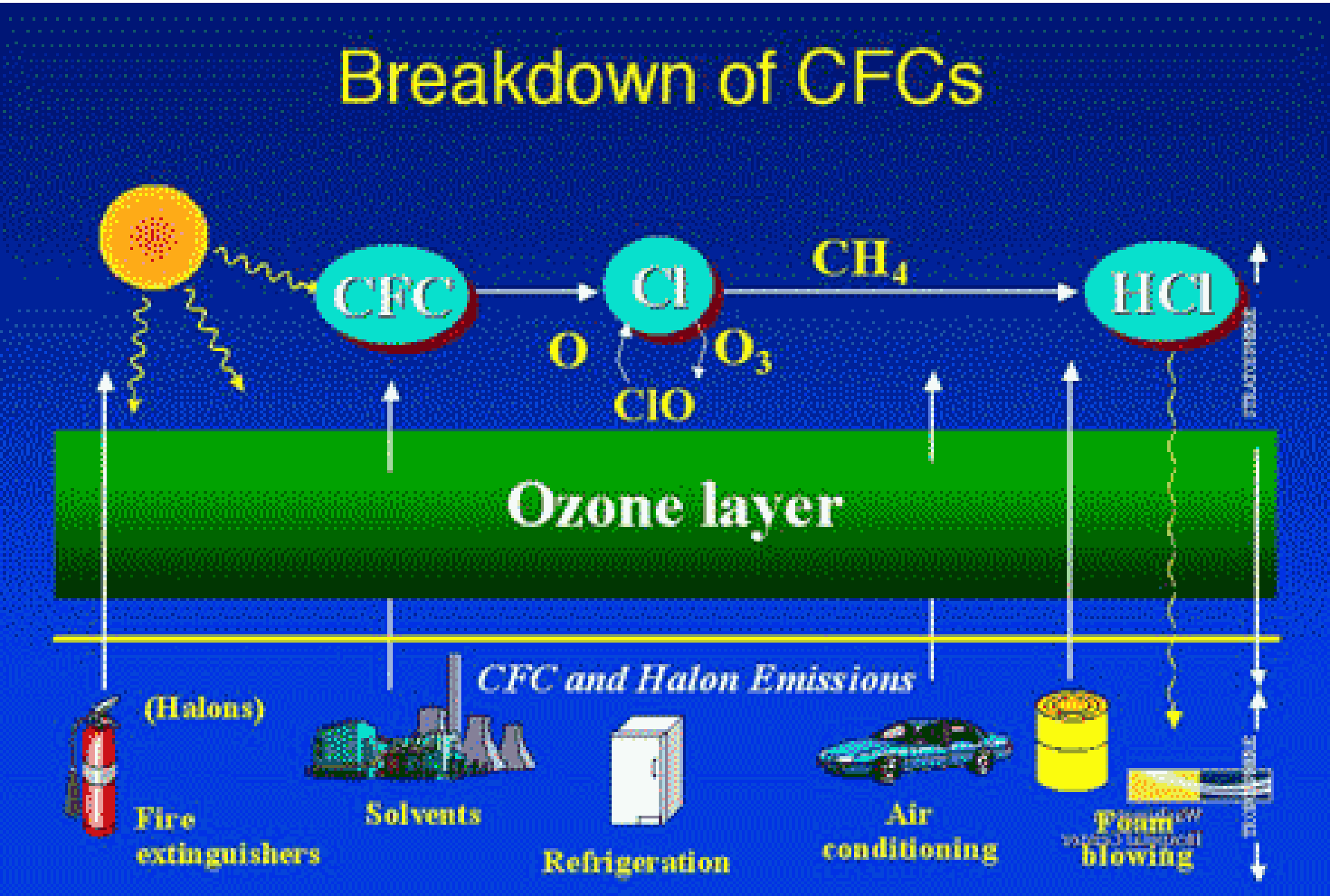
AIR POLLUTION

Chlorofluorocarbons (CFCs)

Chlorofluorocarbons (CFCs) harmful to the ozone layer; emitted from products are currently banned from use. These are gases which are released from air conditioners, refrigerators, aerosol sprays, etc. CFC's on being released into the air rises to stratosphere. Here they come in contact with other gases and damage the ozone layer. This allows harmful ultraviolet rays to reach the earth's surface. This can lead to skin cancer, disease to eye and can even cause damage to plants.

