

A number of chemical compounds found naturally in the earth's atmosphere act as greenhouse gases. The gases are water vapour, carbon dioxide, methane and nitrous oxide while others are exclusively human-made. These gases naturally blanket the earth and have kept the earth's atmosphere some 30°C hotter than it would otherwise be, making it possible for humans to exist on earth.

Greenhouse gases allow sunlight to enter the atmosphere freely. When sunlight reaches the Earth's surface, greenhouse gases absorb some of the reflected longer wavelengths before they are lost to space. These infrared radiation (heat) absorptions warm the earth. Over time, the amount of energy radiated back into space should be the same, leaving the temperature of the earth's surface roughly constant.

The principal greenhouse gas concentrations have increased over the industrial period- began around 150 years ago. The rising amounts of anthropogenic greenhouse gases in the atmosphere increase their ability to trap energy (heat) – leading to a rise in temperature.

In the past 20? years, about three-quarters of human made carbon dioxide emissions were from burning fossil fuels. It is also released by the destruction of forests and other natural 'sinks' and 'reservoirs' that absorb carbon dioxide from the air. In Malaysia, our greenhouse gas emissions come mostly from energy use. These are driven largely by economic growth, fuel used for electricity generation, and weather patterns affecting heating and cooling needs.

Human made greenhouse gases, such as methane, comes from landfills, coalmines and gas operations and agriculture, meanwhile, nitrous oxide is emitted from burning fossil fuels. These gases are also released as by products of industrial processes through the production of cement, the use of certain fertilizers and through leakage.

Some predicted responses to increases in greenhouse gases include increases in mean surface air temperature, increases in global mean rates of precipitation and evaporation, rising sea levels and changes in biosphere. If nothing is done to reduce anthropogenic emissions, the worst change in climatic patterns could happen i.e. global warming. International scientists predict more flooding and droughts, alterations on rain distribution and growing seasons, insect infestations and other seasonal variations taking place around the world.