



**Climate change has resulted in a great deal of confusion and misinformation. Below are some of the main “myths” about climate change.**

**IT’S A MYTH THAT...  
The impacts of climate change are a long way off**

It is clear that climate change is happening now with weather events and changes in rainfall patterns having a big impact on the viability of ecosystems and cities.

The 1990’s was the warmest decade globally since accurate records began more than 100 years ago. Dr Tim Flannery, a leading Australian environmental scientist points out that Perth, for example, has lost two thirds of its surface water supply since 1975.

**IT’S A MYTH THAT...  
Developing nations are the main cause of climate change**

Yes, greenhouse gas emissions from developing countries are growing as they rapidly build the infrastructure (roads and power stations) that developed countries already have. But it is the developed world that is the largest consumer of fossil fuels and the largest emitter of greenhouse gas. Emissions per head of population are far higher in Australia than in almost every other country in the world.

**IT’S A MYTH THAT...  
Climate change is natural**

Yes, natural fluctuations in the climate have always occurred. However recent changes in the climate are far greater than previous natural fluctuations. Scientific evidence shows that recent changes in climate can be attributed to human activity.

The climate on Earth has always fluctuated. Recent changes in the Earths climate (e.g. increases in average global temperatures) cannot be attributed only to natural causes such as changes in solar activity. The Intergovernmental Panel on Climate Change (IPCC) explains that “Most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic (human caused) greenhouse gas concentrations”. Fossil fuels have taken millions of years to form, trapping carbon within them. It is logical that burning millions of years of fossil fuels (and releasing the stored carbon as CO<sub>2</sub>) in the last one hundred years will have made a significant change to the earths atmosphere.

**IT’S A MYTH THAT...  
The economy will suffer if we reduce greenhouse emissions**

Many studies by the world’s leading economists have concluded that doing nothing to address climate change will have a far greater impact on the global economy in the future as compared to addressing the challenge now.

Local employment will also benefit if Australia becomes a leader in clean energy and sustainable tourism and agriculture.

**IT’S A MYTH THAT...**

**Warmer weather will actually be good for some people**

Whilst there may be temporary benefits to some countries in high latitudes, the negative effects far outweigh any temporary positive effects.

Some potential effects of climate change include:

- Those parts of the world already experiencing water shortages would find their problems worsen with climate change.
- Warming of a few °C or more is projected to increase food prices globally, and may increase the risk of hunger in vulnerable populations.
- A higher frequency of epidemics of infectious diseases after storms and floods, and significant impacts from the displacement of populations in response to rises in sea level and greater storm activity.
- Overall crop yields would decrease as temperatures rise.
- An increase in heat-related death and illness.

**IT’S A MYTH THAT...**

**The Kyoto Protocol is a waste of time because the United States will not ratify it**

The countries who have now signed the Kyoto Protocol agreed to individual targets for their total annual greenhouse gas emissions. These targets, if achieved, would result in an overall reduction of emissions by 5.2% in 2008-2012 compared to 1990 (a big turnaround compared to rapid rises in emissions seen since the 1970’s).

**IT’S A MYTH THAT...**

**Using less power will not make a difference because the power station keeps running**

Electricity cannot be stored on the grid, so the system is designed to respond to demand. When less electricity is drawn from the grid, power stations respond by reducing the generation of electricity (and as a result the generation of greenhouse gas).

**IT’S A MYTH THAT...**

**Industry and the Australian Government are doing nothing**

The Commonwealth and State Governments are actively encouraging investments in “climate clean” technologies to prevent climate change and researching solutions to climate change issues. Many industries are leading the way in reducing emissions because they know that when limits on emissions are introduced they will be costly, to implement, especially if they do not start to act now.

**IT’S A MYTH THAT...**

**Turning off lights is the only thing I can do at home**

Almost everything we do (driving, watching TV, running the dishwasher) has an impact on greenhouse gas emissions. By taking part in the Living Smart program and making changes in your lifestyle you are making a great contribution to combating climate change. Many people making changes to their electricity, gas and petrol use will make a big difference.

## CLIMATE CHANGE FACTS AND MYTHS

Living Smart is a world leading initiative developed in Western Australia that encourages people to save energy, water and petrol and to generate less waste. The information provided in this brochure will help you understand the process of climate change. It will also provide the reasons for reducing your greenhouse emissions and show that your actions can make a difference in preventing climate change.

Climate change is a “hot topic” and we see something about it on the TV or in the paper almost every day. There are so many different opinions that it can be difficult to understand what is really occurring. Some say that every extreme weather event is evidence of climate change, while others suggest that these events are natural and nothing to worry about.

This brochure outlines a range of interesting facts and dispels many myths about climate change.



## IT'S A FACT THAT...

### The Greenhouse effect is real

The greenhouse effect occurs because gas in the atmosphere traps some of the heat from the sun that would otherwise radiate away from our planet into space. This raises the earth's temperature and makes it suitable to support life. The emission of greenhouse gases into the atmosphere from human actions is projected to raise the temperature to a point that many animal species, as well as our way of life, will be threatened by rising sea levels and changing habitats.