AIR POLLUTION

Chlorofluorocarbons



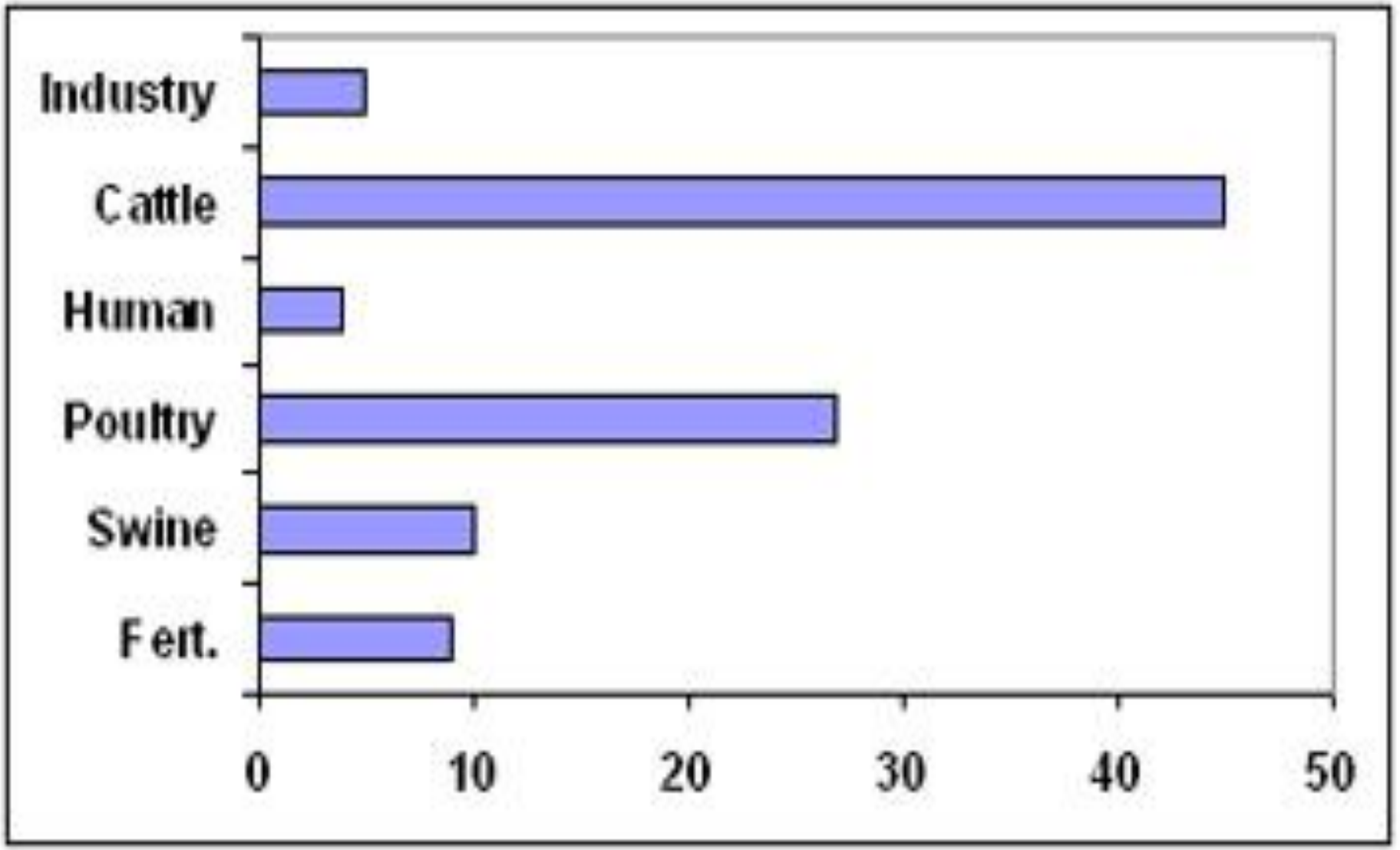
AIR POLLUTION

AMMONIA (NH_3)

Ammonia (NH_3) - emitted from agricultural processes. Ammonia is a compound with the formula NH_3. It is normally encountered as a gas with a characteristic pungent odor. Ammonia contributes significantly to the nutritional needs of terrestrial organisms by serving as a precursor to foodstuffs and fertilizers. Ammonia, either directly or indirectly, is also a building block for the synthesis of many pharmaceuticals. Although in wide use, ammonia is both caustic and hazardous. In the atmosphere, ammonia reacts with oxides of nitrogen and sulfur to form secondary particles.

AIR POLLUTION

AMMONIA (NH_3)



