

## 3 Shaping a global solution

Australia's economy and environment are likely to be disproportionately affected by climate change. As Australia generates only 1.5 per cent of global greenhouse gas emissions, its actions alone cannot avert the worst consequences of climate change: the only solution to the climate change problem is a global one.

Australia's international climate change objective is to contribute to a comprehensive global solution that will slow and ultimately reduce global greenhouse gas emissions to avert dangerous climate change. Australia has committed to playing its full and fair part in meeting that goal. In determining Australia's role, our domestic and international actions are both important.

As a first step, Australia—along with other developed countries—should take credible and robust steps to cut domestic emissions. Our commitment to reduce emissions by 60 per cent of 2000 levels by 2050, together with an ambitious 2020 target and the introduction of the Carbon Pollution Reduction Scheme, forms the basis of this effort.

Internationally, strong domestic action will support our efforts to help shape an effective post-2012 international climate change framework for reducing emissions under the United Nations Framework Convention on Climate Change (UNFCCC). It will also assist Australia's efforts to secure the participation of all countries, both developed and developing, in global efforts to reduce emissions, including through key bilateral and regional relationships.

This chapter outlines Australia's role in helping to achieve a reduction in global greenhouse gas emissions:

- Section 3.1 explains how Australia's domestic actions contribute to global solutions to climate change.
- Section 3.2 explains how Australia's participation in negotiations under the UNFCCC and the Kyoto Protocol contribute to an effective international agreement to reduce emissions.
- Section 3.3 explains how Australia's bilateral, regional and multilateral partnerships contribute to shaping an effective global solution to climate change.

### 3.1 Australia's domestic contribution to a global outcome

The Government has committed Australia to a medium-term (2020) target to reduce Australia's greenhouse gas emissions by between 5 per cent and 15 per cent below 2000 levels (this is equivalent to a 4-14 per cent reduction from 1990 levels). The target range is one element in a trajectory strategy (see Chapter 4) that aims to contribute constructively to a long-term global solution while supporting Australia's transition to a prosperous, low-carbon future.

First, Australia's medium-term target range represents a minimum unconditional commitment to reduce Australia's emissions by 5 per cent below 2000 levels by 2020. It sets Australia on an immediate course to stop the growth of, and then reduce, our emissions by 60 per cent on 2000 levels by 2050. Should countries reach a global deal that includes commitments by all major economies (including key developing countries) to substantially restrain emissions and by all developed countries to take on comparable emissions reductions targets, Australia has committed to reduce emissions by up to 15 per cent below 2000 levels by 2020.

Second, the Government's acceptance of a key finding of the Garnaut Climate Change Review Final Report—that a fair and effective global agreement that delivers deep cuts consistent with stabilising atmospheric concentrations of greenhouse gases around 450 parts per million CO<sub>2</sub> equivalent would be in Australia's interests. However, the Government also accepts the Garnaut Final Report's judgment that securing global agreement to emissions reductions of this magnitude appears unlikely in the near future.<sup>1</sup>

The Government considers the most prospective way forward to setting the world on a path to turn around global emissions is to embark on global action that reduces the risks of dangerous climate change. Immediate domestic action will also support strong outcomes from the international negotiations: transforming Australia's economy into a low carbon economy will build confidence among a broad range of countries and demonstrate that deep cuts in emissions are compatible with continuing economic growth and improved living standards.

By beginning the transformation now, the Government is taking active steps to avoid a counterproductive standoff that risks inaction in the face of dangerous climate change—Australia will encourage other developed countries to specify their mid-term reduction objectives during 2009. Australia recognises it will not be appropriate, or productive, for all countries to adopt identical numeric targets. But targets will need to reflect comparable effort by taking into account the national circumstances of individual countries.

Finally, Australia believes that ambitious global emission reduction goals are in our interest. If a global agreement does emerge over time involving commitments—by developed and developing countries—that are consistent with long-term stabilisation of atmospheric concentrations of 450ppm or lower, Australia would continue to play its full part in achieving ambitious stabilisation levels by establishing appropriate post-2020 emissions reductions targets.

