CHAPTER 3

THE FRAMEWORK CONVENTION ON CLIMATE CHANGE AND THE KYOTO PROTOCOL

> *[The Kyoto Protocol] established a single measure of environmental performance – a measure to drive economic and industry performance, to be a trigger for innovation and perhaps to be a catalyst for a new brand of knowledge economy.*[1]

The Framework Convention on Climate Change[2]

Early developments in the climate change negotiation process

3.1 In 1979, the First World Climate Conference[3] recognised climate change as a serious problem. Following discussions on the possible effects of climate change on human activities, this scientific gathering issued a declaration calling on the world's governments 'to foresee and prevent potential man-made changes in climate that might be adverse to the well-being of humanity'. The Conference also endorsed plans to establish a World Climate Programme (WCP) under the joint responsibility of the World Meteorological Organization (WMO), the United Nations Environment Programme (UNEP), and the International Council of Scientific Unions (ICSU).

3.2 A number of intergovernmental conferences, focusing on climate change, were held in the late 1980s and early 1990s.[4] Together with mounting scientific evidence, these conferences helped to air international concern about the issue. Stakeholders included government policy-makers, scientists, and environmentalists. The meetings addressed both scientific and policy issues and called for global action.

3.3 At the 'Conference on the Changing Atmosphere' in Toronto in 1988, the UN General Assembly took up the issue of climate change for the first time and governments representing industrialised countries voluntarily pledged to cut CO_2 emissions by 20 per cent by the year 2005 (the so-called 'Toronto target').[5]

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1 Prime Minister's Science, Engineering and Innovation Council, *From Defence to Attack: Australia's Response to the Greenhouse Effect,* 25 June 1999, p 3.

2 See appendix 3 of the report for key dates in the climate change negotiation process.

3 unfcc.de/resource/iuckit/fact17.html (17/07/00), p 1.

4 The key events were the Villach Conference (October 1985), the Toronto Conference (June 1988), the Ottawa Conference (February 1989), the Tata Conference (February 1989), the Hague Conference and Declaration (March 1989), the Noordwijk Ministerial Conference (November 1989), the Cairo Compact (December 1989), and the Bergen Conference (May 1990), unfcc.de/resource/iuckit/fact17.html (17/07/2000), p 1.

5 greenpeace.org/~climate/politics/reports/conferences.html (18/07/00), p 1.

3.4 As a result of this meeting, in 1988, the WMO and UNEP established the Intergovernmental Panel on Climate Change (IPCC). Further discussion on the IPCC and the findings of its assessment reports is found in chapter 2.

3.5 In 1990 the IPCC's First Assessment Report was published and confirmed scientific evidence supporting the presence of substantial human induced climate change. It further claimed that 60 to 80 per cent cuts in CO_2 emissions over the next few hundred years would be needed to stabilise the growing concentration of greenhouse gases in the atmosphere. It had a catalytic effect on both policy-makers and the general public and provided the basis for negotiations on a framework convention on climate change and recommended that negotiations should be launched for the development of a global climate agreement.[6]

3.6 The UN General Assembly opened negotiations on the United Nations Framework Convention on Climate Change (UNFCCC) and established an Intergovernmental Negotiating Committee (INC) with a mandate to develop the Convention.[7]

3.7 The Second World Climate Conference in 1990, also supported the call for a framework convention on climate change. Sponsored by WMO, UNEP and other international organisations, this key conference featured negotiations and ministerial-level discussions among 137 states plus members of the European Community. The final declaration supported a number of principles later included in the UNFCCC. These principles included:

- climate change as being a 'common concern of humankind';
- the importance of equity between nations;
- the 'common but differentiated responsibilities' of states assigns the lead in combating climate change to developed countries;
- the special needs of developing countries;
- the importance of promoting sustainable development; and
- the precautionary principle.[8]

3.8 The INC met for the first time in February 1991 to develop the UNFCCC. In May that year final negotiations concluded and, as a first step towards addressing the issue, industrialised countries agreed to bring their CO_2 emissions back to 1990 levels

6 unfccc.de/resource/process/components.response/landmarks.html (17/07/000, p 1.

7 United Nations General Assembly Resolution 45/212.

8 unfcc.de/resource/iuckit/fact18.html (17/07/00), p 1 (also see /fact17.html).

by the year 2000. However, the emissions commitments in the UNFCCC were not to be legally binding.[9]

3.9 On 9 May 1992, the UNFCCC was adopted in New York by the INC and opened for signature at the 1992 Rio Earth Summit in Brazil.

3.10 Article 2 of the UNFCCC states that its objective is to achieve:

> … the stabilisation of greenhouse gas concentrations in the atmosphere to a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.[10]

3.11 The UNFCCC contained no firm or binding commitments on emissions levels, but did lay down some general principles and objectives which would shape the negotiations leading up to the Kyoto Summit in 1997. It specified that:

- developed countries (most members of the OECD plus the states of Central and Eastern Europe undergoing the process of transition to a market economy - known collectively as Annex I countries) should take the lead with abatement measures;
- that the climate and economic vulnerabilities of developing states should be recognised; and
- that abatement should be consistent with sustainable national development and not infringe the goals of an open and supportive international economy.[11]

3.12 Parties to the UNFCCC committed themselves to:

- develop, update and publish national greenhouse gas inventories;
- begin the development of programs and policies for climate change mitigation;
- promote the development and transfer of clean and emissions-reducing technologies;
- cooperate in managing the impacts of climate change on affected communities and ecosystems; and

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9 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, pp 115-17.

10 Cited in Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, p 37.

11 Cited in Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, p 37.

- promote research into climate change, technology, and policy; increase education and training; and promote the cultivation of sinks and reservoirs to absorb greenhouse gases.[12]

3.13 In addition, the Parties agreed to take climate change into account in their relevant social, economic, and environmental policies; cooperate in scientific, technical, and educational matters; and promote education, public awareness, and the exchange of information related to climate change.[13]

3.14 The Annex I Parties were required to describe the adopted policies and measures designed to work towards returning greenhouse gas emissions to 1990 levels by the year 2000. They were also required to give projections through to the year 2000 of how their policies will affect emissions and sinks. These projections were to be subjected to a regular review process. A team of experts from developed and developing countries, and from international organisations, was to be assembled for each review by the Convention's Secretariat. However, the negotiations of the Kyoto Protocol in 1997 have superseded these objectives with individualised targets for each Annex 1 country to be met on average over the first commitment period, from 2008 to 2012, with 1990 as the base year.

3.15 The sharing of information by governments is central to the working of the UNFCCC. The Convention requires its members to submit 'national communications' to the Conference of the Parties (CoP)[14] on a regular basis. This information, about national greenhouse gas emissions, international cooperation, and national activities, is reviewed periodically so that the Parties can track the Convention's effectiveness and draw lessons for future national and global action. The first communications were submitted in September 1994 by Annex I Parties.

3.16 In December 1992, Australia became the ninth country to ratify the Convention. By 21 March 1994, the UNFCCC entered into force having received the required 50 ratifications.[15]

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12 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, pp 39-40.

13 unfcc.de/resource/iuckit/fact18.html (17/07/00), p 1.

14 Conference of the Parties established as the supreme body of the Convention responsible for: periodically reviewing the obligations of the Parties and institutional arrangements under Convention; promoting and facilitating the exchange of information on measures adopted by the Parties to address climate change and its effects; promoting and guiding the development of comparable methods for preparing inventories of greenhouse gas emissions by sources and removals by sinks; and establishing subsidiary bodies necessary or the implementation of the Convention (B Graham, M Hinchy, B Fisher and V Tulpule, *Climate Change Negotiations – the Kyoto Protocol*, Outlook 98, Proceedings of the National Agricultural & Resources Outlook Conference, Commodity Markets and Resource Management, Volume 1, 3 – 5 February 1998, ABARE, Canberra, 1998, p 67).

15 unfccc.de/resource/process/components.response/landmarks.html (17/07/00), p 1. As at 20/07/98 the Convention has been ratified by 175 countries and the European Union, unfccc.de/fccc/conv.

3.17 A watershed was reached at the Berlin Conference of the Parties (CoP 1, the Berlin 'Climate Summit'), held in 1995, when a large group of developing countries stated that the UNFCCC commitments were inadequate and called for industrialised nations to accept *binding* emissions reductions. The Parties agreed to the 'Berlin Mandate' to develop a Protocol or other legal instrument by the time of the Third Conference of the Parties (CoP 3), which was to have contained binding reductions within specified time frames extending beyond 2000 to 2005, 2010 and 2020.[16] The Berlin Mandate also stated that the negotiating process would not introduce any new commitments for the developing countries. The Mandate recognised that the share of global emissions from developing countries will need to grow to meet their social and development needs.[17]

3.18 In December 1995, the IPCC produced the Second Assessment Report on the science of climate change. The Report was written and reviewed by some 2,000 scientists and experts world-wide. Its findings underlined the need for strong policy action and concluded that 'the balance of evidence suggests that there is a discernible human influence on global climate.[18] Further details of the findings of the Second Report is included in chapter 2.

3.19 The IPCC Third Assessment Report is due to be completed in 2001. The IPCC will produce a series of technical papers and special reports before the Third Assessment Report is published. Likely outcomes are discussed in chapter 2 of this report.

3.20 The Second Conference of the Parties (CoP 2), in July 1996, achieved little direct progress on CO_2 emissions reduction targets. However, with the support of the US, the majority of Ministers present at the meeting signed the 'Geneva Declaration'. The Declaration stated that:

- the new IPCC science provided the basis for 'urgently strengthening action';
- the world faced 'significant, often adverse impacts' from climate change; and
- legally binding 'significant overall reductions' in greenhouse gas emissions should be negotiated by the next Conference of the Parties.[19]

16 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, p 47.

17 Greenpeace, *Guide to the Kyoto Protocol*, Greenpeace International, October 1998, p 3.

18 United Nations, *The International Response to Climate Change, Climate Change Information Kit, Climate Change Information Sheet 17*, unfcc.de/resource/iuckit/fact17.html (17/07/00), p 2.

19 greenpeace.org/~climate/politics/reports/conferences.html (18/07/00), p 2.

The Kyoto Protocol

The negotiations

3.21 In December 1997, the Conference of the Parties (CoP 3) adopted the Kyoto Protocol, the culmination of 30 months of negotiations. The Parties finally accepted legally binding greenhouse gas emissions commitments for all Annex I countries and outlined specific new policies and measures which could be used to meet them.

3.22 The 1997 Kyoto Conference agreed upon the six types of emissions[20] for which emissions targets were to be set; established multi-year budget periods to accommodate sudden shifts in the economies of Parties; assigned a series of differentiated targets for nations and groups of nations; and went some way to defining an acceptable definition of sinks. Most nations agreed to a reduction of emissions during the first five year 'commitment period' from 2008 to 2012, and in relation to 1990 as the base year.

3.23 In Kyoto, the European Union (EU) 'bubble' (emissions from a group of countries[21]) agreed to reduce emissions to 92 per cent of 1990 levels, the US 93 per cent, Japan 94 per cent, and Canada 94 per cent. New Zealand was allowed an increase to 101 per cent and Australia 108 per cent of their 1990 emissions levels. The overall aggregate effect of the Protocol, across all countries with targets, is a reduction of 5.2 per cent globally by 2010 in comparison with 1990 levels.[22]

3.24 However, the figures need to be considered in relation to the changing emissions levels across nations through the 1990s. EU emissions were just below 1990 levels, the rest of the OECD countries had increased emissions by 6 to 10 per cent and the former 'Eastern bloc' countries saw falls of between 15 and 50 per cent.

