

International response to climate change



Climate change is a global issue of international significance. Governments, industries, communities and organisations across the globe need to work in partnership to better understand the impacts of increasing greenhouse gas concentrations and the implications for climate change. A better global understanding of climate change will continue to assist the world to develop measures to help deal with our changing climate.

Analysing the science: defining the problem

The Intergovernmental Panel on Climate Change (IPCC)

The IPCC is an international panel of scientists and researchers that provides advice on climate change to the international community.

The role of the IPCC is to assess the scientific, technical and socio-economic information relevant for the understanding of the risks of human-

induced climate change and provide policy relevant advice on the state of technical knowledge on climate change. The assessments inform international negotiations on climate change issues.

The IPCC provides periodic assessment reports on climate change and have completed four comprehensive assessment reports to date (1990, 1995, 2001, and 2007). The most recent, the *Fourth Assessment Report*, is a consensus document produced by 450 lead authors, 800 contributing authors, and 2500 scientific expert reviewers representing 130 countries.

Key findings of IPCC's *Fourth Assessment Report*

- Warming of the climate system is unequivocal.
- Most of the warming in the past 50 years is “very likely” (defined by IPCC as more than 90 per cent probability) due to the observed increase in greenhouse gas concentrations from human activities such as the burning of fossil fuels and land use change.

- It is “very likely” that changes in the global climate system will continue well into the future, and that they will be larger than those seen in the recent past.
- Global warming has had a discernible influence on many physical and biological systems.
- Some large-scale climate events have the potential to cause very large impacts, especially after the 21st century.
- Some adaptation is occurring now and will need to continue into the future to address impacts from the warming (which is already unavoidable due to past emissions).

The report concludes that if global emissions peak by 2015 and decline sharply thereafter, warming can be kept to 2.5°C above pre-industrial levels, therefore avoiding the worst impacts.

The report states that many options exist for reducing global greenhouse gas (GHG) emissions through international cooperation and that governments have options for introducing incentives for mitigation action.

Research since the *Fourth Assessment Report* indicates that greenhouse gas emissions, climate change and sea-level rise are happening faster than the climate models have so far indicated.

International policy response

The United Nations Framework Convention on Climate Change (UNFCCC)

The UNFCCC is a primary policy tool for facilitating a global response to protect the climate system for present and future generations.

Australia adopted the UNFCCC in 1992 – this was a major step forward in tackling the problem of global warming. Yet as greenhouse gas emission levels continued to rise around the world, it became increasingly evident that only a firm and binding commitment by developed countries to reduce emissions could send a signal strong enough to convince businesses, communities and individuals to act on climate change. Member countries of the UNFCCC therefore began negotiations on a Protocol – an international agreement linked to the existing Treaty, but standing on its own. The Kyoto Protocol was adopted on 11 December 1997.

Kyoto Protocol

The Kyoto Protocol is an international agreement which builds on the UNFCCC and sets legally binding targets and timetables for cutting greenhouse-gas emissions of industrialised countries.

On 3 December 2007, Prime Minister Rudd ratified the Kyoto Protocol as the first official act of the new Australian Government.

Like the UNFCCC, the Kyoto Protocol's goal is to stabilise GHG emissions in the atmosphere. The major distinction between the two documents is that while the convention encouraged developed countries to stabilise GHG emissions, the Protocol *commits* them to do so.

The Protocol sets out emission reduction targets for developed countries because they have been responsible for the vast

majority of the world's human-induced GHG emissions which have triggered the warming of the past century. It requires those countries to reduce their GHG emissions. Some developed countries are required to reduce emissions, some to keep their emissions constant, and some to limit emissions increases to a defined amount. Australia's target is 108 per cent of 1990 levels. Targets must be met within a five-year time frame between 2008-2012 (the "first commitment period") and add up to a total cut in global GHG emissions of at least 5 per cent against the baseline of 1990. While this may seem like an insignificant amount, compared with what would happen if nothing were done, the Kyoto target provides a significant first step to reducing global emissions.

The Kyoto Protocol allows countries flexibility in how they meet their emission reduction targets:

- Emissions trading – based on the principle that the cost of emissions reductions differs across countries and companies, but that it does not matter where in the world the emissions are reduced. This allows large cuts to be made to emissions at low cost to achieve targets. 'Leftover' emissions' savings can be sold as credits to those countries or companies who do not meet their reduction target.
- The Clean Development Mechanism – allows developed countries to invest in clean energy and emissions reduction projects in the developing world, and use the emission reductions to help meet their domestic targets.
- Joint Implementation – allows a developed country to undertake a project that reduces greenhouse gas emissions in another developed country and use the resulting emission reductions towards its own national target.

Has the Protocol worked?

Between 1990 and 2004, developed countries which have ratified the Kyoto Protocol have reduced overall greenhouse emissions by 4.9 per cent. A number of

developed countries that are tracking above their assigned targets are expected to meet them through Kyoto Protocol emissions trading and the use of other flexibility mechanisms as mentioned previously. The Protocol's first commitment period has pointed countries in the right direction, led to considerable development of policies, and fostered technologies for emission reductions in the public and private sectors.

Post-Kyoto: next steps

The Kyoto Protocol is generally seen as an important first step towards a truly global emission reduction regime that will stabilise GHG concentrations at a level which will avoid dangerous climate change. Negotiations have commenced on continuing the Protocol beyond the first commitment period (2008-2012). The UNFCCC 13th Conference of the Parties was held in Bali, Indonesia, in December, 2007. This conference resulted in the "Bali Roadmap", a plan to achieve a new global climate treaty by the end of 2009 that would be in place by 2012. For the first time, key developing nations committed to take "nationally appropriate mitigation actions...in a measurable, reportable and verifiable manner." This commitment opens the door to meaningful developing country participation in a climate change agreement.

Source: unfccc.int/kyoto_protocol

More information

Climate Change

www.climatechange.qld.gov.au

The Intergovernmental Panel on Climate Change

Reports can be downloaded at <http://www.ipcc.ch/>

United Nations Framework Convention on Climate Change

<http://www.climatechange.gov.au/international/unfccc.html>

Kyoto Protocol

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