

Watermark

Conference of Leaders of Religious Institutes (NSW)



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Introduction

As the world becomes hotter, so do the debates about climate change and what actions we can take to minimise our contribution to it. For those who, everyday, digest news about global warming and carbon emissions, it can be hard to believe that there are still many people who are sceptical about climate change. However, it is important to understand that we tend to deny what we fear or do not comprehend. Climate change and the politics and science involved in addressing it are often very complex. Despite the fact that these issues are so often discussed, it is rare that they are explained in simple terms. In this issue of *Watermark* we endeavour to provide simple explanations of the main concepts and processes involved in climate change and climate change mitigation.

This issue of *Watermark* is jam-packed with information, so if your eyes are getting tired from reading, please take some time to peruse the web links included on page four. These sites will lead you to important information that we couldn't quite squeeze into this issue!

Of particular interest is the Whitlam Institute website and the links relating to the Energy Security forums. The Whitlam Institute, in partnership with the University of Western Sydney, recently held an excellent series of forums where noted scientists, policy makers, and researchers shared their expertise in fields relating to energy and the environment. We recommend you download videos and slides from the various speakers' addresses from the Whitlam Institute website.

As always, you are encouraged to take simple steps to reduce your carbon footprint, at home, at work or wherever you can. While this issue doesn't include any tips on how to achieve this, we highly recommend the book 'Climate Change: What You Can Do About It' by Paul Holper and Simon Torok. For \$29.95 it is an invaluable resource for carbon-reduction suggestions and simple explanations of climate change issues and facts.

If understanding is the first step towards action, we hope that this issue will spur you on to tackle climate change in whatever ways you can!



The problem...

Q: Global warming...please explain!

Global warming: Our planet is at a warm, liveable temperature because radiation from the Sun reaches the Earth and warms it. Some of this warmth is absorbed by the Earth's surface and some bounces back, and is radiated out into space. Global warming occurs when the heat attempting to bounce back into space is, instead, absorbed by greenhouse gases and remains trapped within the Earth's atmosphere. This surplus heat continues to warm the Earth, creating the effect "global warming". See the diagram opposite for a visual representation of global warming.

Q: So what are these "greenhouse gases" and why are they suddenly a problem?

Greenhouse gases: Some of the main substances collectively called "greenhouse gases" are: water vapour, carbon dioxide (CO₂), methane, ozone (O₃), nitrous oxide, and chlorofluorocarbons (CFCs). Given the fact that CO₂ is the most talked-about of the greenhouse gases, it may come as a surprise that it is in fact water vapour that contributes the most to the warming of the planet. The reason why it is not referred to as a dangerous greenhouse gas, is because it (and whatever radiation it has absorbed) remains within the atmosphere for only a short time.

Q: Why is everyone concerned about CO₂ or "carbon emissions"?

CO₂ or Carbon: While is responsible for only 9–26% of the greenhouse effect, CO₂, unlike water vapour, can stay in the atmosphere for decades, making it very volatile. Efforts are also directed towards reducing levels of CO₂ because it is one of the gases over which we have the most control. The increase of carbon emissions since the industrial revolution (carbon is released when fossil fuels are burned) has caused the Earth's climate to change rapidly over a short period of time. The correlation between industrialisation, increased carbon emissions, and global warming is one of the most convincing signs that human actions are responsible for climate change.