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20 'Anthropogenic (human) sources of six greenhouse gases are to be included in national greenhouse gas emission inventories, including emissions from land use change. However, for the purposes of calculating the base period inventory, emissions form land use change are not included when defining the emission targets unless land use changes were a net source of emissions in 1990. The six greenhouse gases covered by the Protocol are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride' (Frank Jotzo, Edwina Heyhoe, Kate Woffenden, Stephen Brown and Brian Fisher, *Kyoto Protocol: Impact on developing countries and some implications for the design of the Kyoto mechanisms*, Outlook 2000, Proceedings of the National Outlook Conference, Natural Resources, Volume 1, 29 February – 2 March 2000, ABARE, Canberra, 2000, p 48). The six gases are to be combined in a 'basket', with reductions in individual gases translated into 'CO_2 equivalents' that are then added up to produce a single figure (unfcc.de/resource/iuckit/fact21.html (17/07/00), p 1). Countries also have a choice of baselines for the synthetic gases, 1990 or 1995.

21 The Protocol provides in principle for the establishment of 'bubble' arrangements between any group of Parties that choose to fulfil their commitments jointly. It also requires transparency in the way particular bubbles may operate… . [These] Parties, such as those comprising the European Union, may fulfil their (aggregate) commitments jointly (as a 'bubble'). In the event of the European Union not meeting its aggregate Kyoto commitment, each member party will be responsible for meeting the target inscribed for it in its instrument of ratification (Frank Jotzo, Edwina Heyhoe, Kate Woffenden, Stephen Brown and Brian Fisher, *Kyoto Protocol: Impact on developing countries and some implications for the design of the Kyoto mechanisms*, Outlook 2000, Proceedings of the National Outlook Conference, Natural Resources, Volume 1, 29 February – 2 March 2000, ABARE, Canberra, 2000, p 49).

22 greenpeace.org/~climate/politics/reports/conferences.html (18/07/00), pp 2-3.

Thus, the overall effect of the UNFCCC Annex I countries' commitments at Kyoto, if met, would only be to stabilise the level of developed country emissions at 1990 levels, and would have little impact upon developing country emissions.[23]

3.25 By themselves, the Kyoto commitments will make little impact upon future global warming and represent only a first step in stabilising global concentrations of CO_2. It has been estimated that the agreed reductions in emissions will hold back global temperature increase on average between 4 to 14 per cent by the end of the century, that is, by between 0.08°C and 0.3°C. These figures can be compared with a rise, from 1860 to 1998, of global surface temperatures of 0.6°C, and IPCC mid-range projections of an additional increase of 2.0°C by 2100. The projected impact on sea-level rise is similarly modest, with a reduction in the anticipated rise of only one centimetre by mid-century and a few centimetres by the end of the century.[24] Sea levels have risen between 10 to 25 cm since the end of the 19th century and mid-range IPCC projections suggest a further rise of 50 cm by 2100.[25]

3.26 According to the Prime Minister's Science, Engineering and Innovation Council (PMSEIC) the Kyoto Protocol 'was a watershed in the global greenhouse debate',[26] bridged an important threshold in negotiations and created a new framework and machinery for future abatement action:

> It established a single measure of environmental performance – a measure to drive economic and industry performance, to be a trigger for innovation and perhaps to be a catalyst for a new brand of knowledge economy.[27]

3.27 Optimists look to the second commitment period, after 2012, to achieve the restructuring of national energy economies with the introduction of new technologies, infrastructure and industries. There is also an expectation that developed country actions, serving as a positive example, will help draw developing nations into future commitments to emissions reduction.[28] However, uncertainty has been created by the

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23 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, pp 118 and 155.

24 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, pp 156-57.

25 Intergovernmental Panel on Climate Change, *IPCC Second Assessment Synthesis of Scientific-Technical Information Relevant to Interpreting Article 2 of the UN Framework Convention on Climate Change*, clause 2.7.

26 Prime Minister's Science, Engineering and Innovation Council, *From Defence to Attack: Australia's Response to the Greenhouse Effect*, 25 June 1999, p 3.

27 Prime Minister's Science, Engineering and Innovation Council, *From Defence to Attack: Australia's Response to the Greenhouse Effect*, 25 June 1999, p 3.

28 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, p 158.

reluctance of the US Congress to ratify the Protocol and the slow progress in drawing developing nations into the commitment process.[29]

3.28 The Protocol was opened for signature in March 1998 and, as at 13 January 2000, it has received 84 signatures. Details may be found in appendix 4.

Other features of the Kyoto Protocol

3.29 Countries have a degree of flexibility in how they make and measure their emissions reductions. Joint fulfilment, or 'bubble' agreements between developed countries are encouraged (Article 4).[30]

3.30 The Kyoto Protocol also establishes three innovative 'flexibility mechanisms' designed to assist developed nations meet their targets. These include:

- *Emissions Trading* - (Article 17) which allows UNFCCC members to trade unused emissions credits - effectively to redistribute Kyoto emissions targets without affecting the global emissions total. Members will also be able to acquire 'emission reduction units' (ERUs) by financing certain kinds of projects in other developed countries.
- *Joint Implementation (JI)* - (Article 6) which encourages Annex I countries (and companies) to transfer to, or acquire from other Annex I countries, ERUs for reductions over and above those which would otherwise occur.[31] It is planned that JI will be operational from the first commitment period in 2008.
- *The Clean Development Mechanism (CDM)* - (Article 12) introduced to assist Parties not included in Annex I in achieving sustainable development and in contributing to the ultimate objectives of the UNFCCC. The CDM is a means by which developed countries may claim credits for emissions reductions in developing countries, while developing countries gain investment and access to improved technology.[32] It also assists Parties included in Annex I in achieving compliance with their quantified emission limitation and reduction commitments

29 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, p 255 (US ratification) and pp 103-07.

30 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, pp 122-24.

31 'Annex I Parties may trade among themselves emission reduction units (ERUs) resulting from projects aimed at reducing anthropogenic emissions by sources or enhancing anthropogenic removals by sinks of greenhouse gases in any sector of the economy… . Such projects have to provide a reduction in emissions or an enhancement of removals by sinks additional to any that would otherwise occur... . The ERUs may not be acquired if such action is not in compliance with obligations under Articles 5 and 7. … The ERUs are to be supplemental to domestic actions for the purposes of meeting commitments under Article 3' (Peter Cameron, 'From Principles to Practice: the Kyoto Protocol', *Journal of Energy & Natural Resources Law*, 18(1), February 2000, p 1-18 at p 8).

32 greenhouse.gov.au/pubs/factsheets/fs_cop5.html (17/07/00), p 3.

under Article 3.[33] Participation is voluntary and may involve public and private entities.[34] CDM is planned to be introduced as soon as the outstanding aspects of the mechanism have been negotiated by the Parties and certified emission reductions (CERs) will be used to assist in achieving compliance up to and in the first commitment period.[35] The provision for this early crediting in the CDM is unlike anything else in the Protocol.

3.31 These proposals have created definitional and operational issues yet to be resolved and were the subject of controversy during the Protocol negotiations. All three mechanisms raised issues of:

- how transparency, efficiency and accountability can be assured;
- to what extent the trading of permits, ERUs and CERs can be used to deliver the overall Annex I commitment;
- liability for traded units which are based on unfulfilled contracts;
- how to resolve the assessment of baselines for CDM and JI projects;
- the factor that the banking of CERs is allowed from 2000 for use in the budget period but that ERUs cannot be banked and thus have no commercial significance until 2008; and
- the question of developing countries. Without their participation the three Kyoto mechanisms will have little chance of success. Developing countries are expected to be major contributors of greenhouse gases by 2010. There may be problems with implementation of long term projects because of weak legal and institutional frameworks. In addition, there are fears in Annex I countries that the costs of abatement resulting from Kyoto commitments may result in industries relocating to developing countries to avoid the restrictions (a situation commonly termed 'carbon leakage').[36]

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33 'The operational details surrounding the CDM have yet to be negotiated. To qualify as a CDM project, the project activity must result in reductions in emissions (removal of carbon dioxide by sinks) that are additional to any that would occur in the absence of the certified project activity… . Under the CDM, the certified emission reductions (CERs) obtained from the year 2000 onward can be used toward meeting Annex B emission reduction targets in the first commitment period… . The Protocol stipulates that a share of the proceeds from the CERs will be used to cover administrative expenses and to assist developing countries that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaption (Article 12.8)' (Frank Jotzo, Edwina Heyhoe, Kate Woffenden, Stephen Brown and Brian Fisher, *Kyoto Protocol: Impact on developing countries and some implications for the design of the Kyoto mechanisms*, Outlook 2000, Proceedings of the National Outlook Conference, Natural Resources, Volume 1, 29 February – 2 March 2000, ABARE, Canberra, 2000, p 61).

34 Peter Cameron, 'From Principles to Practice: the Kyoto Protocol', *Journal of Energy & Natural Resources Law*, 18(1), February 2000, p 1-18 at p 8.

35 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, pp 135 and 202 ff.

36 Peter Cameron, 'From Principles to Practice: the Kyoto Protocol', *Journal of Energy & Natural Resources Law*, 18(1), February 2000, p 1-18 at p 9.

3.32 The mechanisms were promoted strongly by the US and other OECD countries, and treated as the object of suspicion by the EU, China, India and other G77 States. The Parties have agreed to defer their more detailed negotiations and the design of these mechanisms to later meetings.[37]

3.33 In addition to the development of the above measures, the Parties are bound to develop the compliance system outlined in the Protocol. Further work is also required on provisions for the land use change and forestry sector (sinks), methodologies for estimating emissions and removals, and reporting obligations.[38] The shape and nature of the Protocol's compliance system and the definition and rules to be adopted on sinks, are likely to be key issues to be negotiated and agreed at CoP 6 in November 2000.[39]

3.34 During the Kyoto negotiations two distinct negotiating blocs emerged among the Annex I countries - the 'umbrella group', consisting of Australia, Canada, Japan, Iceland, New Zealand, Norway, the Russian Federation, the Ukraine and the US, and a group which included most other Annex I countries, led by the EU.[40] The umbrella group has made a joint submission on the rules for the operation of the Kyoto mechanisms, where it seeks market-based, transparent and uncapped (unlimited) arrangements.[41]

Australian policy and the Kyoto flexibility mechanisms

3.35 The Prime Minister's 1997 statement contained the provision of '$6 million for facilitating Australian involvement in the Kyoto project-based mechanisms such as the Clean Development Mechanism and Joint Implementation'.[42] This funding was largely focused on facilitating commercial involvement in projects in developing countries and meeting the additional costs incurred by business in undertaking such a project.[43]

3.36 Methods for promoting international partnerships in the context of the CDM and JI of the Kyoto Protocol include:

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37 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, pp 87-102; *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, December 1997, Articles 6, 12 and 17.

38 unfccc.de/resource/process/components/response/respkp.html (17/07/00), pp 1-2.

39 *Proof Committee Hansard*, Canberra, 9 March, 2000, p 3.

40 ABARE, Submission 106, p 880.

41 Australian Greenhouse Office, Submission 169, p 1685.

42 Statement by the Prime Minister of Australia, the Hon John Howard, *Safeguarding the Future: Australia's response to climate change*, 20 November 1997, http://www.greenhouse.gov.au/ago/safeguarding.html (17/07/00).

43 Statement by the Prime Minister of Australia, the Hon John Howard, *Safeguarding the Future: Australia's response to climate change*, 20 November 1997, http://www.greenhouse.gov.au/ago/safeguarding.html (17/07/00).

