

Climate change - Information sources on emerging findings

The principal international agency established to provide authoritative information on climate change is the Intergovernmental Panel on Climate Change (IPCC). One of the IPCC's main activities is the preparation of 'comprehensive assessment reports about the state of scientific, technical and socio-economic knowledge on climate change, its causes, potential impacts and response strategies'. Since its inception in 1988 the IPCC has prepared four multi-volume assessment reports. The Fourth Assessment Report (AR4) was published in 2007 and the Fifth Assessment Report (AR5) will be completed in 2014. There is an extensive participation of experts of all kinds in the preparation of the reports.

This fact sheet provides links to the Fourth Assessment Report (2007) and as soon as it is released it will provide links to the Fifth Assessment report.

There can, however, be long gaps between the release of IPCC reports. In the intervening periods significant changes can occur in the global environment and much new research is taking place.

To gain a full understanding of what is happening there is therefore a need to have other reliable sources to draw on that are constantly being updated. These sources can provide new data and report recent research related to a particular aspect of climate change for example global temperature rises, polar ice melt, ocean acidification, or water resources or to a particular regional area for example Australia.

This fact sheet provides a list of some of these sources.

NATIONAL

The Department of Climate Change and Energy Efficiency (DCCEE)

www.climatechange.gov.au/

<http://www.climatechange.gov.au/government/international/global-action-facts-and-fiction.aspx>

This is the Australian Government Department responsible for delivering the Australian Government's climate change framework focussing on policies relating to mitigation, adaptation and international engagement. This website provides a comprehensive listing of the Commonwealth Government's climate change and energy efficiency initiatives and legislation; practical information on state and territory government household rebates and assistance; and the national framework for the reporting and dissemination of information around corporate GHG emissions, project, energy use and production.

A section of their website is devoted to Global action – facts and fiction, and provides a wealth of information covering Climate Change, Carbon Pricing and details of actions being taken in many countries around the world to reduce greenhouse gas emissions. Information on this website makes it clear that Climate Change is real, that Australia is one of the worst offenders in the emission of greenhouse gases and that Australia is not alone in tackling the problem.

Of particular interest in the current political debate are the following Fact Sheets:

- Climate Change: Countries Acting Now
- International Pledges on Climate Change Action: The Future
- Australia: Part of the Climate Problem – Part of the Solution

Other resources on the site include a list of Frequently Asked Questions, details of Australia's greenhouse gas emission levels and a summary of emission trading schemes in other countries.

Australian Climate Change Science Program (ACCSP)

<http://www.cawcr.gov.au/projects/climatechange/>

<http://www.cawcr.gov.au/projects/climatechange/publications.shtml>

The ACCSP is the Commonwealth Government's flagship climate change science program, playing a significant role in informing public policy on climate change. The ACCSP is co-funded by the Department of Climate Change and Energy Efficiency (DCCEE), CSIRO and the Bureau of Meteorology (BoM), in collaboration with the Australian Academy of Science, the Antarctic Climate and Ecosystems Cooperative Research Centre and the Centre of Excellence for Climate System Science and Australian universities. ACCSP research is peer reviewed, published in high ranking international journals, such as *Nature* and *Science*, accessible to the public. This website provides selected reports and information in multimedia format.

Australian Government: Bureau of Meteorology

<http://www.bom.gov.au/climate/change/>

http://www.bom.gov.au/announcements/media_releases/ho/stateClimate2012.pdf

This site contains useful data and other information, including recent media releases on climatic events and a section on climate change including extreme weather, droughts, rainfall and temperatures.

Australian Academy of Science

<http://science.org.au/publications/>

Modeled on the Royal Society of London, the Australian Academy of Science promotes science through four major program areas: recognition of outstanding contributions to science; education and public awareness; science policy; and international relations. The website has numerous publications produced by the Academy including histories and biographies of scientists, educational

resources for teachers, reports on policy-related matters and conference proceedings.

Antarctic Climate and Ecosystems Cooperative Research Centre (ACE-CRC)

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

ACE is Australia's largest centre for Antarctic and Southern Ocean climate change research. Their research extends to include climate change impacts in Australia and the Pacific. This website has a database of publications published by ACE in peer-reviewed journals, technical reports and annual reports. The website also provides extensive information on Antarctic sea ice, ice cores and shelves, Southern Ocean circulation and carbon sink, ocean fertilisation and acidification along with ecosystem impacts.

ARC Centre of Excellence for Climate System Science

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

This organisation is a major initiative funded by the Australian Research Council focussing primarily on climate system science and modeling which amalgamates atmosphere, ocean, cryosphere and land surface sciences. It is an international research consortium of five Australian universities with national and international partner organisations. Information on latest research, publications, articles and opportunities to engage with the research is available on this website.