#### WHAT ARE GREENHOUSE GASES?

The main greenhouse gases in the Earth's atmosphere are:

- water vapour (H<sub>2</sub>O)
- carbon dioxide (CO<sub>2</sub>) and nitrous oxide (N<sub>2</sub>O)
- methane (CH<sub>4</sub>)
- ozone (O<sub>3</sub>)

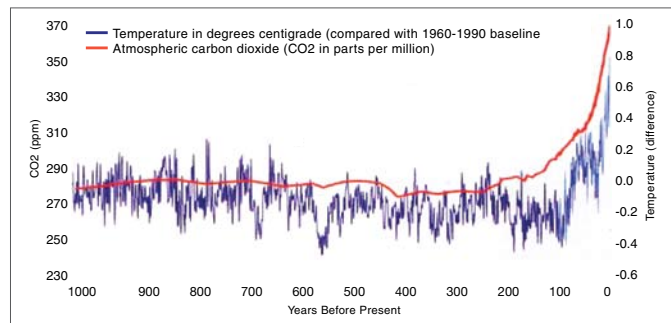
Many human activities release more of these greenhouse gasses and add entirely human-made greenhouse gases, including:

- sulphur hexafluoride (SF<sub>6</sub>)
- hydro fluorocarbons (HFC's)
- perfluorocarbons (PFC's)

## IT'S A FACT THAT...

### The climate is changing rapidly

Scientists say we are now experiencing an event that is not normal at all, global warming. Global warming is caused by human activity - particularly burning fossil fuels (coal, oil and natural gas), agriculture and land clearing.



These activities cause greenhouse gases to be released into the atmosphere at a far greater rate than would occur through natural processes. This human caused increase in greenhouse gases causes more heat to be trapped, resulting in global warming. The reason everyone is so worried about this increase in temperature is because it is happening so rapidly. For Australia a 2°C temperature rise is projected to occur by 2030 (from 1990 levels).

## IT'S A FACT THAT...

### Small changes in temperature can be dangerous to life on Earth

Scientists say that the main question is not whether the climate is changing, but rather how much, how fast and where (regional patterns). On an ordinary day one degree difference in temperature isn't really noticeable, so what's all the fuss about?

The results of climate change are already being observed around the world, and include:

- retreat of glaciers and sea-ice;
- decline of the Arctic sea ice and a decrease in its average thickness of snow;
- an average sea level rise of 20 mm per decade over the last 50 years;
- changes in mating and migration times of birds and other animals;
- an increase in coral bleaching due to increased water temperature.

## IT'S A FACT THAT...

### Some climate change is "locked in" by recent increases in greenhouse gas emissions.

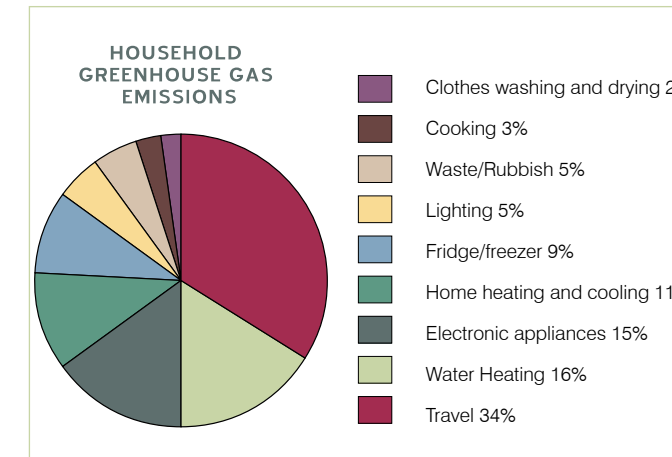
Projections for Australia are for a hotter climate with more frequent extreme events. It is estimated that there will be:

- warming of up to 2°C by 2030 compared to 1990;
- more hot days over 35°C and a reduction in the number of frost days;
- an increase in the frequency and duration of extreme events such as heavy rains, cyclones, floods, and droughts;
- a rise in sea level.

## IT'S A FACT THAT...

### Individuals can make a difference

The typical Australian household releases around 14 tonnes of greenhouse gas through the direct use of electricity, gas, petrol, water and other day to day activities. This represents a quarter of Australia's



emissions and is one of the highest rates per household in the world. Household emissions from all activities (including our food choices, air travel and consumer goods) raise our contribution to around 30 tonnes per household. Small changes in the way we use our cars, lights, airconditioners etc can make a big difference. Reducing our greenhouse gas emissions by 1 tonne a year is easy for most households. Just by switching off standby power, changing to energy efficient light globes and appliances and choosing an alternative to the car for one trip each week will save 1-2 tonnes per year.

## WANT to know more?

For information on climate change and the many things that you can do about it:

Visit the Act Now website at: [www.actnow.wa.gov.au](http://www.actnow.wa.gov.au)

Visit the Department of Climate Change at: [www.greenhouse.gov.au/](http://www.greenhouse.gov.au/)

Visit the Department of the Environment, Water, Heritage and the Arts website at

[www.climatechange.gov.au/gwci/households.html](http://www.climatechange.gov.au/gwci/households.html)

Living Smart is an information service run by the Department for Planning and Infrastructure and the Department of Environment and Conservation that help people make small changes in their day to day life, resulting in reduced emissions of greenhouse gases.

For more information on the Living smart program visit: [www.dpi.wa.gov.au/livingsmart](http://www.dpi.wa.gov.au/livingsmart)

A fully referenced version of this information is available on this website.

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