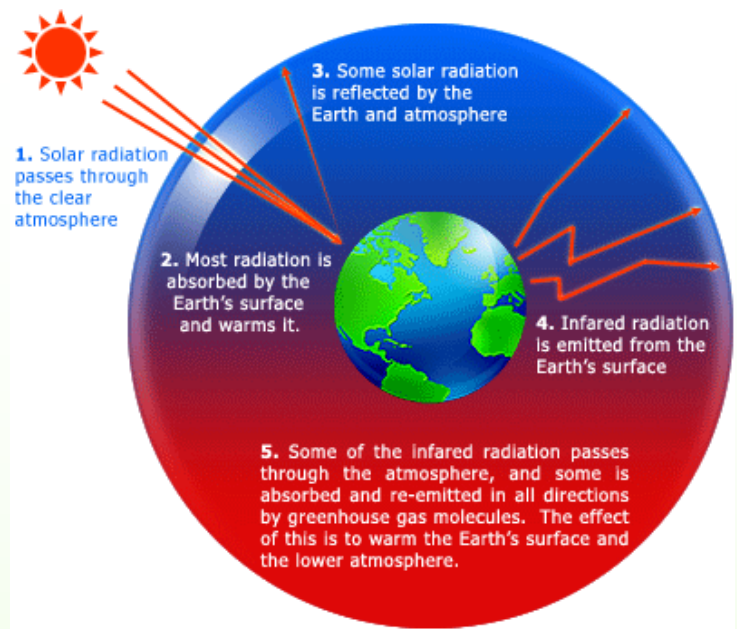


Image from:

<http://www.genersys.co.za/Why-solar/Fight-global-warming>

Q: What's the difference between "global warming" and "climate change"?

Climate change: The terms "global warming" and "climate change" are sometimes used interchangeably, but basically climate change is the result of global warming. Historically, the Earth has gone through many climate changes (think of how we got from the Ice Age to here!) but the climate change of which we speak today is unique because it is brought on by human actions. Increased carbon emissions due to industrial development and heavier reliance on the burning of fossil fuels for energy caused global warming, which in turn led to changes in climates across the world.

Q: If the climate has changed before why should we worry if it changes again?

Effects of climate change: The reason why this climate change is worrying is because it is occurring so rapidly. Previous changes in climate, not caused by humans, occurred comparatively slowly, but current changes are taking place much too rapidly for many ecosystems to adequately adapt. This means that if we do not slow the heating of the Earth, many plants and animals will die, and vital ecosystems will be lost. The human impact will also be immense. Many low-lying Pacific nations are already threatened with inundation by rising sea-levels caused by the heating and melting of polar ice-caps.

The plans...

Q: What is the Kyoto Protocol and what does it mean for Australia?

Kyoto Protocol: The Kyoto Protocol is an international agreement formed between world leaders in Kyoto, Japan, in 1997. The purpose of the Protocol is to legally limit the amount of greenhouse gases emitted by developed nations. The nations involved agreed to certain limits based on increases or decreases from their 1990 emissions levels. It may be confusing that some countries were permitted to increase their emissions, but because these increases are strictly limited, it effectively means that any industrial expansion occurring in these countries must be done so in a carbon-conscious manner. If all nations were to achieve their set greenhouse emissions' reductions/limitations it would mean a 5.2% reduction from 1990 levels by the year 2012. This is not a drastic reduction and the Kyoto Protocol is not a "solution" to climate change. It is simply a way to stop industrialised nations continuing in a "business-as-usual" fashion and increasing their emissions to irresponsible levels.

Australia was one of the many developed countries that signed (agreed to its limits) the Kyoto Protocol in 1998, but only ratified it (confirmed its commitment to achieving these limits) in 2007. Australia is allowed, under the Protocol, to increase its emissions from 1990 levels by 8% by the year 2012. Currently, our emissions have increased by 5%, meaning that in the next four years our emissions can only increase a further 3%.

The Kyoto Protocol is a legally binding agreement. If Australia fails to meet its target in 2012, we will be forced to reduce our emissions by 1.3 tonnes for every tonne we emitted over the 8% increase limit. Alternatively, emissions can be traded on the carbon market.

Q: What is a carbon market and how do you trade emissions?

Emissions Trading Scheme: One of the Kyoto Protocol's mechanisms for limiting carbon emissions is to allow countries to trade carbon (and other greenhouse gases) on a "carbon market". The Australian Government is looking to implement an Emissions Trading Scheme or Carbon Pollution Reduction Scheme (CPRS) on a national level,

meaning polluters would be forced to pay according to how much carbon they emit. This is known as a "cap and trade" system. Certain companies or industries are assigned an emissions limit (cap). If a company emits less than its limit, then it has carbon credit. Companies that exceed their cap can buy credit (trade) from the other companies so that the overall emissions remain at a set level. In effect, this means that companies have an incentive to decrease their emissions or they will be forced to pay for the license to emit beyond their cap.

