

Climate Change and Poverty

What are the challenges?

People living in poverty are currently suffering and will continue to suffer the most from climate change. Relying on the land to survive, poor communities are the least equipped to cope with the rapid degradation of their environments. The world's poorest people tend to live in the most vulnerable areas, such as low-lying land prone to flooding, or marginal agricultural land prone to drought. They are the most vulnerable to the spread of tropical diseases. They are more likely to have to leave their homes in search of water or to escape flooding. And they are the most vulnerable to the effects of the conflicts likely to arise from international tensions over water, energy and the movements of displaced people.

Climate change is not simply an environmental problem. It is fundamentally a development problem that has significant and dire ramifications for the world's poor. Today's increasing levels of greenhouse gas emissions were caused predominately by the industrialisation and land-clearing of today's rich countries. However, the impact of this industrialisation is felt primarily by those not responsible – the people of the world's developing countries.

The solutions will also be developmental – involving significant reductions in emissions, increases in energy efficiency, less carbon-intensive means of production and energy generation, reforestation and prevention of further deforestation, and assistance to those most vulnerable to changing weather patterns, sea level rise and extreme weather events.

1. The science of climate change and poverty

Between February and May 2007, three working groups of the UN's Intergovernmental Panel on Climate Change (IPCC), the recognised global authority on climate change, released a comprehensive assessment of the current state of knowledge on climate change. Their conclusions constitute a clear warning about the devastating impacts of climate change for those already living in poverty. The poorest countries will be hit first and worst. The IPCC concluded that:

- Warming of the climate system is unequivocal. Eleven of the last twelve years (1995-2006) rank among the 12 warmest years since record keeping of global surface temperatures began in 1850.
- It is very likely that hot extremes, heat waves, and heavy rains and flooding will continue to become more frequent. More land will become affected by drought.
- Water supplies stored in glaciers and snow cover are projected to decline, reducing water availability in regions supplied by melt-water from major mountain ranges, where more than one-sixth of the world population currently lives.
- At lower latitudes, especially seasonally dry and tropical regions, crop productivity is projected to decrease for even small local temperature increases (1-2°C), which would increase the risk of hunger.
- Many millions more people are projected to be flooded every year due to sea-level rise by the 2080s.



- In Africa: By 2020, between 75 and 250 million people are projected to be affected by water shortages due to climate change.
- In Asia: Freshwater availability is projected to decrease, which could adversely affect more than a billion people by the 2050s.
- In Latin America: By mid-century, increases in temperature are projected to lead to gradual replacement of tropical forest by savannah in eastern Amazonia.

2. How are our neighbours?

Pacific Island nations are disproportionately vulnerable to the effects of climate change, including rising sea-levels and temperatures, and increasingly frequent extreme weather (storm surges, hurricanes). The world's first evacuation of low-lying islands due to climate change is now underway in Papua New Guinea's Carteret Islands. More such evacuations are expected as storms and higher tides inundate low-lying land. Changes in climate are also expected to affect the Pacific's natural assets including coral reefs and fish stock, jeopardising the region's biodiversity and fishing and tourism industries.

Australia's previous refusal to sign the Kyoto Protocol has been seen by Pacific countries as evidence of Australia's lack of commitment to their viability, as has been Australia's reluctance to discuss climate change-induced migration.

3. Climate change and health

The World Health Organisation indicates that the climatic changes that have occurred since the mid 1970s could already be causing more than 150,000 deaths a year, mainly in developing countries. Many illnesses and diseases are sensitive to climate, including heat-related mortality or morbidity, air pollution-related illnesses, infectious diseases (particularly those transmitted via water, insects or rodents), and refugee health issues linked to forced population migration.

Health problems related to climate change are likely to affect millions of people around the world, particularly those who are most vulnerable, through:

- increases in malnutrition (with implications for child growth and development);
- increased deaths, disease and injury due to heat waves, floods, storms, fires and droughts;
- an increase in the number of cases of diarrhoea (a major killer of children under five); and
- changes in the spread of some infectious diseases, particularly those transmitted by mosquitos.

4. Climate change and forests

The burning of fossil fuels for energy, transportation, and other industrial activities is the largest source of greenhouse gases. However, agriculture and forestry contribute approximately 30% of the global sources of greenhouse gases. In addition to committing to ambitious reductions of greenhouse gas emissions from burning fossil fuels, World Vision believes that the Australian Government should support environmental solutions to reducing carbon dioxide in our atmosphere through reforestation and avoided deforestation.