ODOURS

Odours — such as from garbage, sewage, and industrial processes

Odour

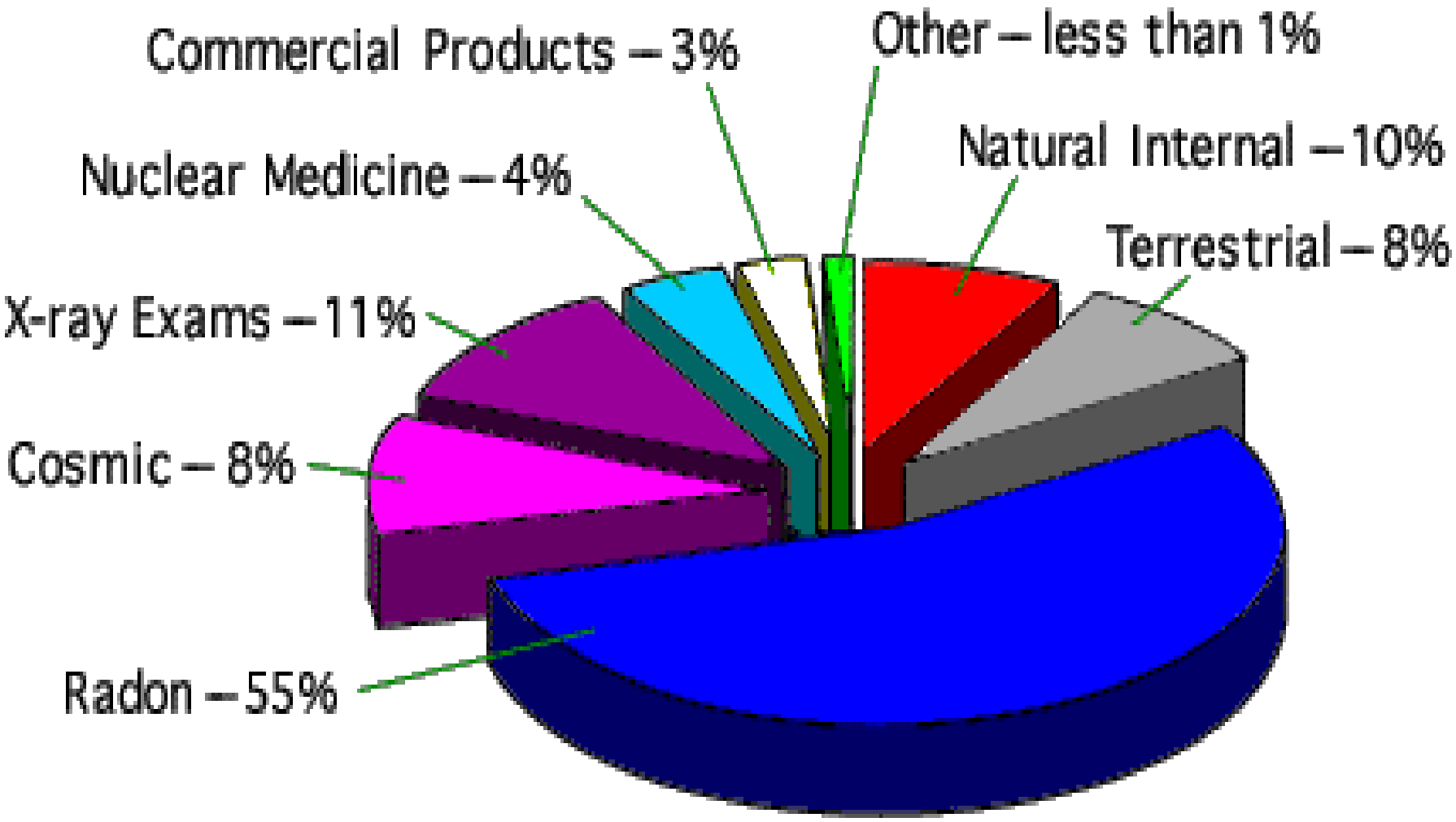
AIR POLLUTION

- Odours are caused by mixtures of chemicals that stimulate the nerves we smell with. An unpleasant, strong, long-lasting odour can be a severe nuisance, reducing our enjoyment of life.
- Sources of odour could include pulp and paper manufacturers, rendering plants, waste water treatment plants and intensive indoor animal farms (for example piggeries and poultry farms).
- There are no national guidelines.

RADIOACTIVE POLLUTANTS

Radioactive pollutants - produced by nuclear explosions, nuclear events, war explosives, and natural processes such as the radioactive decay of radon.