The success of a CPRS lies in its inclusiveness. If some companies or industries are excluded from the scheme it will cripple the effectiveness of the system. The Australian Government is being pressured by certain emissions-intensive industries to grant exemptions. We encourage you to lobby the government to remain firm and make the CPRS an all-inclusive scheme, so that accountability for global warming lies with those who produce the most emissions.

Q: Who is Garnaut and what's his report about?

The Garnaut Report: Ross Garnaut is an Australian economist employed by the Australian Federal and State governments to assess the effects of climate change, and climate change mitigation, on our economy. On the 30th of September Garnaut released his Final Report, which advised that greenhouse gases in the atmosphere should be limited to 450ppm (parts per million – i.e. that greenhouse gases make up 450 of every million molecules in the air). Garnaut suggests that Australia should support an international agreement to achieve these levels, and if no such agreement can be reached, then aim for a less-ambitious limit of 550ppm. The justification given for this is that more progress can be made with an achievable target, than with an overly-ambitious one that we may fail to meet. Garnaut has received some criticism for not advocating for bolder targets, but the overall message of his report remains the same: we must act now to mitigate climate change or the Australian economy and people will suffer greatly.

With the current panic over the global financial crisis, it would be easy to put action for climate change on the back-burner. But the Garnaut Report clearly states that if Australia does not reduce its carbon emissions our economy will suffer tremendously. Australia can also financially *benefit* from investing in renewable (low carbon) energies, as our climate and geography lend themselves to such sources of natural energy.

Conference of
Leaders of Religious
Institutes
(NSW)

PO Box 259
Rosebery
NSW 1445

PHONE:
(02) 9663 2199

E-MAIL:
clrinsw@ozemail.com.au



We are on the Web!
www.clrinsw.org

You can read past
issues of
Watermark
on our website!

Climate Torch Relay

While Olympic Games officials did their best to prevent protestors disrupting the 2008 Olympic Torch relay, another torch relay was occurring throughout Australia, which had a far more open attitude towards speaking out against the powers that be! The Australian activist organisation **GetUp!** arranged a Climate Torch Relay to promote the use of renewable energies and to deliver the message that Australia should reduce its carbon emissions by 50% by the year 2020.

From August 11th to October 12th numerous relay events occurred where a specially-designed torch, powered by wind power, solar power, "people power" and the reactive acids of a lemon, passed through towns all across Australia. The relay ended with the torch being delivered to Parliament House in Canberra, in front of a crowd of hundreds of supporters of strong action for climate change in Australia.



The climate torch

Events such as this demonstrate the passion of many Australians about mitigating climate change, and their willingness to play a part in the process. The Garnaut Report suggests that Australia should commit to a 25% reduction in carbon pollution by the year 2020, or a 40% reduction if an international agreement can be, collectively, reached to achieve this target. The Australian Conservation Foundation suggests that Australia's emissions need to be reduced by at least a third, while the position of GetUp! is clearly even stronger.

While the Garnaut Report clearly demonstrates that climate change mitigation is more economically beneficial than taking no action, the suggestions made by the Report are still conservative. "People power" was one of the key sources from which the Climate Torch drew energy. People power is also an indispensable element in the fight for social and political change. Even though the Climate Torch Relay is now over, you can continue to carry the message of the relay to your local political member. The Garnaut Report is an invaluable resource for our politicians in their policy and decision-making, but it is not the be-all and end-all. Let your local politician know that you care about the steps Australia is taking to be a part of the solution to climate change. At the end of the day climate change will affect all of us, so it is up to every one of us to share some of our own energy to make the world a cooler place to live.

[Links](#) and Ways to Help!

A good place to start for facts about climate change

<http://www.realclimate.org>

Learn more about the Kyoto Protocol

http://unfccc.int/kyoto_protocol/items/2830.php

Find out more about the Carbon Pollution Reduction Scheme

<http://www.climatechange.gov.au/emissionstrading/index.html>

To read the entire Garnaut Report

<http://www.garnautreview.org.au>

Renewable Energies – follow the links under 'Energy Security'

http://www.whitlam.org/whitlam/index.php?option=com_content&task=category§ionid=1&id=1&Itemid=65

Australian Conservation Foundation – read their Garnaut Report 'scorecard', get involved in projects and sign up for ACF newsletters

<http://www.acfonline.org.au>

Members of Parliament contact details

<http://www.australia.gov.au/>