### **3.1.1 The comparability of Australia's efforts**

On this basis, the Government considers that, together with Australia's 2050 target, a 2020 target range of 5-15 per cent below 2000 levels is a concrete and credible contribution to a long-term global solution that will protect and advance Australia's long-term interests.

Australia's particular national circumstances—including its rapid population growth, large share of energy- and emission-intensive industries, and heavy reliance on fossil fuels for energy—mean that Australia faces a relatively greater structural adjustment task to move towards a low-emission future than many other developed countries.

Australia's population is projected to grow by around 45 per cent over the 1990-2020 period, so Australia's target range translates to a 34-41 per cent reduction in the per capita emissions of every Australian. In addition, the target range represents a 12-22 percentage point reduction

relative Australia's Kyoto target (which is to limit emissions to 108 per cent of 1990 levels over the 2008-2012 period).

While very few countries have announced specific quantitative commitments to medium term targets, Australia's target range represents a comparable effort to those that have. For example, the European Union (EU) has committed to reducing emissions by 20 per cent in aggregate by 2020 compared with 1990 emissions, or 30 per cent in the context of strong commitments by other developed countries. Like Australia, the EU range represents a 12-22 percentage point reduction relative to the EU's Kyoto target (which is to reduce emissions by 8 per cent below 1990 levels over the 2008-12 period). The population of the EU is projected to be relatively stable over the 1990-2020 period, so its target range translates into a 24 to 34 per cent reduction in per capita emissions for each European.

The comparisons below highlight that Australia and the EU are both making serious and broadly comparable commitments to reduce carbon pollution so as to place the world on the pathway to effective global action. Proposals by United States President-elect Obama and the targets already adopted by the United Kingdom similarly reflect strong commitments to deliver substantial emissions reductions by developed economies.

**Table 3.1: Comparing carbon pollution reduction targets of different countries**

Country	2020 targets	2020 per capita reduction	2050 targets
Australia	5-15 per cent below 2000 levels (4-14 per cent below 1990 levels)	27-34 per cent below 2000 levels (34-41 per cent below 1990 levels)	60 per cent below 2000 levels (60 per cent below 1990 levels)
European Union	20-30 per cent below 1990 levels	24-34 per cent below 1990 levels	60-80 per cent below 1990 levels
United Kingdom	26-32 per cent below 1990 levels	33-39 per cent below 1990 levels	80 per cent below 1990 levels
<b>Proposal</b>			
United States (proposal of President-elect Obama)	Return to 1990 levels	25 per cent below 1990 levels	80 per cent below 1990 levels

Based on UNFCCC emissions data including land use change and forestry; Australia's Low Pollution Future for Australian population projections; UN population projections for other countries.

### 3.1.2 Contributing to the international response

The Carbon Pollution Reduction Scheme (the Scheme) is designed both to give effect to, and be consistent with, Australia's international obligations.

The Scheme will contribute to the development of a global carbon market by establishing international links via the Kyoto Protocol's flexibility mechanisms. Modelling conducted by the Treasury in *Australia's Low Pollution Future: the Economics of Climate Change Mitigation* found that participation in the global carbon market is important to minimising Australia's costs, as it expands Australian businesses' access to cost-effective mitigation.<sup>2</sup> Linking arrangements will be reviewed in light of ongoing international negotiations, and the evolution of international markets and the Australian scheme. Chapter 11 discusses the implications of international linking for the operation of the Scheme, including for the domestic price of carbon.

By introducing a cap and trade emissions trading system, Australia is joining a growing group of countries that have developed or are developing similar schemes. The most established of these is the 27-member European Union Emissions Trading Scheme, introduced in 2005.