- AusAID funds for programs which contribute to abatement and adjustment to climate change, worth $154 million to November 1997;
- coal energy and training programs;
- efforts to channel Australian expertise in clean energy through the Australian Energy Systems Exporters Group (AUSTENERGY);
- International Centre for Application of Solar Energy (CASE) programs to promote and facilitate the sustainable application of solar and renewable energies in developing countries; and
- the promotion of international greenhouse partnerships with Australian industry in JI and CDM projects focused on the Asia-Pacific.[44]

3.37 Australia supports the National Strategy Study Program (NSSP), a collaborative initiative between the World Bank and bilateral donors. The Australian NSSP aims to build capacity of developing countries in the Asia-Pacific region to explore the opportunities and potential benefits of participating in the CDM. It also helps them to explore their role in the CDM, identifying potential investment projects and developing national policies regarding the CDM. Australia will provide $3 million to be used for the execution of selected climate change-related studies in the Asia-Pacific region. [45]

3.38 An International Greenhouse Partnerships Office has also been set up within the Department of Industry, Science and Resources.[46] International Greenhouse Partnerships are aimed at laying the groundwork for Australia and cooperating countries to benefit from mutually beneficial greenhouse gas mitigation projects under the project-based Kyoto mechanisms, CDM and JI. Cooperating countries are expected to benefit through enhanced investment, technology transfer and human resource development, and Australian investors will be able to secure greenhouse gas mitigation credits from such projects.[47]

3.39 Currently, Australia's overseas aid program is funding programs and projects that help to abate greenhouse gas emissions and facilitate adaptation to climate change.[48] In addition, Australia has commitments of approximately $46 million to the Global Environment Facility (GEF)[49] climate change program since 1991 to assist with the introduction of:

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44 Australian Greenhouse Office, *The National Greenhouse Strategy: Strategic Framework for Advancing Australia's Greenhouse Response*, 1998, pp 31-37.

45 Australian Greenhouse Office, Submission 169, p 1687.

46 isr.gov.au/resources/netenergy/greenhouse/partnerships/index.html (04/09/00), p 3.

47 Australian Greenhouse Office, Submission 169, p 1687.

48 AusAID, *The Overseas Aid Program and the Challenge of Global Warming*, 1999, p 2.

49 The GEF is the financial mechanism of the Framework Convention on Climate Change.

- renewable energy technologies;
- agricultural research projects;
- environmental management projects;
- forestry and land management activities; and
- adaptation and abatement assistance to vulnerable small island states in the Pacific.[50]

3.40 Australia now has nine approved greenhouse projects in five countries (Chile, Fiji Islands, Indonesia, Mauritius and the Solomon Islands). Five new projects on fugitive emissions, fuel conversion, energy efficiency and renewables were endorsed recently. The Program is also building awareness of the project-based Kyoto mechanisms by staging bilateral workshops in cooperating countries and training and development courses in Australia.[51]

Australia and Kyoto: A Special Case?

Arguments in favour

3.41 During the negotiations for the Kyoto Protocol, the Australian Government made a claim that Australia has a distinctive set of national circumstances and challenges which will have an impact on efforts to achieve effective climate change abatement. Michael Grubb highlighted these national circumstances in the climate change negotiations when he pointed out that:

> Cooperation and action to limit climate change is complex because serious responses could reach deep into countries' economic and political interests.[52]

3.42 Mr Vivek Tulpule, representing ABARE, more recently argued that:

> What we have said in the past is that Australia needs to worry about its target relative to other countries because we believe - and our modelling shows and other people's modelling shows - that Australia would have been more severely affected by the European-style targets that were being proposed at that time.[53]

50 Australian Greenhouse Office, Submission 169, p 1686.

51 Australian Greenhouse Office, Submission 169, p 1687.

52 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, p 27.

53 *Proof Committee Hansard*, Canberra, 16 August 2000, p 901.

3.43 While it is estimated that Australia's emissions account for only 1.4 per cent of total global emissions, it is the largest emitter per person in the industrialised world.[54]

3.44 Australia's economy, trade profile, energy use and other circumstances were argued as being unique among Annex I Parties in that:

- Australia's population, while small, has been increasing rapidly when compared with the growth of other OECD countries. In the period 1985 to 1992, Australia had a population growth rate that was higher than all other Annex I countries with the exception of Turkey. This in turn has influenced Australia's growth in energy consumption;
- Australia has vast distances separating urban centres within the country and even greater distances separating Australia from other countries. Traversing these distances has implications for Australia's transport sector and energy usage;
- changing land-use patterns and Australia's large forestry sector accounted for around one-fifth of Australia's greenhouse gas emissions in 1990. While most developed countries have relatively stable patterns of land usage, land use patterns in Australia are still undergoing significant change;
- Australia is the world's largest exporter of coal, bauxite, alumina, lead, titanium and zircon and one of the world's leading exporters of gold, iron ore, aluminium, nickel, zinc and uranium. Mineral resources and resource processing industries are energy-intensive industries and generate 8.5 per cent of Australia's GDP;
- agricultural and pastoral properties on Australia in 1994 to 1995 covered almost two-thirds of Australia's land surface. Agricultural emissions are a very important component of Australia's emissions profile accounting for 17 per cent of emissions;
- Australia has a significant export link with developing countries in the Asia-Pacific region;
- Australia's abundance of fossil fuel resources has influenced energy choices and the structures of the economy. Australia's energy sector is highly reliant on gas and coal. Subsequently, Australia is a large producer of fossil fuel-based products and continues to be heavily reliant on energy and greenhouse-intensive production processes and export. Australia's manufacturing sector is more dependent on fossil fuels than any other OECD country (with the exception of

54 Using official totals for 1995 supplied to the UN by the 35 Annex B (industrialised) Parties to the Kyoto Protocol, the Australia Institute calculated that Australia had the highest emissions per capita at 26.7 tonnes: 'this is twice the level for all other wealthy countries (13.4 tonnes) and 25 per cent higher than emissions per person in the US (21.2 tonnes). While the US has higher emission per capita from energy (20.6 tonnes compared to Australia's 17.6 tonnes), Australia has much higher levels of emissions from agriculture and land-use change', (The Australia Institute, Submission 79, p 2).

Iceland) and energy and greenhouse-intensive goods account for over 80 per cent of Australia's merchandise exports; and

- trade specialisation has caused Australia's economy to become more energy and greenhouse gas intensive. The country's trade profile means about 20 per cent of the country's greenhouse gas emissions are embodied in exports (notably aluminium and agricultural products). Similarly, emissions associated with Australia's highly greenhouse-intensive exports are attributed to Australian sources rather than to the countries consuming these exports. Australia is a significant net exporter with nearly 70 per cent of Australia's total energy production destined for overseas markets.[55]

3.45 Prior to CoP 3 in Kyoto, the Australian Government argued vigorously that, since Australia is heavily dependent on fossil fuels for export revenue, and relies on fossil fuels as the chief source of domestic energy, uniform emissions reductions targets would be very costly and would impose a disproportionate economic burden on Australia compared with other Annex I countries.[56]

3.46 The Government advocated a form of 'differentiation', that is, allocation of different targets between Annex I countries, on the basis of equal economic cost per capita for each Annex I country. The Australian Government claimed that this proposal was consistent with the UNFCCC's reference to 'common but differentiated responsibilities'.[57] Australia would, under this proposal, have more lenient targets than most other countries.

3.47 The United Nations review team, for the first Australian National Communication in 1994 to the Intergovernmental Negotiating Committee for the UNFCCC, agreed that 'Australia is in many respects unique' and:

> … [t]he team recognize[d] the complexity of Australia's system of government where the Federal Government has limited constitutional

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55 United Nations General Assembly, *Executive Summary of the National Communication of Australia*, 26 October 1995, A/AC.237/NC/4, p 3. See also Department of Foreign Affairs and Trade, *Australia and Climate Change Negotiations*, An Issues Paper, September 1997, pp 4-6 at dfat.gov.au/environment/climate/accn/overview.html (02/02/00); Australian Greenhouse Office, Submission 169, p 1682; and *The National Greenhouse Strategy: Strategic Framework for Advancing Australia's Greenhouse Response*, Australian Greenhouse Office, Canberra, 1998, p 100.

56 The Australia Institute, Submission 79a, p 583.

57 The Australia Institute, Submission 79e, p 2311. The Institute explained that: 'The phrase 'common but differentiated responsibilities' was first used in the Framework Convention and reiterated in the Berlin Mandate'. However, the Institute pointed out that: 'the phrase referred to the 'common but differentiated responsibilities and respective capabilities *between developed and developing countries.* It is important to recognise this because the Australian Government used the phrase to give legitimacy to its differentiation argument in the lead-up to the Kyoto Conference. This was intended to give the impression that the Framework Convention and the Berlin Mandate provided the principle on which the Australian case was based. This was a misuse of the wording of the Convention for it was never understood to apply to 'differentiated responsibilities' among the rich countries'.

> powers to implement measures, and where progress depends on establishing partnerships with state and local governments.[58]

3.48 The team acknowledged the leadership of the Council of Australian Governments (COAG) to implement commitments under the Convention. The broad range and quality of a number of climate-related research activities being carried out in the country was also recognised, as well as research in the pure and applied sciences on climate change issues, including expected impacts of and adaptation to climate change.

3.49 Support for the negotiations, designed to provide Australia with a special emissions target set in the context of national circumstances, is noted in a number of submissions including the Department of Resources Development (WA), Wesfarmers CSBP, and the Minerals Council of Australia.

3.50 The Department of Resources Development (WA) argued that:

> The preparation of national greenhouse initiatives must be implemented in respect of national strategic policy priorities and within the context of the Prime Minister's statements referring to protection of Australia's international competitiveness and the mining sector.
>
> … any move to control greenhouse gas emissions by restricting expansion or development of new projects would have a major impact on the Western Australian and Australian economies.
>
> … new developments will potentially locate in countries that are not signatories to the Kyoto Protocol, with no benefit to the global environment but a real cost to the Australian economy.[59]

3.51 Wesfarmers CSBP told the Committee:

> … if Australia somehow or other falls into an international line with a short time frame that keeps the Kyoto mechanism at 25 or 26 countries and ignores the other 170, there is a very real risk that countries like ours will have a really difficult time, because every product we are manufacturing is competing against direct imports, particularly in the case of fertilisers in Western Australia at the moment.[60]

3.52 The organisation explained that they were concerned that 'if the time lines are too short, or they are skewed against one country in favour of another, then companies like ours will have a very hard row to hoe' and stressed that they:

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58 United Nations General Assembly, *Summary of the report of the In-Depth Review of the National Communication of Australia*, 14 December 1995, FCCC/IDR.1(SUM)/AUS, p 2.

59 Department of Resources Development (WA), Submission 67, p 502.

60 *Proof Committee Hansard*, Perth, 17 April 2000, p 522.

> … would not support greenhouse gas costs whether they are permits or taxes that apply only to Australian-based companies and not imported. We would find it a very difficult situation if we were to have, for example, something like a carbon tax or an emission permit attached to our plants in Australia producing a product which someone else could bring in over a jetty without that cost while still creating the CO_2 somewhere else in the world. From that it follows in our view that it would be very difficult for Australia to act unilaterally with greenhouse because we are such a small part of the world and we are a trading nation, whether importing or exporting.[61]

3.53 Richard Wells, Executive Director, Minerals Council of Australia explained:

> We argued in Kyoto that the Australian economy is very different and deserves recognition in any international target setting. Therefore, we were very much supportive of the view that we could not afford, as an economy, to take some of the cuts that other countries did that do not have such a dependence on fossil fuel and fossil fuel dependent industries. We still argue that the Australian economy has special characteristics. There is nothing to apologise for; it is part of our competitive advantage which benefits the Australian community. But what we need to do is be responsible about bearing our share of the burden in achieving these things internationally, so it is the same position.[62]

Outcome of the negotiations and the agreed target for Australia

3.54 On the basis of the case it presented, the Australian Government achieved a differentiated emissions target of 108 per cent over 1990 levels in the 2008 to 2012 period, a target that is 13 per cent higher than for most OECD countries.