AIR POLLUTION



Sources of Radiation Exposure
to an Average American

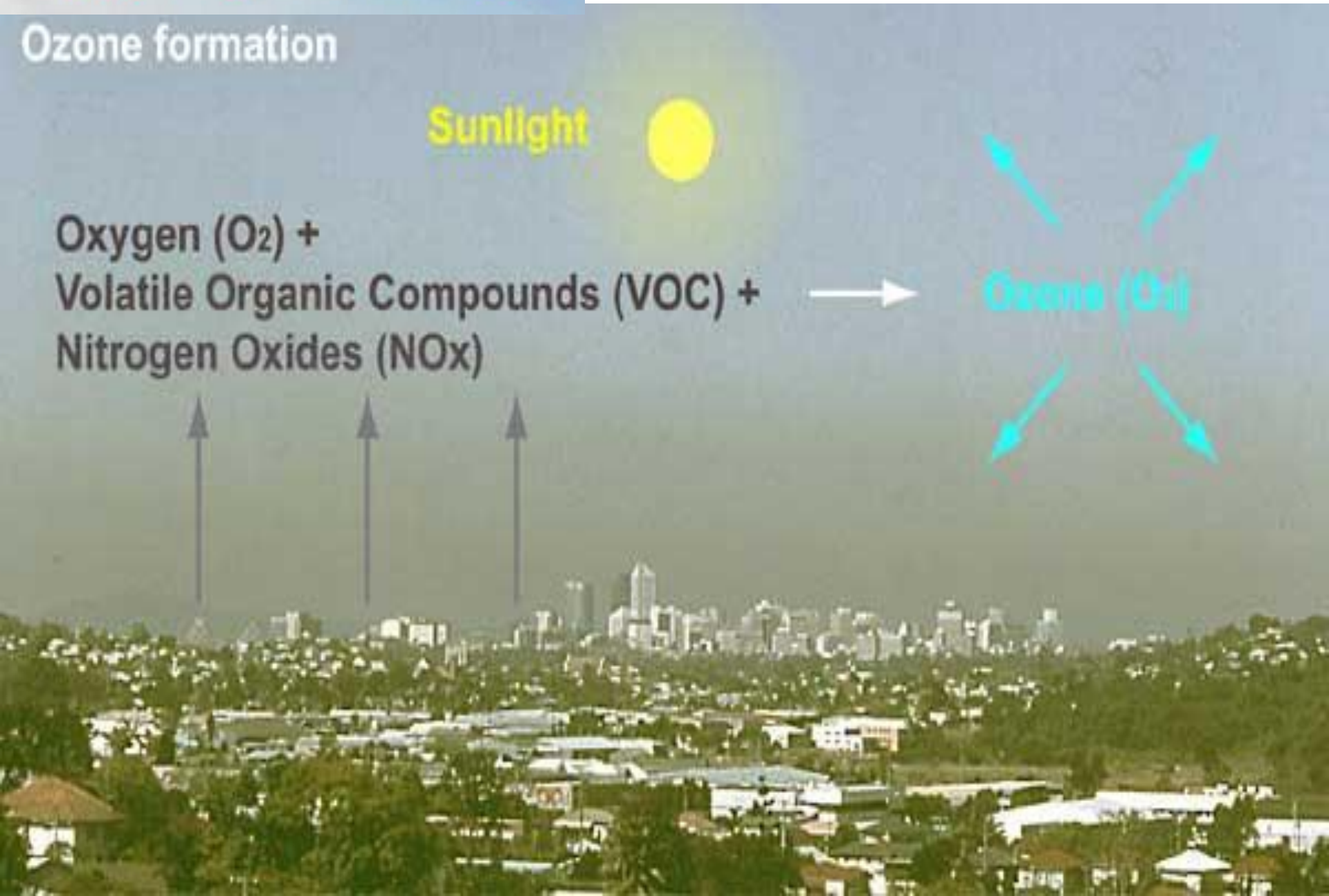
AIR POLLUTION

OZONE POLLUTION

The ozone layer found high in the upper atmosphere (the stratosphere) shields us from much of the sun's ultraviolet radiation. However, ozone air pollution at ground level where we can breathe it (in the troposphere) causes serious health problems.

AIR POLLUTION

OZONE POLLUTION



How do we pollute our

- Air
- Water
- Land
- Food
- Sea
- Space?

BY

BY

By

SMOKE

DUST

CHEMICALS

ACIDS

PARTICULATES

BIOLOGICAL

NUCLEAR

PLASTICS

NOISE

Lung damage from air pollution is a risk faced by 1 out of 5 humans.

Air Pollution

AIR POLLUTION

SMOKE

AIR POLLUTION

DUST

AIR POLLUTION

CHEMICALS

AIR POLLUTION

ACIDS

AIR POLLUTION

PARTICULATES

AIR POLLUTION

BIOLOGICAL

AIR POLLUTION

NUCLEAR

PLASTICS

AIR POLLUTION

NOISE

INNOVENTOR
(INNOVATOR+ INVENTOR),
CONCEPT CREATOR, NEOLEXIAN & AUTHOR

Exn Dr Nirmal Basu, GPian
7th Sense Master & Trainer (SINCE 1991)
FOUNDER- ExNoRa International (1989). 5th Pillar (1997), 7th Sense Society (1999), INNOVENTIONS (1999) & 40 more INNOVENTOR (INNOVATOR+ INVENTOR), (since 1977) of nearly of 3000 IDEAS, CONCEPTS, SERVICES & PRODUCTS AUTHOR (since 1964) 14 books & hundreds of articles, stories & research papers PHOTO-JOURNALIST (since 1964) NEOLEXIAN (coiner of new words) in 3 languages (since 1980)