



Learn about greenhouse gases



What are greenhouse gases?

Greenhouse gases (GHGs) have the ability to capture heat reflected from the Earth's surface and keep our atmosphere warm. Greenhouse gases are important because they stop our planet Earth from freezing. BUT we humans are releasing more greenhouse gases. So more heat is captured in the atmosphere and our planet Earth is getting warmer and warmer! This warming of our planet is known as "global warming".

Global warming

Global warming will bring about changes in our weather patterns, seasons and climate. For example – we may experience a very dry season when it is supposed to be wet. In the Pacific, we may have much stronger cyclones and storms. Global warming will also cause the ice sheets in the North and South Pole to melt bringing about sea level rise. This will affect our coastal areas. **Global warming is causing the climate to change.**

Alert! We need to reduce the amount of GHGs we are releasing into the atmosphere

Methane (CH₄) is a greenhouse gas

Methane is released from natural sources such as wetlands and swamps, wild fires, and when animals and insects digest the plant and woody material they eat. These animals and insects include cows, goats, sheep, termites and tiny marine organisms. Methane is also released when rubbish and organic waste decompose.

Fact: More than 50 per cent of methane emissions in the world come from things that we humans do

Reduce CH₄ emissions by constructing landfills and rubbish dumps that minimise the release of methane into the atmosphere. Capturing methane from sources and turn it into energy.

Nitrous oxide (N₂O) is a greenhouse gas

The main source of nitrous oxide produced by humans is from fertilisers used in agriculture. Plants need nitrogen to help them grow. When fertilisers containing nitrogen are added in large amounts to the soil, nitrous oxide is released. Nitrous oxide is released faster when soils are wet or washed away by rain.

Fact: About 40 per cent of nitrous oxide emissions in the world come from human activities

Reduce N₂O emissions by reducing the use of synthetic fertilisers, using organic manure and compost and by planting nitrogen fixing trees and plants (mainly legumes) with crops.

Carbon dioxide (CO₂) is a greenhouse gas

When we use petrol, oil, gas and diesel for machines, vehicles, power plants and other equipment, carbon dioxide is released. Carbon dioxide is also released when we cut down forests and mangroves because of the vast amount of carbon stored in trees, on the forest floor, in the soil and in mangrove swamps.

Fact: Carbon dioxide is the main greenhouse gas emitted through human activities

Reduce CO₂ emissions by walking or cycling instead of taking a car, switching on only the lights that you need at home, turning off the TV and other electrical equipment from the power point, and keeping forests and mangroves healthy.