3.55 This agreed target was supported in several submissions to the Committee, but other submissions expressed concern about the adverse implications for achieving future targets.

3.56 His Excellency Ralph Hillman, Ambassador for the Environment, said that:

> This outcome was seen as a good achievement for Australia. We had the concept of differentiation accepted in the negotiations, we had sinks included in a way that accommodated our interests and we were given a plus eight per cent target, which recognised Australia's particular economic circumstances.[63]

3.57 However, the Australian Conservation Foundation noted that Australia could be faced with an equivalent or greater *cut* to emissions in the second and subsequent

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61 *Proof Committee Hansard*, Perth, 17 April 2000, pp 522-23.

62 *Proof Committee Hansard*, Canberra, 10 March 2000, p 75.

63 *Proof Committee Hansard*, Canberra, 9 March 2000, p 2.

commitment periods. Mr Don Henry, Executive Director of the Australian Conservation Foundation suggested that:

> Australia will not be allowed to get away with very flexible interpretations of exactly what our Kyoto target means. I would imagine that will be the international pressure that will be on us because it would set an example that would totally undermine some of the efforts and dimensions particularly to bring developing countries either into the mechanisms at the moment or more vigorously into the overall effort.[64]

3.58 Although the negotiated 2008 to 2012 target has given Australia some 'breathing space', this could quickly disappear if a national framework for effective abatement actions to reduce emissions in the energy sector is not developed. Ms Tristy Fairfield from the Friends of the Earth (Fitzroy) explained:

> We need to accept the fact federally that we are going to get much tougher emissions targets after the 2012 commitment period. We have not actually made any real change towards achieving the targets that we have got.[65]
>
> …
>
> By moving so slowly we are failing to recognise that we are going to have much tougher emissions targets after the next round, particularly if we fail to meet the soft targets we got in this round. After 2012 we do not seem to have any long term vision. … there are no real on-the-table plans for the post-2012 commitment period.[66]

3.59 Senator the Hon Robert Hill, Minister for the Environment and Heritage, also warned that Australia may be left vulnerable when targets are established for post-2012 periods. Senator Hill pointed out that the agreed target for Australia:

> … should not be interpreted, however, as a signal that we can continue to rely on driving economic growth through the increased emission of greenhouse gases. The Kyoto outcome has given Australia the breathing space required to make the structural changes in our economy.
>
> The international trend, in fact, appears to be significantly moving toward a 'decoupling' of economic growth from a related growth in emissions. In other words, developed nations are growing their economies without a corresponding increase in greenhouse emissions.[67]

3.60 He went on to argue that Australia needed to join this trend:

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64 *Proof Committee Hansard*, Melbourne, 21 March 2000, p 195.

65 *Proof Committee Hansard*, Melbourne, 20 March 2000, p 161.

66 *Proof Committee Hansard*, Melbourne, 20 March 2000, p 162.

67 Senator the Hon Robert Hill, *Opening Address to the Insurance Council of Australia's Canberra Conference*, 10 August 2000, Department of the Environment and Heritage, Media Release and Speeches, environment.gov.au/minister/env/2000/sp10aug00.html (13/08/00), p 3.

> The ability of developed nations to decouple their economic growth from emissions growth will have major implications when the international negotiations begin to determine the first round of post-Kyoto Protocol reduction commitments. Nations which have achieved this decoupling will be well placed to meet these further commitments. Nations which continue in the ways of the past will inevitably face an even tougher, more costly task. It seems sensible that Australia should take precautionary action now to ensure it does not fall into this latter category.[68]

> … it's not just the cost of action which must be considered but the cost of inaction.[69]

3.61 One other problem perceived by a number of submissions is that emissions growth in Australia has already exceeded the target agreed in Kyoto and future cuts in expected growth of emissions are necessary.[70] Ms Gwen Andrews, Chief Executive of the Australian Greenhouse Office (AGO) acknowledged, before the Committee, that the Australian projections of the effect of existing measures on reducing business as usual have moved from 118 per cent to a projection that may go as high as 123 per cent above 1990 levels.[71] In July 2000, the AGO announced that Australia's latest National Greenhouse Gas Inventory showed a 16.9 per cent increase overall in emissions from all sectors (excluding land clearing) from 1990 to 1998.[72]

3.62 The PMSEIC, stated that meeting the negotiated commitment will require a cut of 35 per cent, or 135 Mt (million tonnes of CO_2 equivalent), from expected growth by 2010.[73]

3.63 Mr Michael Rae, representing the World Wide Fund for Nature, told the Committee that, because Australia has been highlighted as being a special case, there will be considerable additional international attention on the need for Australia to achieve its target in the first commitment period:

> IPCC is saying that we need between 50 and 70 per cent reductions immediately to stabilise emissions. That is clearly the sort of target we should be going for at a global level. I think Australia was particularly fortunate at Kyoto to win the target it did, looking at a very narrow view,

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68 Senator the Hon Robert Hill, *Opening Address to the Insurance Council of Australia's Canberra Conference*, 10 August 2000, Department of the Environment and Heritage, Media Release and Speeches, environment.gov.au/minister/env/2000/sp10aug00.html (13/08/00), p 3.

69 Senator the Hon Robert Hill, *Opening Address to the Insurance Council of Australia's Canberra Conference*, 10 August 2000, Department of the Environment and Heritage, Media Release and Speeches, environment.gov.au/minister/env/2000/sp10aug00.html (13/08/00), p 4.

70 Australian Conservation Foundation, Submission 191, p 2015.

71 *Proof Committee Hansard*, Canberra, 22 June 2000, p 686.

72 Australian Greenhouse Office, Media Release, National Greenhouse Gas Inventory for 1998 released, 13 July 2000, greenhouse.gov.au/media/nggi98.html (21/07/00), p 1.

73 Prime Minister's Science, Engineering and Innovation Council, *From Defence to Attack: Australia's Response to the Greenhouse Effect*, 25 June 1999, p 2.

> and I cannot imagine that the international community will allow us to persist in not meeting our own obligations.
>
> I think it would be a very clear responsibility of government to signal to the community that that particular apportionment of emissions is unlikely to continue for a very much longer and the Australian people and the Australian economy will have to adjust. The question is whether we do that in an orderly fashion or whether we get a very painful shock to the system as the international community brings us to account.[74]

3.64 There is a strong argument to suggest that under the targets established for the second commitment period, to be negotiated after 2005, Australia will face a more stringent target well below 100 per cent. This prospect requires leadership from government and recognition from industry that serious abatement action needs to begin now.

Concern that Australia has presented a 'special case'

3.65 Other submissions also expressed considerable concern that Australia had presented a special case at Kyoto. Climate Action Network Australia (CANA) objected to the Australian Government's negotiation in Kyoto and claimed that:

> This is a dishonourable position and one that Australia should disown immediately. It is unjust, inaccurate and hypocritical… .[75]

3.66 The Australia Institute argued that the Australian proposal for differentiated targets was seen as being driven primarily by self-interest.[76] It added:

> At home and abroad, Australia was increasingly characterised as a 'pariah nation', bracketed with the OPEC countries and seen to be pursuing narrow self-interest with little regard for the environment or the diplomatic implications of seeking special concessions.[77]

3.67 Also, Professor Ian Lowe[78] pointed out:

> At the moment Australia is the only major carbon intensive economy that has not undertaken to reduce its emissions.[79]

3.68 It may be argued that Australia's reputation will be further affected by Australia's interest in maximising the scope of the Kyoto flexibility mechanisms. In the lead up to the next Conference of the Parties, Australia has been seeking very

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74 *Proof Committee Hansard*, Sydney, 23 March 2000, p 444.

75 Climate Action Network Australia, Submission 193, p 2033.

76 The Australia Institute, Submission 79a, p 584.

77 The Australia Institute, Submission 79e, p 2312.

78 Professor Ian Lowe, Griffith University, gave evidence before the Committee in a private capacity.

79 *Proof Committee Hansard*, Brisbane, 26 May 2000, p 559.

broad definitions in relation to sink activities, CDM projects and emissions trading rules. Australia's stance on these issues could be interpreted as a preoccupation with minimising the requirement for stronger greenhouse abatement measures.

3.69 In its submission to the Committee, the Australia Institute challenged a number of the arguments made by the Australian Government at Kyoto when negotiating a special case for emission targets.[80] The Institute addressed the claim that Australia's fossil-fuel dependence makes it harder for the country to cut emissions and argued that this was unsubstantiated by economic modelling results. The Institute pointed out that:

> … the opposite is more likely to be the case. In determining the cost of emission reductions, the key test is not the relative amount of fossil fuel burnt but how efficiently a country burns it. As an economy reduces its emissions it will start with the cheapest abatement measures (energy savings) and then move to the more expensive measures by replacing energy-using equipment and switching from high-emission sources such as coal to low emission sources such as natural gas and nuclear power.[81]

3.70 The Institute also explained that exports of fossil fuels have no impact on Australia's greenhouse gas emissions, as emissions are counted in the country in which the fuels are combusted.[82] In this case only energy used in mining, processing and transporting fuels appear in Australia's emissions inventory. In relation to transport the Institute argued that, although Australia is a big country:

> … most travel in Australia occurs in urban areas and, accordingly, the size of our country has only a small impact on total travel requirements. Secondly, when compared to other developed countries, the share of emissions from transport in Australia is about average.[83]

The economic modelling of the special case

3.71 To support its argument in Kyoto at CoP 3, the Australian Government requested the Australian Bureau of Agricultural and Resource Economics (ABARE) to provide estimates using the MEGABARE model of the economic costs to Australia of cutting emissions. The Australia Institute submission to the inquiry noted that:

> The model results in 1995 indicated that real Gross National Expenditure (GNE) would fall below the 'business-as-usual' path by amounts ranging from -0.27 per cent in the year 2000 to -0.49 per cent in 2020.[84]

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80 The Australia Institute, Submission 79a, p 579.

81 The Australia Institute, Submission 79a, p 580.

82 The Australia Institute, Submission 79a, p 581.

83 The Australia Institute, Submission 79a, p 583.

84 The Australia Institute, Submission 79a, p 580.

3.72 The model and its predictions have since been the subject of criticism. The Australia Institute argued that:

> … the MEGABARE model failed to allow for technological change in response to policies to cut emissions, excluded assessment of the benefits of reducing emissions, ignored emissions from land clearing, seriously overstated the likelihood of jobs going off-shore, and employed various presentational ticks that gave a grossly misleading picture of the economic costs of reducing emissions.
>
> Economists outside of ABARE concluded that the MEGABARE model did not provide accurate or reliable estimates of the economic impacts of emission reduction policies and should be disregarded.[85]

3.73 The Committee questioned ABARE about the nature of the peer review of the work of that organisation.[86] Dr Fisher, representing ABARE, explained to the Committee that:

> [Any review] depends on when these things are being published. For example, we released the document you have before you, the one we put in as the submission, using our own internal review system, but the content of that is now subject to the energy modelling forum processes and we will use the feedback we get from that as input into the next document that we produce later this year.[87]

3.74 However, the Australia Institute claimed that:

> The Minister revealed that most of the funding for the modelling work had been received from businesses and business organisations involved in the fossil fuel industry… . These organisations paid $50,000 for a seat on the Steering Committee overseeing the modelling work.[88]

3.75 The submission from the Australia Institute also argued that 'ABARE did not subject its work to a proper process of peer review'[89] and by:

> … limiting membership of the Steering Committee to organizations willing to pay $50,000, ABARE had failed to protect itself adequately from 'allegations of undue influence by vested interests'. Its practices 'could create a reasonable public perception that the research projects were weighted in favour of the interests of Australian industry'.[90]

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85 The Australia Institute, Submission 79e, pp 2313-14.