United States President-elect Obama has confirmed that he will introduce a cap-and-trade emissions trading scheme to reduce greenhouse gas emissions by 80 per cent below 1990 levels by 2050. Currently, 23 US states and four Canadian provinces participate in three regional carbon trading schemes—the Western Climate Initiative (WCI), the Regional Greenhouse Gas Initiative (RGGI) and the Midwestern Gas Accord. Three Canadian provinces participate in the WCI and one participates in both the RGGI and the WCI. The New Zealand parliament passed legislation in September 2008 introducing an emissions trading scheme. The National Party led Government (elected in November 2008) has indicated it will review the design of the New Zealand scheme by late 2009, but has reaffirmed its commitment to the introduction of emissions trading.

The design of the Australian scheme as a production-based emissions trading scheme is intended to ensure it is consistent with our international obligations. In developing the UNFCCC, the international community, including Australia, agreed that production, rather than consumption, should be the basis for international greenhouse gas emissions accounting rules.

The Rusal submission (Submission 606) in response to the Green Paper proposed that emissions costs under the Carbon Pollution Reduction Scheme should be imposed on the consumption of products, rather than on producers. This is based on a concern that a production-based model may unfairly target Australia's emissions-intensive, trade exposed industries and risk carbon leakage by creating incentives for these industries to move offshore to countries where no emissions pricing regime exists.

However, the UNFCCC uses a production-based model. Moving away from a production-based model to a consumption-based model would not absolve Australia of its responsibility to monitor and report its production-based emissions, consistent with its UNFCCC reporting obligations. Calling for a new approach globally would not be seen as a constructive contribution to international efforts to reach a global solution to climate change. The Government assesses it as unlikely that the international community will support a move toward a consumption-based approach.

In addition, introducing a price on the emissions contained in goods or services at the point of consumption, rather than production, potentially carries a significant administrative burden. The Government would need to design and implement a methodology that could measure carbon emissions 'embodied' in a range of products and which was flexible enough to be kept up-to-date to account for new products or production methods. As this approach would be applied to imported goods, the methodology would need to account for production methods overseas and would need to be applied in a way that was consistent with international trade rules.

Finally, other countries now developing emissions trading schemes are doing so on a production basis consistent with their international obligations. Australia's adoption of a similar approach in its scheme maximises the opportunity for linking with other emissions trading schemes and contributing to an international carbon market. The Scheme's proposal for international linking and rules proposed for recognition of Kyoto credits within the Scheme outlined in Chapter 11 and Appendix C assume a close complementarity between Australian and international emissions units.

For these reasons, the Scheme will take a production-based approach to liability for carbon pollution, consistent with Australia's long-standing commitments.

## 3.2 Helping to shape a global solution

A global solution will be based on broad international agreement to reduce emissions. Australia is now closely engaged in two tracks of negotiations under the UNFCCC and the Kyoto Protocol, which together constitute the internationally agreed climate change framework. Under the Protocol negotiation track, Australia and other developed countries are negotiating emissions reduction targets for the period after 2012, when the first commitment period expires. Under the UNFCCC negotiation track, Australia is working to ensure that developing countries and the United States (which is not a party to the Kyoto Protocol) agree to comparable 'measurable, reportable and verifiable' actions to reduce greenhouse gas emissions. Both tracks aim to conclude their work at the UNFCCC's Conference of the Parties in Copenhagen in December 2009.

The positions Australia adopts in the negotiations have the capacity to influence the shape of the post-2012 emissions regime. Australia's ratification of the Kyoto Protocol at the United Nations climate change talks in Bali in December 2007 helped to drive forward the launch of a two-year process that aims to culminate in all countries contributing to an effective, equitable and fair post-2012 outcome.

Australia considers it essential that both developed and developing countries can, and do, participate in global efforts to reduce emissions. While taking into account the circumstances of individual countries, Australia is working toward a post-2012 outcome that meets three criteria.

First, the Government believes that the post-2012 outcome must be comprehensive. It must take into account the changing sources and patterns of national contributions to global emissions. Compared to 1992, when the climate change framework was agreed, more countries (the major emitters) need to reduce their emissions if we are to avert dangerous climate change. Almost 80 per cent of the world's greenhouse gas emissions are produced by only 15 countries. The United States, China and the European Union currently rank as the world's three largest greenhouse gas emitters.