World Vision is addressing climate change in the field

Climate change has the potential to undo the last 50 years of development work. In response to this emerging threat, World Vision is committed to helping communities prepare themselves for climate change. World Vision is implementing environment-enhancing development activities such as reforestation, agro-forestry and organic and conservation farming in its programs. Some current projects include:

- Community-based forestry and desertification projects in Mongolia.
- Land management projects in Kenya to increase livestock numbers and maintain a positive impact on natural regeneration.
- Restoring ancient cedar forests in Lebanon.
- Developing nurseries for fruit trees, fuel wood and vegetables to improve food reliability in Afghanistan.
- Working with farmers in Brazil to replant their banana plantations with sustainable forests.

Recently, World Vision Australia and World Vision Ethiopia negotiated one of the first carbon credit generating reforestation projects with the World Bank's BioCarbon Fund

Under the agreement, 27,000 hectares of severely degraded, eroding land around Humbo in Ethiopia's southwest will be restored and managed sustainably as a rich, healthy, biodiverse forest. The seven local communities who share the forest are managing the project themselves and will be the direct beneficiaries of income from the agreement.

Farmer Managed Natural Revegetation, the method being used to transform Humbo is easy, enduring and inexpensive. Existing tree stumps and roots are pruned and re-grown into trees. Only native species are chosen for regrowth. The method replaces conventional tree planting programs, which can be costly, labour intensive and produce lower yields/results.

Once restored, the Humbo forest will capture more than 202,000 tonnes of carbon dioxide by 2017 and provide fodder, firewood, non-wood products and improved water management for thousands of people. Money raised from the project will be used by the communities around Humbo to build schools, health services and agricultural projects.

World Vision will continue to explore and develop carbon offset programs which provide both community development and environmental benefits.

Converting land to forests can in fact play a far more significant role in reducing total atmospheric carbon-dioxide than producing biofuels to substitute for fossil fuels (see examples of World Vision's reforestation fieldwork in the box on p. 2). Plants draw carbon dioxide out of the air and store it through photosynthesis. Soils also naturally build up carbon levels if leaf or crop litter is not cleared, and if the ground is not heavily tilled. Recent research has also shown that avoiding further tropical deforestation is likely to be a far more important factor in preventing dangerous climate change than had previously been recognised. International carbon-trading agreements need to reflect this, by providing incentives for tropical countries to preserve existing forests.

Reforestation, afforestation of previously unforested land, avoided deforestation, and agricultural practices which build up soil carbon all need to become significant parts of Australia's greenhouse gas reduction strategy. And in its aid program, Australia should be helping developing countries to protect and regrow their own forests.

5. Funding for climate change adaptation for developing countries

The poorest developing countries lack the resources to respond to emerging climate change challenges. As well as taking much stronger action to reduce Australia's greenhouse footprint and to assist developing countries minimise theirs, Australia should also be doing more to help developing countries adapt to climate change.

Adaptation is required to:

- Secure the physical safety of those affected by rising sea levels, higher storm surges, worse floods, or more severe storms;
- Prevent diseases such as malaria from spreading to previously unaffected areas (warmer weather increases habitat for mosquitos);
- Secure water for consumption, irrigation, sanitation, and drainage as rainfall patterns are altered; and
- Secure food, as shifting weather patterns affect food production. Wildlife, in the midst of drought, for example, may migrate into agricultural areas, impacting food productivity. Subsistence crops may not survive with decreased rainfall.

Industrialised countries should substantially increase the aid they give to help developing countries adapt to climate change. This climate aid should be in addition to the 0.7% of Gross National Income that the industrialised countries promised when they committed to achieving the Millennium Development Goals in 2000. The simple principle is that the polluters who were the main cause of this new global problem should pay for the bulk of the solutions.

6. Climate change and the Australian Government

While there has been considerable public and political debate in Australia on climate change during the past year, we are yet to take significant steps to reduce Australia's climate impact or to assist developing countries to reduce their greenhouse emissions and prepare for changes in climate. The Commitment to Development Index 2007 produced by the Center for Global Development, ranked Australia the worst out of 21 donor nations in terms of greenhouse gas emissions per person. Along with the United States, Australia has been one of only two industrialised countries not to have ratified the Kyoto Protocol, which means Australian companies have been shut out of the US\$30 billion carbon market. World Vision warmly welcomes the new Government's commitment to the ratification of Kyoto. Australia also has previously had a very poor record on promoting renewable energy. By contrast, China has a target of producing 20% of its electricity with renewable energy by 2020.