86 *Proof Committee Hansard*, Canberra, 23 June 2000, pp 819-20.

87 *Proof Committee Hansard*, Canberra, 23 June 2000, p 559.

88 The Australia Institute, Submission 79e, pp 2315.

89 The Australia Institute, Submission 79e, pp 2316.

90 The Australia Institute, Submission 79e, pp 2317.

3.76 The Australia Institute, has more recently commented:

> We all know that, prior to Kyoto, the ABARE's modelling was enormously influential in the political debate, it was the basis of the whole of the Australian Government's position, and yet no one was acknowledging the extraordinary arbitrariness of the ABARE model, and indeed of other models. I have heard today from Vivek [Research Director, Trade and International Policy Branch, ABARE] that these figures are two years old and now are sharply different. The costs now estimated by ABARE are markedly lower than they were prior to Kyoto. If we had known that two and a half years ago, does that mean the Australian Government's position in the lead-up to and at Kyoto would have been markedly different?[91]

3.77 The Minister for the Environment and Heritage, Senator Hill has remarked that:

> ABARE's work since Kyoto has actually indicated that the cost of compliance may not be as great as originally expected.[92]

3.78 Dr Hamilton argued that other modelling techniques have shown that investment in energy efficiency would substantially reduce the estimated economic costs of bringing about large reductions in greenhouse gas emissions and that these sort of results are not reflected in the calculations from the ABARE GTEM[93] model.[94] He added that:

> [I]t is impossible to use ABARE model results to draw any conclusion about the desirability or otherwise of policies because they only assess the costs of emission reductions, they do not make any estimate of the benefits of reducing emissions.[95]

3.79 Mr Alan Pears, representing the Sustainable Energy Industry of Australia (SEIA), also expressed criticism of the ABARE model:

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91 *Proof Committee Hansard*, Canberra, 16 August 2000, p 899.

92 Senator the Hon Robert Hill, *Opening Address to the Insurance Council of Australia's Canberra Conference*, 10 August 2000, Department of the Environment and Heritage, Media Release and Speeches, environment.gov.au/minister/env/2000/sp10aug00.html (13/08/00), p 4.

93 'The Global Trade and Environment Model (GTEM) is derived from the MEGABARE model and the GTAP model. The most significant features that distinguish GTEM from MEGABARE are the extended coverage of greenhouse gas emissions, the inclusion of interfuel substitution and emission reduction responses in noncombustion greenhouse gases… . Global computable general equilibrium models such as GTEM have the capacity for estimating the impacts of international climate change policies on key economic variables and emissions. The economic variables considered include the prices of consumer goods and inputs into production, sectoral and regional output, trade and investment flows between regions and, ultimately, national income and expenditure levels in Annex B and non-Annex B regions (Cain Polidano et al, *The Kyoto Protocol and Developing Countries: Impacts and implications for mechanism design*, ABARE, 2000, p 74).

94 *Proof Committee Hansard*, Canberra, 16 August 2000, p 900.

95 *Proof Committee Hansard*, Canberra, 16 August 2000, p 903.

> … not only I but many others see ABARE's analysis as being the absolute worst-case, most pessimistic, scenario because it actually means replacing a lot of our coal-fired power stations by renewable energy and pursuing almost no energy efficiency by 2020. It is a very high cost scenario.[96]

3.80 Mr Pears explained that:

> When we start putting this analysis into perspective, we find that something like 85 per cent of Australian industry will benefit under a very conservative costing analysis of greenhouse response. When we look at the industries that are supposedly adversely affected, we have to recognise that ABARE's analysis assumes those people will do very little to change.[97]

3.81 Dr Brian Fisher, Executive Director of ABARE, explained to the Committee that the model produced for the Kyoto negotiations in 1997 had been superseded by new premises which have emerged post-Kyoto:

> All of the simulations done pre-Kyoto were done in a policy world where we thought that we would only be dealing with one gas, namely carbon dioxide. We were talking about uniform percentage reductions for every country. As it turned out, we agreed at Kyoto that we would include six gases in the coverage and we would differentiate targets.
>
> There is quite a substantial difference and impact on Australia and on its sectors as a consequence of moving from a ten per cent reduction in emissions against the 1990 base versus an eight per cent increase. There is a radical difference in terms of the impact on sectors as a consequence of inclusion of gases like methane and nitrous oxide.[98]

3.82 Dr Fisher concluded that the early modelling:

> … was based on correct presumptions at the time but as a consequence of the negotiations and agreement to include totally different coverage we have a new set of model results.[99]

3.83 He emphasised that the Committee 'should not rely on those results because they were done in a totally different environment for a totally different set of policy settings' and that MEGABARE is not a model ABARE uses any more. He explained that ABARE now uses a model called GTEM which incorporates the greenhouse sensitive gases carbon dioxide, methane and nitrous oxide.[100] Dr Fisher added that ABARE is:

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96 *Proof Committee Hansard*, Melbourne, 21 March 2000, p 230.

97 *Proof Committee Hansard*, Melbourne, 21 March 2000, p 230.

98 *Proof Committee Hansard*, Canberra, 23 June 2000, p 820.

99 *Proof Committee Hansard*, Canberra, 23 June 2000, p 821.

100 *Proof Committee Hansard*, Canberra, 23 June 2000, p 825.

> … currently working on [their] next set of projections and those will be released once [they] finalise [their] analysis of [their] fuel and energy survey, which is a biennial activity.[101]

3.84 At a Round Table on Global Warming held before the Committee, Mr Vivek Tulpule, Research Director in Trade and International Policy at ABARE, noted:

> The quality of the data just keeps improving all the time. As we have the resources and the funding to improve the quality of the data, we do that.[102]

3.85 However, Mr Tulpule added that the Australian Government, at the time of the Kyoto Conference of Parties, 'would have been informed by models that ranged across the top end of what people were saying, and the bottom end'.[103] He emphasised that:

> Both of those models, despite the fact that these curves are at different levels, came up with pretty much the same conclusions. Those conclusions were that Australia would be more severely harmed as a result of the independent abatement EU styles of policies that were being proposed at that stage, despite the positions of these curves. The second thing they found was that emissions trading would help Australia achieve emission reduction targets at a much lower cost than would independent abatement.[104]

3.86 Mr Tulpule noted:

> At a global level, modellers everywhere are worried about how you model technological change. How do you incorporate this properly into greenhouse models in order to be able to assess the sorts of policies that governments are now actually putting on the table, which are to do with R&D - especially in the United States - and which are to do with technological improvements?[105]

3.87 Ms Eileen Claussen, President of the Pew Center on Global Climate Change also pointed out that: '[m]any of the economic models that are used to develop the cost estimates are unrealistic'[106] and that 'different countries have interpreted the language in the treaty differently, and this has affected their assessment of whether

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101 *Proof Committee Hansard*, Canberra, 23 June 2000, p 825.

102 *Proof Committee Hansard*, Canberra, 16 August 2000, p 891.

103 *Proof Committee Hansard*, Canberra, 16 August 2000, p 896.

104 *Proof Committee Hansard*, Canberra, 16 August 2000, p 891.

105 *Proof Committee Hansard*, Canberra, 16 August 2000, p 901.

106 Eileen Claussen, President of the Pew Center on Global Climate Change, *Kyoto – the best we can do or fatally flawed?*, Royal Institute of International Affairs Conference, London, 20 June 2000, p 40.

and how they will be able to reach their targets'.[107] Ms Claussen suggests that there is a clear need to 'renegotiate the targets or the timetables'.[108]

Recommendation 4

The Committee recommends that future work undertaken by ABARE on the economic impact of climate change and greenhouse gas abatement should:

- **be subject to wide-ranging peer review to ensure open and objective reporting; and**
- **incorporate opportunities for low cost and negative cost abatement.**

International Negotiations Following Kyoto

3.88 Since Kyoto, negotiations between governments have continued. In November 1998, the Fourth Conference of the Parties (CoP 4) adopted the 'Buenos Aires Year 2000 Plan of Action' to strengthen the implementation of the UNFCCC and prepare for the Kyoto Protocol's entry into force. Decisions were made on a program of work and a process for elaborating rules for the Kyoto (flexibility) mechanisms, the development of technology transfer and future commitments for developing countries; compensation and adaptation; financial resources - Global Environment Facility (GEF); national communications; issues of compliance and land use change and forestry; and an undertaking to discuss supplementarity, ceilings, long term convergence and equity issues.[109]

3.89 The Fifth Conference of the Parties (CoP 5), which took place in Bonn in 1999, continued discussions on a program of works, rules of compliance, land use and forestry change and market mechanisms.[110]

3.90 Negotiations will continue at the Sixth Conference of the Parties (CoP 6) in The Hague in November 2000. Each of the following aspects of the negotiations are further considered in this chapter:

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107 Eileen Claussen, President of the Pew Center on Global Climate Change, *Kyoto – the best we can do or fatally flawed?*, Royal Institute of International Affairs Conference, London, 20 June 2000, p 5.

108 Eileen Claussen, President of the Pew Center on Global Climate Change, *Kyoto – the best we can do or fatally flawed?*, Royal Institute of International Affairs Conference, London, 20 June 2000, p 7.

109 Brian Fisher, *Kyoto Protocol: Economic impacts on Annex B economies and key Australian industries*, Outlook 99, Proceedings of the National Agricultural & Resources Outlook Conference, Commodity Markets and Resource Management, Volume 1, 17 - 18 March 1999, ABARE, Canberra, 1999, pp 39-40. See also Peter Cameron, 'From Principles to Practice: the Kyoto Protocol', *Journal of Energy & Natural Resources Law*, 18(1), February 2000, p 1-18, at p 10.

110 Greenpeace International, *Greenpeace Analysis of the Kyoto Protocol*, Greenpeace Briefing Paper, UNFCCC, Session of the Subsidiary Bodies, Bonn, June 2-12 1998, Greenpeace International.

- the three Kyoto mechanisms: Emissions Trading; Joint Implementation (JI) and the Clean Development Mechanism (CDM);
- the use of sinks;
- the compliance system;
- the role of developing countries and carbon leakage; and
- ratification.

Emissions Trading

3.91 An international emissions trading system is a central element of the Kyoto Protocol. Under Articles 3, 6 and 17, Parties are allowed to trade unused emissions credits - that is, Parties whose net emissions are likely to fall below their assigned amounts can sell them to Parties who require additional credits. However, the Protocol states that international emissions trading shall be supplementary to domestic actions to reduce emissions. Because of disagreement during the Kyoto meeting, the detailed design and structure of the system - including rules for verification, reporting and accountability - was deferred for negotiation to future meetings. It is expected to be discussed at the next meeting of the Parties (CoP 6).[111] Emissions trading is discussed in detail in chapter 9 of this report.