To be comprehensive, the post-2012 outcome must tackle growing emissions from developing countries. The Garnaut Final Report reported that, since 2000, emissions from non-OECD countries have grown almost eight times faster than for OECD countries. Without mitigation, developing countries will account for about 90 per cent of emissions growth over the next two decades and beyond.<sup>3</sup> The Treasury modelling found that, even if developed countries (including the United States) reduced their collective emissions to zero by 2050, if other countries followed 'business as usual' emissions pathways, greenhouse gas concentrations would rise to 650 ppm by 2050 and further after that.<sup>4</sup> This would bring high risks of dangerous climate change.

As discussed in Section 3.3.1, the Government considers that, along with our strong domestic measures, our close bilateral and regional ties give Australia unique opportunities to build mitigation and adaptation capacity in some key developing nations and to encourage them to take on greater commitments as part of the post-2012 outcome.

Second, Australia is working to ensure the post-2012 outcome is efficient by generating access by a broad range of countries to low-cost emissions reductions. Modelling conducted by the Treasury in *Australia's Low Pollution Future: the Economics of Climate Change Mitigation* found that broad coverage of emissions sources and sinks reduces the cost of

achieving emission reduction goals.<sup>5</sup> The Government considers that all sectors which contribute significantly to global emissions—such as the forestry and land-use change sectors—should be treated consistently. Including incentives to reduce emissions from deforestation and degradation activities in developing countries will ensure that more countries have opportunities to reduce emissions at the lowest possible cost, because reductions are immediate and the necessary technology is available. Such activities are currently excluded from the Kyoto Protocol. Consistent treatment of key sectors will also build parties' confidence in the developing carbon market that will, in part, finance emissions reduction activities. Australia strongly supported the decision of the parties in Bali in December 2007 to include incentives for activities that reduce emissions from deforestation and degradation in developing countries in the post-2012 framework.

Third, the Government recognises that, to be effective, the post-2012 outcome needs to be fair. It should reflect current relative economic and social conditions and therefore address climate change mitigation and adaptation needs equitably. Since the climate change framework was agreed in 1992, more countries have become able to financially support climate change response measures. They should do so, especially to support the most vulnerable least developed countries and small island developing states. The relative economic circumstances of some of the countries classed as 'developing' have improved to the point where two are now full members of the Organisation for Economic Co-operation and Development (OECD), but continue to be classed as developing countries for the UNFCCC. As well, the per capita GDPs of 40 or so developing countries now exceed those of some of the 'developed' countries listed in Annex I to the UNFCCC.

Against this background, what Australia does domestically (outside the negotiations) matters because there is currently no international agreement on an appropriate mid-term target for developed countries. Australia's 5-15 per cent 2020 target range requires ambitious efforts to reduce emissions by every Australian. Together with credible policy measures, particularly the CPRS, the target range will help to build confidence in the international negotiations. The target range sets Australia immediately on a path to reduce national emissions and signals our willingness to implement greater reductions—up to 15 per cent from 2000 levels—in the event of an appropriate global agreement. This undertaking for the future will also help to encourage broader international engagement by giving other parties incentives to take on robust emission reduction targets.

### **3.3 Australia's complementary international approach**

Australia's relationships with key countries and international organisations provide other opportunities to help shape an effective global solution to climate change, especially among regional partners. By supporting efforts to address climate through a suite of bilateral, regional and multilateral partnerships, Australia is aiming to build goodwill and confidence in the international process and encouraging key partners to take actions to restrain their emissions and participate in a global solution.

#### **3.3.1 Bilateral relationships**

Australia has longstanding bilateral programs and relationships that can build cooperation and capacity to address immediate and long-term climate change challenges. Through bilateral

assistance programs, Australia can also help developing country partners prepare to take nationally appropriate mitigation and adaptation actions.