The Climate Commission

<http://climatecommission.gov.au>

The Climate Commission is an independent group made up of experts from a range of fields relevant to climate change and is not subject to Government direction. They provide reliable information about the science of climate change, the international action underway to reduce greenhouse gas emissions and the economics of carbon pricing. Four major reports called the 'Critical Decade' provide detailed analysis and information on issues relating to climate change in Australia including impacts and proposed solutions. Additional regional reports and resources are also accessible on the website.

The Commonwealth Scientific and Industrial Research Organisation (CSIRO)

www.csiro.au/

<http://www.csiro.au/Outcomes/Climate.aspx>

The CSIRO is the national body for scientific research in Australia with numerous operational divisions including climate change adaptation, sustainable agriculture, energy technology, earth science & resource engineering, etc. This comprehensive website provides information searchable by topic, publications, reports, multimedia, the ability to subscribe to their RSS feed for latest news, and a breadth of links to activities and research.

The Climate Group

www.theclimategroup.org/

The Climate Group is an independent not-for-profit organisation working internationally with government and business leaders to advance smart policies toward a low carbon future. They host programs, events and provide latest news on current events relating to climate change, including publications and briefing reports leading up to and post COP negotiations.

The Garnaut Climate Change Review

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

Led by Professor Ross Garnaut, this review was first commissioned by the Australian Commonwealth, State and Territory Governments in 2007 and updated in 2011. It is an independent study of the impacts of climate change on the Australian economy with recommended policy frameworks to improve the prospects for sustainable prosperity. On this website there are links to publications, reports and presentations on climate change science and impacts, emissions trends, carbon pricing, technology, land and the electricity sector. Information on the website is primarily dated around 2011 when the last report was commissioned.

Climate Code Red

<http://www.climatecodered.org/>

This website was prompted by the 2008 publication 'Climate Code Red: The case for emergency action' by Phillip Sutton and David Spratt. The website provides information about new scientific research, analysis about

disparities between science and politics, grassroots and strategic campaigns, and commentaries. The website also incorporates material from Carbon Equity and the Climate Action Centre sites.

OzCoasts - Australian Online Coast Information

<http://www.ozcoasts.gov.au/index.jsp>

OzCoasts is a publicly accessible online database with a web-based interface that provides comprehensive information about Australia's coasts (including estuaries and coastal waterways) to natural resource managers, marine scientists, planners, policy makers and the public. The content represents the collaborative efforts of over 100 coastal scientists from government agencies and universities. The website provides up to date information on the science of climate change and the coast; risks to coastal settlements, infrastructure & ecosystems; sea level rise maps; and information on preparing coasts for climate change impacts.

INTERNATIONAL

Intergovernmental Panel on Climate Change (IPCC)

<http://www.ipcc.ch/>

http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml#.UUAJUxnLcbo

The IPCC is the leading international scientific body for the assessment of climate change, established in 1988 by the United Nations Environmental Programme (UNEP) and the World Meteorological Organisation (WMO). It does not conduct research or monitor climate related data. It reviews the most scientific, technical and socio-economic data produced worldwide relevant to the understanding of climate change with thousands of scientists contributing on a volunteer basis. Special reports, technical papers, The Fourth Assessment Report (AR4) and important reference documents leading up to the release of the Fifth Assessment Report (AR5) are accessible on this website.

NASA James Hansen, USA

<http://pubs.giss.nasa.gov/authors/jhansen.html>

James Hansen is a leading climate scientist and Director of the NASA Goddard Institute for Space Studies. Since the 1970's Hansen has collected and analysed global surface temperatures and studied the earth's atmosphere.

His research continues to contribute to the body of knowledge on climate systems and to the broader implications of public policy. Numerous publications can be found through this link provided.

NASA, USA

<http://www.nasa.gov/>

<http://www.earthobservatory.nasa.gov>

The NASA website has numerous informative articles on different aspects of climate change, carbon dioxide concentration, climate models, air pollution and more. Articles, maps and multimedia on these topics are easily searchable by using keywords in their search function. The Earth Observatory site has news and images of Greenland, the Arctic and Antarctica.

United Nations Environmental Programme

<http://www.unep.org>

<http://www.unep.org/climatechange/InformationMaterials/Publications/tabid/249/Default.aspx>

This organisation is an international programme responsible for the coordination of the UN's environmental activities. The Environmental Assembly of UNEP is the world's largest annual gathering of environmental ministers, a role strengthened at Rio+20, to deliver the environmental dimension of sustainable development. A vast database of publications, resources, toolkits, manuals and magazines are accessible on topics ranging from climate change adaptation and mitigation, energy finance, climate science and related socio-economic issues.

United Nations Framework Convention on Climate Change (UNFCCC)

<http://unfccc.int/2860.php>

The UNFCCC is an international environmental treaty and also the name of the UN Secretariat responsible for the operation of the Convention, Kyoto Protocol and the Conference of the Parties (COP). The website provides access to key documents of the negotiations including the Convention, Kyoto Protocol, the Bali Road Map and the Cancun Agreements. A searchable database on the website also provides access to numerous publications, documents and resources relating to the negotiations, workshops and decisions.