3.92 The Australian Government supports the introduction of emissions trading at an international level and is considering its domestic introduction. Mr Tulpule emphasised that:

> … we [ABARE] are arguing a couple of things very strongly. The first is that it is very important to have full and free emissions trading. That is a conclusion that you can draw from the model, and it is a conclusion that we think will help us to achieve our Kyoto targets at a much lower cost than would otherwise be the case. We think that is an important result in the model.[112]

The role of sinks - land use, land use change and forestry

3.93 The role of sinks is discussed in detail in chapter 7 of this report. The word 'sinks' refers to those natural processes which absorb carbon dioxide from the atmosphere. The role of sinks is one of the most complex technical issues in the Kyoto Protocol negotiations. The rules and modalities to operationalise the sinks provisions in the Kyoto Protocol, and their applicability in the flexibility mechanisms, are yet to be agreed by the Parties. The scope of the use of sinks as a measure to offset emissions from elsewhere is dependant on the final definitions accepted for forests and what may be counted as an additional activity. A number of potential

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111 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, pp 128-29.

112 *Proof Committee Hansard*, Canberra, 16 August 2000, p 905.

loopholes could be created as a result of these definitions. The permanence of sequestered carbon in forestry or other vegetation-based sinks has also been of significant concern to many stakeholders. Other uncertainties relate to the measurement and monitoring of carbon stored in sinks. How this will be operationalised at an international and domestic level has been a key issue and, in particular, confidence in and the transparency of any accounting system developed.

3.94 In relation to sinks, Ralph Hillman, Ambassador for the Environment, told the Committee that:

> Sinks are of critical importance to Australia. The definition and rules to be adopted will impact on the size of our abatement task, as well as the cost. This will be a key issue for us at CoP 6.[113]

3.95 The Australian Government also achieved a provision at Kyoto, under Article 3.7 of the Protocol (the Australia clause). The clause allows countries to include emissions from land clearing to be added to their 1990 baseline to calculate the emissions target in the Kyoto commitment period of 2008 to 2012.[114] Higher baseline emissions imply a higher target, and if emissions from land clearing are declining for other reasons, this frees up allowable emissions for other sectors.[115]

3.96 The Australia Institute has argued that the clause 'effectively [only] benefits Australia':

> … there is an important issue concerning the interpretation of Article 3.7 that has a major bearing on the calculation of base year emissions. The clause provides a trigger which permits a Party to include land use emissions in its base year amount; it applies to '[t]hose Parties… for whom land-use change and forestry constituted a net source of greenhouse gas emissions in 1990…'. This trigger applies almost exclusively to Australia.[116]

3.97 The Institute also explained that:

> … the fact that the large fall in the rate of land clearing occurred in 1991, and not in 1990 or earlier, was extremely fortuitous for it means the Australia's total allowable emissions under the Protocol are 6 per cent higher than they might otherwise be, and extra tranche of emissions that may be worth $640 million in emission permits. The 6 per cent is a very large number by any standard and Australia's land clearing data will

113 *Proof Committee Hansard*, Canberra, 9 March 2000, p 3.

114 The Australia Institute, Submission 79c, p 2281.

115 The Australia Institute, Submission 79c, p 2281.

116 The Australia Institute, Submission 79c, pp 2283-84.

> undoubtedly attract intense scrutiny from other Parties to the Framework Convention.[117]

3.98 While, under the Kyoto Protocol, Australia is permitted to include land clearing within its total emissions, it is currently not reported in the National Greenhouse Gas Inventory because of considerable uncertainties in calculating the effects on emissions.[118] The Australia Institute and the Australian Conservation Foundation have criticised the decision of the Conference of Parties at Kyoto, at the request of Australia, to include land clearing when calculating national totals of carbon emissions.[119] These organisations argue that, if falls in the rate of land clearing occur, when factored into national totals, they may allow Australia to go close to meeting its Kyoto target without the need for further abatement action that would reduce current trend increases in energy emissions:

> Simple calculations show that even if rates of land clearing do not continue to decline… then emissions from Australia's fossil fuel and other sectors can increase by 22 per cent while Australia remains within the 8 per cent overall target set at Kyoto. If the Government implements its announced plan to reduce land clearing by 20,000 ha./an. then emissions from the fossil fuel and other sectors can increase by 28 per cent.[120]

3.99 The Australia Institute argued that, again because of accounting rules, plantations would be less effective sinks than is widely considered to be the case:

> The opportunity to use plantations to offset emissions from fossil sources will be much less extensive than many people believe. There is a lot of hype about the opportunities for land holders to establish plantations or woodlots with a view to selling the emission credits in the future. The first fundamental point to recognise is that carbon stored or sequestered in plantations can only count towards the Kyoto target if it meets two conditions:
>
> - the plantations must have been established after 1990; and
> - they must be established on land that was cleared before 1990.

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117 The Australia Institute, Submission 79c, p 2282.

118 Australian Greenhouse Office, *National Greenhouse Gas Inventory 1998*, July 2000.

119 Australian Conservation Foundation and The Australia Institute, *Land Clearing and the Kyoto Protocol: Summary of a paper presented to Buenos Aires Climate Change Convention Negotiations*, November 1998, http://www.acfonline.org.au/campaigns/globalwarming/govt per cent20process/landclearing.htm. Detailed analysis of the impact of the land use change clause in Australia's commitment is discussed in Clive Hamilton and Lins Vellen, 'Land use change in Australia and the Kyoto Protocol', *Environmental Science and Policy*, No 2, 1999, pp 145-52.

120 The Australia Institute, Submission 79c, p 2281.

> If a plantation meets these criteria then it may count towards the Kyoto target. However, in practical terms only large, professionally managed plantations are likely to qualify and be commercially worthwhile.[121]

3.100 CANA summed up the sensitivity and importance of the land clearing issue to stakeholders in the climate change negotiations in Australia as follows:

> The Australia clause (Article 3.7 Kyoto Protocol) enables Australia to increase fossil fuel emissions between 13 per cent and 26 per cent and still meet the Kyoto target.[122] It allows industrial emissions to be written off against 'land use change' (LUC). This is possible because land clearing in Australia has slowed since 1990 – producing less greenhouse gas emissions. This will 'compensate' for increased industrial emissions. The Australian Government negotiating team at Kyoto in 1997 knew this and yet failed to reveal the information openly at the negotiating table.[123]

Recommendation 5

The Committee recommends that strict rules to govern the use of carbon sinks should be included in any emissions trading framework developed by the Parties to recognise the uncertainties in measurement and the long term security risks.

The compliance system?

3.101 Means for demonstrating compliance with the targets agreed in the Kyoto Protocol have also been the subject of international negotiations but have not yet been agreed. The Kyoto Protocol puts great emphasis on compliance assessment.[124] It repeatedly stresses the need for accountability and verification.

3.102 Michael Grubb noted that the Parties have expressed concern that 'many emission sources and sinks might be hard to estimate and that compliance assessment would be correspondingly hard'.[125] He also pointed out that 'the Protocol provisions for reporting and review are scattered throughout the document, making their overall effect difficult to grasp at a glance'.[126]

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121 The Australia Institute, Submission 79a, p 586.

122 A Reynolds, & C Hamilton, *1998 Land Use Change in Australia and the Kyoto Protocol*, a presentation given at CoP 5, 12 November 1999.

123 Climate Action Network Australia, Submission 193, p 2035.

124 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, p 143.

125 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, p 143.

126 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, p 143.

3.103 Article 18 of the Kyoto Protocol provides the mandate for the adoption of compliance procedures and mechanisms and is one of a number of provisions in the Protocol that will provide the basis for its 'compliance system'. The monitoring, reporting and review provisions in Articles 5, 7 and 8 of the Protocol will provide the tools for assessing Parties' compliance, or non-compliance, with their target obligations. These provisions will provide an important early warning device, enabling Parties to identify and address (or to seek help to address) potential compliance problems at an early stage.[127] Articles 16, 18 and 19 of the Protocol contain the specific legal processes concerning compliance.[128] Article 18 is directed at overall compliance with specific commitments and, with Article 16, basically provides a framework for more negotiations and the development of an 'indicative list of consequences' for non-compliance.[129]

3.104 Michael Grubb points out that Article 18 makes the Protocol a 'potentially stringent mechanism, far more so than in most other international agreements'.[130] He concludes that the wording of the Article suggests that the Parties intend to try to enforce compliance by imposing a range of penalties in a routine and systematic way.

3.105 Article 19 of the Protocol provides for the settlement of disputes procedure in the UNFCCC.

3.106 To be effective, the Kyoto Protocol will require a robust and efficient compliance regime. Accurate and transparent measurement and reporting of emissions provide the foundation for the effective operation of the Protocol's market-based mechanisms.[131] Parties must have an accurate assessment of their emissions in order to monitor the effect of transfers and acquisitions under the mechanisms. The importance of an effective compliance mechanism is strengthened because the level of non-compliance with targets is rolled over into later commitment periods. If a developed country does not emit the whole of its assigned amount by the end of the commitment period, it is allowed to carry forward the unused portion to the next commitment period. This is known as 'banking' of emissions. Verification of actual emissions levels achieved, and their comparison with accepted targets, is critical to this banking process.

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127 Department of Foreign Affairs and Trade, *Climate Change: Options for the Kyoto Protocol Compliance System*, A Discussion Paper, May 2000, paras 10-11.

128 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, p 147.

129 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, p 147.

130 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, pp 143, 148.

131 Department of Foreign Affairs and Trade, *Climate Change: Options for the Kyoto Protocol Compliance System*, A Discussion Paper, May 2000, para 15.

3.107 At CoP 5, the Parties agreed that the Protocol's compliance system should have three objectives: promoting compliance, preventing non-compliance and determining and addressing instances of non-compliance. Details of the Protocol's compliance system remain to be negotiated.[132]

3.108 It has been accepted that the system should have both facilitative (to encourage compliance) and enforcement (to deter non-compliance) functions, although there was no consensus as to how these functions could be implemented.[133] In earlier international agreements, international pressure has been used as a major enforcement mechanism, with the threat of trade restrictions for non-compliance.

3.109 Ralph Hillman, Ambassador for the Environment, advised the Committee of the current Australian view about compliance mechanisms:

> Current proposals range from facilitative means designed to help Parties overcome their implementation problems to enforcement or hard measures such as requiring additional emission reductions in a subsequent commitment period. Australia has argued that a strong facilitative component is important to achieve implementation of Parties' commitments, but we are yet to finalise our position on consequences.[134]

3.110 The two main aspects of Australia's view are, therefore, that the compliance mechanism should focus primarily on country targets and that it should have a 'pro-compliance' approach, that is, the system should encourage and facilitate countries to meet their obligations before punishment for infringements is considered.

Recommendation 6

The Committee agrees that the integrity of the Kyoto Protocol rests on its ability to deter non-compliance and recommends that the Australian Government works with the Parties towards the adoption of firm sanctions for non-compliance.

Recommendation 7

The Committee recommends that the Australian Government support the development of a reporting mechanism under the Kyoto Protocol which will identify and assist those Parties falling behind in Protocol emissions targets.

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132 Department of Foreign Affairs and Trade, *Climate Change: Options for the Kyoto Protocol Compliance System*, A Discussion Paper, May 2000, para 3.

133 greenhouse.gov.au/pubs/factsheets/fs_cop5.html (17/07/00), p 2.

134 *Proof Committee Hansard*, Canberra, 9 March 2000, p 3.