Australia has formal bilateral climate change partnerships in place with China, the European Union, Japan, India, Indonesia, New Zealand, Papua New Guinea, South Africa, the United Kingdom and the United States. These have delivered practical projects to build capacity and collaboration on technical matters, such as emissions monitoring and measurement, renewable energy and energy efficiency. These partnerships are supported in some cases by regular high level policy dialogues, such as with Indonesia, Papua New Guinea and, from 2008, China.

Australia's practically focused climate activities build strong working-level platforms to share experience and build capacity. For example Australia's \$200 million International Forest Carbon Initiative aims to support efforts to reduce emissions from deforestation and forest degradation in developing countries. The initiative supports efforts to reduce deforestation through the UNFCCC. It aims to demonstrate that reducing emissions from deforestation and forest degradation can be part of an equitable and effective international agreement on climate change. A central element is the initiative's focus on developing practical demonstration activities with key partners, including Indonesia, Papua New Guinea and East Timor.

### **3.3.2 Regional collaboration**

Australia also contributes to global efforts to reduce emissions by supporting collaborative regional efforts to address climate change. The Government recognises that the Asia-Pacific region faces particular threats from climate change, which is expected to exacerbate existing challenges and lead to significant impacts on environments, sustainable development and, in some cases, countries' potential future survival. Australia is working with its neighbours to improve our understanding of expected climate change and to develop concrete adaptation measures. Through the Government's \$150 million International Climate Change Adaptation Initiative, Australia is helping to address high-priority climate adaptation needs in vulnerable countries in the Asia-Pacific region, particularly among our Pacific island neighbours.

In addition, Australia has pioneered international initiatives that bring together governments, industries and researchers from a wide range of countries to support the development and deployment of low-carbon technology. The Government expects these collaborations to accelerate vital experience- and knowledge-sharing on important technology issues across key industrial sectors. For example, Australia is collaborating with the United States, Japan, the Republic of Korea, Canada, China and India in the Asia-Pacific Partnership on Clean Development and Climate. The partnership is widely recognised as the best existing model for international collaboration on a sectoral level. It can complement economy-wide approaches to reduce emissions and can target sector-specific issues, where technology development and deployment can directly contribute to reducing emissions.

This kind of engagement has the potential to generate regional consensus on key climate change issues and mobilise broader multilateral support for a post-2012 outcome that is sensitive to regional priorities and includes regionally appropriate adaptation and mitigation activities. Australia actively supports the development of regional frameworks and activities through structures such as the Pacific Islands Forum and the Asia-Pacific Economic Cooperation regional forum.

### **3.3.3 Multilateral cooperation**

Australia's engagement in a number of complementary high-level forums provides a further means to build agreement between parties to the United Nations negotiations. The Major Economies Meeting process has sought to build greater consensus on emissions reductions among the world's 15 largest emitters, which together contribute almost 80 per cent of the world's emissions. These countries include key developing and developed emitters, such as China, India, the United States and Japan. Other forums, such as the United Nations General Assembly High Level Segment and G8 Outreach, also provide platforms for the Prime Minister and other ministers to build high-level political momentum and consensus that can move United Nations negotiations forwards.

Australia also supports innovative measures in areas important to the negotiations. For example, as part of a broader commitment to scale up finance for clean development, Australia has committed \$150 million to the World Bank's Climate Investment Funds. In addition to funding transformational shifts to low-carbon and climate-resilient development pathways in developing countries, the funds will finance demonstration adaptation and forestry programs that will generate experience and lessons for the UNFCCC negotiations.

Australia is taking a leading role in the international development and deployment of clean coal technologies. According to the International Energy Agency, Carbon Capture and Storage (CCS) technologies will play a key role in reducing carbon dioxide levels in the atmosphere.<sup>6</sup> The Government has launched a Global CCS Initiative which establishes a Global Institute. The Institute will work to accelerate the research, development and demonstration of CCS technologies and to provide a financial and technical foundation for its commercialisation. The Initiative will complement the work already underway by other institutions to promote CCS technology on a large scale.

