

# Become an expert

**Task:** You will be given an information sheet with one human cause of climate change.

1. You must read through your information sheet and learn everything you can. Fill in your worksheet with the information on your cause.
2. After you have done this you will need to move to the next table and fill in your worksheet with the next information sheet.

# Human Cause: Burning fossil fuels

Fossil fuels are coal, gas and oil when these are burnt they release carbon dioxide into the atmosphere.

Using fossil fuels to generate energy also releases pollutants such as sulphur dioxide into the atmosphere.

These gases trap heat in the atmosphere and increase climate change causing global warming.

These energy sources are called **non-renewable** sources as once they are used we can't remake them. They make up 80% of the world's energy supply.



**89% of all  
greenhouse  
gases  
produced  
are CO<sub>2</sub>**

# Human Cause: Deforestation

Cutting down trees causes climate change in two ways:

1. Cutting down and burning trees releases carbon dioxide ( $\text{CO}_2$ ). As trees decay they also release  $\text{CO}_2$  increasing the carbon dioxide in the atmosphere.

2. Trees absorb carbon dioxide during photosynthesis. Forests absorb and store carbon in their trees and soil. Once cut down they stop absorbing carbon dioxide and removing it from the atmosphere.

If forests are cleared or disturbed carbon dioxide and other greenhouse gases are released



**$\frac{1}{5}$  of global  
greenhouse  
gases come  
from  
deforestation**

# Human Cause: Landfill Waste

When we throw waste away without recycling or composting it goes to landfill.

When organic materials rot and decompose, they release methane. Methane absorbs 84 times more effective heat from the sun than carbon dioxide. This makes it one of the most potent greenhouse gases.

Landfills also produce carbon dioxide and water vapor, and trace amounts of oxygen, nitrogen, hydrogen, and non methane organic compounds, which can also contribute to climate change.



**1/3 of all food  
produced in  
the world  
goes to  
waste**



# Human Cause: Agriculture

Agricultural (farming) practices lead to the release of greenhouse gas emissions in a number of ways:

1. High demands for meat and dairy has lead to an increase in pastoral (animal) farming. Animals release methane so the more animals there are leads to more methane in the atmosphere.
2. Arable (crop) farming uses fertilisers containing nitrous oxide, which is 10x worse and nearly 300x more potent than carbon dioxide!
3. Deforestation to make space for farming releases gases and takes away a greenhouse store.
4. Fossil fuels are used to transport food to people.



**29% of gas emissions are come from farming practices**