The role of developing countries and carbon leakage

Developing countries and the Kyoto Protocol

3.111 Developing countries are currently not required to commit to agreed targets under the Kyoto Protocol. This situation has generated considerable international debate, especially in the context of possible transference of emissions from activities in developed countries to activities in developing countries ('carbon leakage'). The commitment of developing countries to targets under the Protocol was also a common concern in the submissions to the inquiry from industry. As a result of current modelling on greenhouse gas emissions, ABARE noted that:

> Emissions from non-Annex B countries are projected to account for more than half of global emissions well before 2010.[135]

3.112 The inquiry heard much debate about whether and when developing countries should agree to binding targets, and whether this issue should affect Australia's timetable for ratification.

3.113 Ambassador Hillman addressed the Committee with the issue of how and when developing countries should take on targets under the Kyoto Protocol and confirmed that the Australian Government is 'not asking the developing countries to ratify; [but]… asking that they agree to a pathway towards taking on targets'.[136]

3.114 In the United Nations, developing countries seek to group together under the umbrella of the Group of 77 (G77) plus China (numbering more than 120 countries at full strength).[137] Since the inception of the climate change regime, developing countries have been united by the principle that any major response action should be led by the industrialised world. Developing countries, as formally represented by the G77 and China, have firmly resisted efforts to open discussions on quantified emissions commitments.[138]

3.115 Developing countries will be affected directly by the physical aspect of climate change (as acknowledged in Articles 4.8 and 4.9 of the UNFCCC) and indirectly, by the implementation of response measures in developed countries to meet the Kyoto targets (Articles 3.14 of the Kyoto Protocol and 4.8 of the UNFCCC).[139]

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135 Cain Polidano et al, *The Kyoto Protocol and Developing Countries: Impacts and implications for mechanism design*, ABARE, 2000, p 2.

136 *Proof Committee Hansard*, Canberra, 9 March 2000, p 6.

137 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, p 35.

138 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, p xli.

139 Cain Polidano et al, *The Kyoto Protocol and Developing Countries: Impacts and implications for mechanism design*, ABARE, 2000, p 15.

3.116 Adoption of Kyoto targets and mechanisms will affect the structure of world trade and investment and adoption of technology.[140] Hence, developing countries, despite having no emissions abatement targets, are likely to feel the economic consequences of emissions abatement measures in developed countries, through trade and investment links.[141] ABARE claimed that the consequences for developing countries would include those arising from:

- lower world prices for fossil fuels as developed countries' demand for fossil fuels falls in order to meet their abatement targets;
- reduced investment in Annex B regions as a consequence of lower returns following the implementation of carbon equivalent penalties;
- higher import prices for energy-intensive goods;
- some relocation of energy-intensive industries from developed to developing countries as developed countries introduce emissions reduction measures;
- restructuring of developing country economies away from fossil fuel extraction towards capital-intensive activities such as iron and steel and aluminium production (associated with carbon leakage) leading to increased demand for capital; and
- impact from the Clean Development Mechanism (CDM) which provides for direct developing country involvement in emissions reduction projects in a host country.[142]

Importance of the Clean Development Mechanism (CDM)

3.117 In general, developing countries are keen to see the Kyoto Protocol's CDM implemented.

3.118 Under the CDM, the richest countries shall provide 'new and additional financial resources' and facilitate technology transfer to developing countries. So-called UNFCCC Annex II Parties (essentially the OECD) will fund the 'agreed full cost' incurred by developing countries for submitting their national communications. These funds must be 'new and additional' rather than redirected from existing developmental aid funds. UNFCCC Annex II Parties will also help finance certain other UNFCCC-related projects, and they will promote and finance the transfer of, or access to, environmentally sound technologies, particularly for developing country Parties. The UNFCCC recognises that the extent to which developing country Parties

140 Cain Polidano et al, *The Kyoto Protocol and Developing Countries: Impacts and implications for mechanism design*, ABARE, 2000, p 3.

141 Cain Polidano et al, *The Kyoto Protocol and Developing Countries: Impacts and implications for mechanism design*, ABARE, 2000, p 1.

142 Cain Polidano et al, *The Kyoto Protocol and Developing Countries: Impacts and implications for mechanism design*, ABARE, 2000, p 1 and 3.

implement their own commitments will depend on financial and technical assistance from the developed countries.[143]

3.119 ABARE pointed out that the CDM has the potential to offer low cost abatement opportunities for Annex B countries while assisting developing countries to achieve sustainable development.[144] The credits can also create revenue for developing countries as, under the CDM, non-Annex B countries will receive a share of the emissions reduction credits generated by certified emissions reduction projects.[145]

3.120 ABARE noted the importance of ensuring that the CDM 'is implemented in a way that is all encompassing in its approach to projects, and includes removals by sinks as well as emissions reductions by technology transfer'.[146] The organisation concluded that, unless the latter is the case, 'the benefits from the Clean Development Mechanism will not be distributed equitably among developing country Parties to the Protocol'.[147]

3.121 In relation to the cost of implementing the Kyoto Protocol, Ambassador Hillman, asserted that:

> The Clean Development Mechanism is significant not only because it will give developed countries access to low-cost abatement opportunities in developing countries, and thereby lower the global cost of reaching the Kyoto targets, but also because it will lead to substantial flows of investment and environmental technology to developing countries. This prospect has softened the attitude of many developing countries to the concept of the flexibility mechanisms and to progress in the negotiations more generally.[148]

Should developing countries take on targets?

3.122 The importance of encouraging commitment by developing countries was highlighted by Ambassador Hillman when he stated:

> This is probably the most difficult of all the issues, yet it is central to ratification by the United States and others, including Australia. The United States Senate has made it clear that it will not ratify the Kyoto Protocol

143 unfcc.de/resource/iuckit/fact18.html (17/07/00), pp 1-2.

144 Cain Polidano et al, *The Kyoto Protocol and Developing Countries: Impacts and implications for mechanism design*, ABARE, 2000, p 9.

145 Cain Polidano et al, *The Kyoto Protocol and Developing Countries: Impacts and implications for mechanism design*, ABARE, 2000, p 34.

146 Cain Polidano et al, *The Kyoto Protocol and Developing Countries: Impacts and implications for mechanism design*, ABARE, 2000, p 9.

147 Cain Polidano et al, *The Kyoto Protocol and Developing Countries: Impacts and implications for mechanism design*, ABARE, 2000, p 11.

148 *Proof Committee Hansard*, Canberra, 9 March 2000, p 2.

> unless there is meaningful participation by developing countries. The G77 - that is, developing countries, and particularly China and India - strongly resist any suggestion that they should take on binding targets. They were successful at Kyoto in having a draft article on voluntary targets removed from the text. A strong United States push to address this in the formal negotiations at the fourth Conference of the Parties in Buenos Aires in 1998 led to the G77 blocking substantive progress on virtually all other issues. The United States is now focusing on bilateral contact and informal dialogue in which Australia participates to take this issue forward.[149]

3.123 In response to questions from the Committee about the rationale for Australia to wait to ratify the Protocol until developing countries have agreed to a commitment to taking on greenhouse gas emissions targets, Ambassador Hillman argued that a global, communal effort was required to achieve reduction in emissions:

> The reasons are environmental. There is very little point in our acting unless down the track the developing countries also act.[150]

3.124 However, Ambassador Hillman went on to explain that:

> There is another angle to it. I mentioned the environmental angle, but there is an important economic angle… . In a situation in which the developing world has no prospect of taking on targets, it will lead to what we call carbon leakage; that is, investment in carbon intensive industries such as aluminium, smelting, cement, paper and even petroleum refining will gradually move offshore simply because the cost burden in Australia will be too high. We will see substantial shifting of industries offshore. This will have two impacts: first, an economic impact on Australia and, second, the emissions, instead of being contained by the Kyoto targets, will simply move somewhere else where there are no targets.[151]

3.125 However, other witnesses pointed out that developed countries had agreed to take the lead.[152] The Australia Institute drew attention to the fact that the aim of the 1995 Berlin Mandate:

> … was to set mandatory targets for rich countries exclusively. It stated, *inter alia*, that the purpose of the process was the 'strengthening of the commitments of the Parties included in Annex I', i.e. the developed countries, through the adoption of a protocol. The aim was for Annex I Parties 'to set quantified limitation and reduction objectives within specified

149 *Proof Committee Hansard*, Canberra, 9 March 2000, p 3.

150 *Proof Committee Hansard*, Canberra, 9 March 2000, p 6.

151 *Proof Committee Hansard*, Canberra, 9 March 2000, p 6.

152 See above in this chapter.

> time-frames' and specifically said that the process would '[n]ot introduce any new commitments for Parties not included in Annex I'.[153]

3.126 The Berlin Mandate reaffirmed the principle, enshrined in the UNFCCC, that: 'developed countries should take the lead in combating climate change and the adverse effects thereof'. The Mandate not only stated that the targets to be set would apply to developed countries alone, but also set down the principles that were to guide the process, notably:

> The fact that the largest share of historical and current global emissions of greenhouse gases has originated in developed countries, that the per capita emissions in developing countries are still relatively low and that the share of global emissions originating in developing countries will grow to meet their social and development needs.[154]

3.127 The Australia Institute explained that:

> The Mandate reflected universally accepted ethical principles,… that those countries responsible for increased concentrations of greenhouse gases in the atmosphere should do most to reduce the problem, especially since, being rich countries, they were in a better position to do so. These principles of polluter pays and ability to pay were reinforced by the acknowledgment that while rich countries became rich by burning fossil fuels, poor countries would suffer most of the damage of climate change. There was no challenge to these views.[155]

How likely is carbon leakage?

3.128 The potential shift of production and associated carbon emissions from developed countries to developing countries is described as the carbon equivalent leakage effect.[156] ABARE estimated that the rate of carbon equivalent leakage will be 14 per cent in 2010 under independent abatement.[157] With emissions trading introduced, they suggest that leakage would be reduced to 8 per cent.

3.129 Concerns were expressed in a range of submissions suggesting that mandatory measures to cut emissions, which have the effect of increasing energy prices, will see industry move out of countries such as Australia because of the competitive

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153 The Australia Institute, Submission 79a, p 585.

154 The Australia Institute, Submission 79a, p 585.

155 The Australia Institute, Submission 79a, p 585.

156 Cain Polidano et al, *The Kyoto Protocol and Developing Countries: Impacts and implications for mechanism design*, ABARE, 2000, p 4.

157 Cain Polidano et al, *The Kyoto Protocol and Developing Countries: Impacts and implications for mechanism design*, ABARE, 2000, p 4. Carbon equivalent emissions from non-Annex B regions are projected to rise by 140 tonnes for every 1000 tonne reduction in carbon equivalent emissions in Annex B countries.

disadvantage that would be produced.[158] The Australian Industry Greenhouse Network (AIGN) expressed the views evident in a number of submissions and suggested that:

> … there needs to be a clear path for the taking on of commitments by developing countries. At the moment there is no agreed path. It is a major problem for Australia because many of the competitors for both our exporting industries and our import competing industries are located in non-Annex I countries. That presents us with a huge exposure unless there can be something done about that. The government is in agreement with that.[159]

3.130 AIGN argued that the Kyoto Protocol 'suffers from a fundamental flaw':

> Although non-Annex I countries account for a significant and growing share of global emissions they are not subject to binding constraints under the Protocol. Consequently, Australian businesses, especially those in energy and emissions intensive industries, could be rendered uncompetitive against developing country producers with no emission constraints… .[160]

3.131 Mr David Coutts, Executive Director of the Australian Aluminium Council added weight to this comment:

> In terms of ratification, one of the big problems in the Kyoto Protocol is that developing countries are not part of it. They are our major competitors for future investment in this industry. The aluminium industry does have very considerable problems with the Kyoto Protocol being ratified without some guidance as to what is going to happen to bring developing countries into the process… . If you choose to increase energy costs dramatically in Australia to try and meet the Kyoto Protocol that will, without question, force investment in industries like ours for these other countries. That will do nothing at all for global warming. It may even be negative because we are the most efficient at using that energy at the moment.[161]

3.132 Mr Ian Satchwell, Chief Executive Officer of the Chamber of Minerals and Energy of Western Australia, also argued that developing countries must be included in the global greenhouse effort as soon as possible.[162] The organisation put the view that, in spite of efforts to produce energy-intensive products efficiently, Australian industry is likely to attract either international disrepute for exceeding the Kyoto target, or extra costs in the form of traded emissions targets. The result will be a loss

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158 See *Proof Committee Hansard*, Sydney, 23 March 2000, p 393; Minerals Council of Australia, Submission 107, p 911; *Proof Committee Hansard*, Perth, 17 April 2000, p 480; and *Proof Committee Hansard*, Perth, 17 April 2000, p 485.