## AUSTRALIA'S 2020 TARGET—COMPARISON WITH OTHER REGIONS

The timing and scale of each country's contribution to the global mitigation effort is currently the subject of international negotiations under the UNFCCC and the Kyoto Protocol. While some principles guide international discussions, national interests loom large.

Mitigation will be best enhanced by countries making a comparable effort to others at a similar stage of development, taking into account differing national circumstances. Comparable effort would be represented by the entire portfolio of a country's effort, including but not limited to economy wide emission reduction targets for advanced economies.

A number of factors are relevant to assessing the comparability of effort of developed countries' targets for the post 2012 period. These include per capita effort, reduction relative to targets for the Kyoto commitment period, and economic costs of meeting those targets.

To illustrate Australia's contribution to the global mitigation task, the table below sets out the per capita effort implied by Australia's 2020 target range. The table also shows the 2020 target ranges that would apply if other developed countries and regions make equal reductions in their per capita emissions. This comparison is illustrative only, and does not represent an official negotiating proposal or position of the Government.

If all developed countries (countries listed in Annex I of the UNFCCC) match the per capita reduction of Australia's conditional target of 15 per cent below 2000 levels, this would deliver a more than 30 per cent reduction in collective Annex I emissions.

**Table 3.2: 2020 targets: comparison of per capita effort**

<b>Australian target for 2020 (% change from 2000)</b>	<b>-5</b>	<b>-15</b>
<b>For Australia, this is equivalent to</b>		
% change from 1990	-4	-14
Per capita reduction (% change, 1990 to 2020)	-34	-41
<b>Equivalent per capita reductions would translate to absolute 2020 targets of (% change from 1990)</b>		
EU25 (EU 27 excluding Cyprus and Malta)	-31	-38
United Kingdom	-27	-34
United States	-10	-19
Japan	-34	-41
Canada	-13	-22
Russia	-41	-47
Norway	-21	-29

**Table 3.2: 2020 targets: comparison of per capita effort (continued)**

Absolute per capita reduction in emissions implied by these targets (t CO <sub>2</sub> e per person, change from 1990-2020)		
Australia	10.9	13.2
EU25	3.8	4.6
United Kingdom	4.6	5.5
United States	7.1	8.5
Japan	3.3	4.0
Canada	6.3	7.6
Russia	7.8	9.4
Norway	2.8	3.4
2020 per capita level of emissions implied by these targets (t CO <sub>2</sub> e per person)		
Australia	21.2	18.9
EU25	7.4	6.6
United Kingdom	8.9	8
United States	13.7	12.3
Japan	6.4	5.7
Canada	12.2	10.9
Russia	15.2	13.6
Norway	5.5	4.9

Population data from UNFCCC database, <http://unfccc.int/di/FlexibleQueries.do> (accessed 2 August 2008) and UN Department of Economic and Social Affairs, Population Division, <http://esa.un.org/unpp/> (accessed 24 September 2008). Emissions data from Annex I National Inventory Submissions for 2006 including LULUCF (accessed 2 September 2008), UNFCCC Greenhouse Gas Data Interface including LULUCF (accessed 2 August 2008) and inventory using KP accounting including LULUCF (for Australia).

- 1 R Garnaut, *The Garnaut Climate Change Review: Final report*, Cambridge University Press, 2008, pp. 278–279.
- 2 Australian Government, *Australia's Low Pollution Future: The Economics of Climate Change Mitigation*, pp. 196-197.
- 3 R Garnaut, *The Garnaut Climate Change Review: Final report*, Cambridge University Press, 2008, p. 64.
- 4 Government, *Australia's Low Pollution Future: The Economics of Climate Change Mitigation*, p. 103.
- 5 Australian Government, *Australia's Low Pollution Future: The Economics of Climate Change Mitigation*, pp. 140-144.
- 6 International Energy Agency, *World Energy Outlook 2007*, OECD/IEA, 2007, p. 216.