National Snow and Ice Data Centre (NSIDC)

<http://nsidc.org/>

This organisation in the USA supports research, manages and distributes scientific data on the earth's cryosphere including, but not limited to, snow, ice sheets, glaciers, frozen ground and climate interactions that intersect with it. Easy to search tools provide access to publications, maps, scientific data and tools for education and information.

The Climate Action Network (CAN)

<http://www.climateactionnetwork.org/>

This is a worldwide network of over 700 non-governmental organisations (NGOs) in over 90 countries working to promote government and individual action to limit human-induced climate change to ecologically sustainable levels. The 'Policy & Information' section of their website provides a database of discussion papers and policy positions, letters to governments and resources that explain and help to understand the negotiations for beginners to the more advanced.

The Yale Project on Climate Change Communication, USA

<http://environment.yale.edu/climate>

Anthony Leiserowitz is the Director of this project that conducts original research on public climate change awareness, risk perceptions, policy support and behaviour. They design and test new strategies for public engagement on climate change and solutions. Their website has a wide range of publications and reports from their research, videos, interviews and outreach projects.

The Royal Society, UK

www.royalsociety.org/

<http://royalsociety.org/policy/climate-change/>

The Royal Society is a self-governing Fellowship of many of the world's most distinguished scientists from all areas of science, engineering and medicine. Their website search function is easy to navigate and find a wide range of articles, publications and reports on various issues relating to climate change and climate science.

Global Climate Observing System (GCOS)

<http://www.wmo.int/pages/prog/gcos/index.php?name>AboutGCOS>

<http://www.wmo.int/pages/prog/gcos/index.php?name=Publications>

GCOS is a joint undertaking of the World Meteorological Organization, the Intergovernmental Oceanographic Commission of the United Nations Educational Scientific and Cultural Organization (UNESCO), the United Nations Environment Programme (UNEP) and the International Council for Science (ICSU). Its goal is to provide comprehensive information on the total climate system, involving a multidisciplinary range of physical, chemical and biological properties, and atmospheric, oceanic, hydrological, cryospheric and terrestrial processes. The website provides a comprehensive database of reports, technical papers and presentations.

World Glacier Monitoring Service (WGMS)

www.geo.unizh.ch/wgms/

This site has data on the retreat of mountain glaciers around the world. The WGMS collects standardised observations on changes in the mass, volume, area and length of glaciers with time, as well as statistical information on the distribution of perennial surface ice in space. The WGMS library has more than 220 books, journals and reports which extensively cover the discipline of glaciology.

World Resources Institute (WRI)

<http://www.wri.org/>

The WRI is an independent, non-partisan, non-profit think tank focussing on the intersection of the environment and socio-economic development. They work with government, business and civil society internationally to develop solutions to protect the earth and improve people's lives. Four main areas of work include: Climate, Energy & Transport, Governance & Access, Markets & Enterprise and People & Ecosystems. WRI's biennial publication 'World Resources Report' is a highly regarded collection of data and analysis on current environmental issues. The report is a collaborative product of WRI with the World Bank, UNEP and the United Nations Development Programme. They have projects in climate change and other areas, and produce a range of publications and tools accessible on their website.

The Hadley Centre, UK

<http://www.metoffice.gov.uk/climate-change/resources/hadley>

Operated by the Met Centre, UK's National Weather Service, The Hadley Centre is one of the UK's lead centres for guidance on the science of climate change. The website has numerous easy to understand resources, including multimedia, on different aspects of climate science and climate change.

The International Energy Agency (IEA)

<http://www.iea.org/>

The IEA implements an international program of energy program to ensure reliable, affordable and clean energy for its 28 member countries and beyond. They produce about 30 publications a year. Their website provides the Executive Summary of the World Energy Report which looks at trends in energy markets and security, the environment and economic development.

The Tyndall Centre for Climate Change Research, UK

<http://www.tyndall.ac.uk/>

The Tyndall Centre is a UK-based partnership of researchers including scientists, economists, engineers and social scientists working to develop sustainable responses to climate change. They produce research but also work with business leaders, policy advisors, media and the general public. Their website provides links to their current research, reports and publications on various aspects of climate change.

The Centre for Climate and Energy Solutions, USA

<http://www.c2es.org/>

The Centre for Climate and Energy Solutions (formerly the Pew Centre on Global Climate Change) is an independent, non-partisan, non-profit organisation working to advance strong policy and action to address the twin challenges of energy and climate change. They have a substantial publications library which is easily searchable by topic and easy to understand in their international section. In the Economics FAQs, information provided explains the difference between carbon pricing policies, how they work, and what their effects on emissions will be.