Australia urgently needs to reduce its greenhouse gas emissions. World Vision suggests that Australia should aim for a target of at least a 25% reduction in net greenhouse gas emissions below 1990 levels by 2020. This is a minimum appropriate short-term target for Australia that, while achievable, will provide significant challenges given our lack of action to date. Other countries, including the EU, have been making serious inroads into reducing greenhouse gas emissions and have adopted higher targets. For Australia to make up for lost ground, we should set steeper post-2020 targets of a 60% reduction below 1990 levels by 2035 and a reduction of at least 80% by 2050.

World Vision is taking the greenhouse challenge

Recognising that climate change is one of the biggest challenges facing all organisations today, World Vision Australia is committed to reducing the environmental impacts of its own domestic operations and to becoming carbon neutral in its operations by 2015.

To achieve this, World Vision Australia has developed tools and processes to continually monitor and improve upon our performance, including a partnership with the Australian Government through the Australian Greenhouse Challenge Plus program.

To reduce greenhouse gas emissions, World Vision Australia has reduced the size of its car fleet, installed an open plan office format in the National Office, installed energy-efficient lighting and upgraded lighting controls to reduce their hours of operation, and is using recycled and sustainable forestry paper products. World Vision is offsetting emissions from our car fleet, and purchasing GreenPower sourced from Australian wind farms. In addition, improved infrastructure has allowed the organisation to reduce water consumption by over 50% within three months.

World Vision Recommends

World Vision Australia recommends that the Australian Government should implement the following changes and enhancements to their policies and programs.

- 1. Adopt meaningful, achievable climate change targets**
The Australian Government should commit to a reduction of at least 25% in Australia's net greenhouse gas emissions below 1990 levels by 2020, followed by further reductions of at least 60% by 2035 and at least 80% by 2050.
- 2. Pursue strong, binding emissions targets in international climate change negotiations**
In international climate change negotiations, the Australian Government should support strong, binding emissions reduction targets for developed countries that will keep global warming below 2.0°C, including emission reduction targets of 25-40% below 1990 levels by 2020, and at least 80% below 1990 levels by 2050.
- 3. Commit Australia's fair share to climate change adaptation for developing countries**
The Australian Government should significantly increase aid directed towards helping developing countries to improve energy efficiency, to adopt energy-efficient production processes, to adopt renewable energy technologies and to adapt to climate change through measures such as disaster preparedness planning, and improving food and water security. This aid should be above and beyond the 0.7% of Gross National Income for aid pledged by donor countries before climate change emerged as a global emergency.
- 4. Support climate change mitigation and adaptation research**
The Australian Government should increase funding for research into innovative technologies including renewable energy, understanding climate change dynamics, carbon capture and sequestration, energy efficiency, crop varieties, and other adaptation and mitigation innovations.
- 5. Support environmental solutions in developing countries**
Australia should support global, regional, national and local efforts to address climate change through leading-edge bio-sequestration programs including agricultural diversification, reforestation and reduction of deforestation.
- 6. Support our neighbours who are displaced by climate change**
The Australian Government should commit to taking in and providing resettlement support to Pacific Islanders whose homelands are made unviable by climate change and rising sea levels and who wish to relocate to Australia.

Further Information

Recent WV Publications and Papers related to climate change

World Vision Australia's Policy Position on Climate Change (2007) <http://www.worldvision.com.au/>

Island Nation or Global Citizen? (2007, http://www.worldvision.com.au/learn/policyandreports/files/islandnation2007_hi.pdf)

Getting the Basics Right: Water and Sanitation in South East Asia and the Pacific (with WaterAid) (2007, <http://www.worldvision.com.au/learn/policyandreports/files/WaterReport.pdf>)

Building a Sustainable Future Free From Extreme Poverty: Priorities for APEC (with Make Poverty History) (2007, http://www.makepovertyhistory.com.au/pdfs/Making_Apec_Work_Complete.pdf)

Other key resources on climate change

Intergovernmental Panel on Climate Change (<http://www.ipcc.ch/>)

UN Framework Convention on Climate Change (<http://www.unfccc.org>)

About World Vision

World Vision is a Christian humanitarian organisation working to create lasting change in the lives of children, families and communities living in poverty. In Australia, World Vision is the country's largest charitable group. With the support of more than 400,000 Australians, World Vision helps over 12.4 million people every year. The organisation implements humanitarian relief, long-term community development projects and advocacy that addresses the causes of poverty and helps people move towards self-sufficiency.

To discuss World Vision Australia's position on climate change, please contact policy@worldvision.com.au