159 *Proof Committee Hansard*, Melbourne, 20 March 2000, p 144.

160 Australian Industry Greenhouse Network, Submission 113, p 960-61.

161 *Proof Committee Hansard*, Canberra, 10 March 2000, p 47.

162 *Proof Committee Hansard*, Perth, 17 April 2000, p 474.

of capital investment to non-Annex B countries which can emit CO_2 without such penalties.

3.133 Dr Jim McCabe, representing Chevron Australia, explained their approach to Australia's obligations under the Kyoto Protocol:

> We believe that Australia should not fix national rules in the absence of an international scheme which would allow Australia to reap the benefits of being a clean fuel greenhouse beneficial fuel supplier through LNG, and that a greenhouse gas abatement measure should be driven by market forces rather than government regulation.[163]

3.134 In contrast to other witnesses, Chevron did not believe developing countries needed to take on targets before the Kyoto Protocol was implemented. Rather, they could take on CDM projects:

> We are looking for ways that the international field can be levelled but without necessarily saying to Australia that we require developing countries to be signatories and take targets before we should play the game. The idea is to look for some innovative ways in which we can maintain our competitiveness rather than having a single solution of bringing developing countries into the Kyoto mechanism.[164]

3.135 The Australia Institute argued that industry claims about a loss of capital investment to developing countries were exaggerated:

> While the prospect of some carbon leakage cannot be dismissed, its likely extent has been grossly exaggerated by the fossil fuel-based industries and by ABARE in its modelling. In order to be subject to carbon leakage, firms need to meet three criteria: they need to be energy-intensive in production, they need to be export-dependent (or import-competing), and their competition must come from non-Annex B countries (since all Annex B countries will have emission abatement policies).
>
> The great majority of energy is consumed by industries or activities that are entirely domestic and face no foreign competition – electricity and gas consumed in households, nearly all transportation, the commercial and service sectors of the economy. The major sectors that fall into this category are alumina, aluminium, LNG and steel production. These sectors account for around 10 per cent of Australia's total emissions.[165]

3.136 The Institute pointed out that organisations which consider moving their operations to developing countries will have to address the fact that the developing

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163 *Proof Committee Hansard*, Perth, 17 April 2000, p 510.

164 *Proof Committee Hansard*, Perth, 17 April 2000, p 511.

165 The Australia Institute, Submission 79a, p 589.

countries will also be required to develop emissions abatement policies in a decade or so, as they take on emissions reduction obligations.[166]

3.137 There is some agreement that there are a few industries which may legitimately claim concessions for differential impact. The Australia Institute explained that:

> In a few cases, a good case can be made for some special concessions for exporters, so that the rest of the economy meets the cost of reducing emissions. LNG [Liquid Natural Gas] is a case in point. Although produced using an energy-intensive liquefaction process, it has the potential to replace more emission-intensive fuels worldwide. In such cases, it may be desirable to incorporate special transitional provisions to offset the costs of emission abatement and provide those firms most affected with a longer period over which to adjust. [167]

3.138 However, developed countries need to be seen as leaders in attempts to check climate change, but the extent of their leadership is constrained by economic factors and the willingness of industry to follow. How to address the vulnerability of developing countries remains an important issue on the post-Kyoto agenda.[168] Some developing countries, such as low-lying island nations, are highly vulnerable to the impacts of climate change and are likely to favour commitment, others feel more threatened by the potential economic repercussions if they take abatement action.

3.139 The Committee acknowledges industry concerns about possible 'carbon leakage', although it recognises that only a small proportion of overall emissions are likely to be effected. The Committee supports efforts to encourage and assist developing countries to adopt binding targets as soon as possible.

Conference of the Parties 6 (CoP 6)

3.140 The next post-Kyoto milestone is CoP 6, to be held in The Hague in November 2000. Major decisions are expected on the operational details of the Kyoto Protocol with the aim of bringing the Protocol into force as early as possible. The UNFCCC Secretariat has indicated that many Parties have indicated a wish to see this occur by 2002.[169]

3.141 At this meeting a number of issues are of particular importance to all Parties. Senator Hill outlined the level of resolve:

> There now appears to be a renewed sense of determination among the international community to have outstanding issues resolved at the next

166 The Australia Institute, Submission 79a, p 589.

167 The Australia Institute, Submission 79a, p 589.

168 unfccc.de/resource/process/components/response/respkp.html (17/07/00), p 2.

169 unfcc.de/resource/process/components/road/roadahe.html (17/07/00), p 1.

> Conference of the Parties. It was decided to hold an additional two ministerial level meetings prior to The Hague COP to further progress negotiations. This is an unprecedented level of ministerial involvement.
>
> The final detail on these issues will be central to determining the ability of member nations to achieve their targets.[170]

3.142 Issues of particular concern to Australia have been discussed earlier in this chapter. Mr Ralph Hillman, Ambassador for the Environment, highlighted the major issues which the Parties have agreed to negotiate at CoP 6:

> The first is the extent to which developed countries should be allowed to meet their targets through emissions trading and by undertaking emission reduction projects in developing countries - as distinct from domestic measures - and what the rules and modalities of these so-called flexibility mechanisms should be. The second issue is the extent to which sinks, that is, forestry and land use management, should contribute to meeting developed country targets. The third issue is which compliance system should apply and what the consequences of non-compliance should be. The fourth is the extent to which developed countries need to respond to demands by G77, that is, developing countries, for transfers of resources and technology.[171]

3.143 The Ambassador noted that the issue of how and when developing countries should take on targets under the Kyoto Protocol is also of concern to Australia. However, no agreed process or time frame has been established by the Parties to the Protocol to deal with this question and it is not expected that this issue will be resolved at CoP 6.

3.144 Flexibility mechanisms are believed to offer a substantial reduction in the cost of implementing Kyoto, compared with a situation where each country meets its target by domestic measures alone.[172] The EU, and some G77 countries, are supporting a cap or limit on the extent to which these mechanisms can be used to achieve targets. Australia on the other hand, as a member of the umbrella group, is committed to uncapped use of emissions trading and other flexibility mechanisms.[173]

3.145 The Clean Development Mechanism (CDM) has been introduced earlier in this chapter. Under the CDM developed countries can invest in a project in the developing world and earn certified emissions reductions (CERs) to reduce (on paper) pollution in their own country.[174] Ms Reynolds, representing Climate Action Network

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170 Senator the Hon Robert Hill, *Warming to the Challenge: The role of Australian business in combating global warming*, An address to The World Business Council on Sustainable Development and the Australian Business Council Forum, Melbourne, May 5 2000, p 4.

171 *Proof Committee Hansard*, Canberra, 9 March 2000, pp 2-3.

172 *Proof Committee Hansard*, Canberra, 9 March 2000, p 2.

173 Mr Ralph Hillman, *Proof Committee Hansard*, Canberra, 9 March 2000, pp 2-3.

174 Climate Action Network Australia (CANA), Submission 193, p 2036.

Australia (CANA), pointed out that the CDM is 'potentially a very positive part of the Kyoto Protocol' and that the mechanism provides an opportunity, acknowledged by the Parties, for developed country investment into developing countries.[175]

3.146 However, Ms Reynolds also expressed concern that this flexibility mechanism has been identified as a potential Kyoto accounting loophole. She explained that there is:

> … at this stage, no cap on how many rights to pollute you can buy from establishing developments in developing countries. For example, in 1990 we may have had an allowance to increase to eight per cent, but we could go well above our eight per cent target and produce a range of CDM credits that we have collected between the period 2000-12. You can actually collect CDM credits from this year or as soon as the rules are established for the CDM.[176]

3.147 There is concern that developed countries, rather than take action to reduce pollution at home, could meet a large portion of their emissions target through involvement in initiatives under the CDM.[177] CANA recommend that the CDM should only provide credit for activities that are additional to those which would have been undertaken under a 'business as usual' situation.[178]

3.148 Eligible CDM activities have yet to be finalised under the Kyoto Protocol. In this context it is noted that some countries, including Australia, are lobbying for few or no restrictions in terms of activities which will qualify to be included under the CDM. Ms Anna Reynolds pointed out that there is concern about what can be included in the CDM and that:

> Australia is not opposing clean coal, nuclear technology and sinks to be included in the Clean Development Mechanism.[179]

3.149 However, a number are Parties are opposed, in particular, to the expansion of nuclear power as a result of the Kyoto Protocol.[180] There is support to limit CDM activities to best practice renewable energy and energy efficiency projects.[181]

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175 *Proof Committee Hansard,* Canberra, 10 March, p 87.

176 *Proof Committee Hansard,* Canberra, 10 March, p 87.

177 Climate Action Network Australia (CANA), *The Kyoto Protocol – make it work and make it law,* Briefing Paper, September 2000, p 3.

178 Climate Action Network Australia (CANA), *The Kyoto Protocol – make it work and make it law,* Briefing Paper, September 2000, p 3.

179 *Proof Committee Hansard,* Canberra, 10 March 2000, p 87.

180 Climate Action Network Australia (CANA), Submission 193, p 2036.

181 Climate Action Network Australia (CANA), *The Kyoto Protocol – make it work and make it law,* Briefing Paper, September 2000, p 3.

Recommendation 8

The Committee recommends that credit for activities should only be provided for activities that are additional to those which would have been undertaken under a 'business as usual' situation.

Recommendation 9

The Committee recommends that the Commonwealth Government oppose in future international negotiations, any proposals for the inclusion of nuclear technology in the Clean Development Mechanism.

Australian Democrats Recommendation 2

The Australian Democrats recommend that the Commonwealth Government oppose in future international negotiations, any proposals for the inclusion of clean coal or sinks in the Clean Development Mechanism.

3.150 Progress on sinks issues is planned at CoP 6, following a special IPCC report on land use and forestry produced in May 2000. The Australian Government is also working with the umbrella group on carbon sinks, which remains a central issue for Australia. Again, the EU and some G77 countries are trying to limit the extent to which sinks are used to meet Kyoto Protocol targets. However, the Australian Government is pushing for a very broad range of activities to be defined as sinks and considers sinks to be a critical element in enabling Australia to meet its target.[182]

3.151 Senator Hill has commented that:

> Australia will be seeking a CoP 6 decision on sinks that all countries can work with for a better environmental outcome… sinks may offer a means for developing countries to play their part… .
>
> We will be looking for the rules and definitions to implement Article 3.3 that are in line with the terms of the Protocol… .
>
> Australia will also be seeking a decision that sinks projects are included in the Clean Development Mechanism.[183]

3.152 Ambassador Ralph Hillman noted that penalties for non-compliance will be important to most industrialised countries in relation to their decision on

182 Australian Greenhouse Office, Submission 169, p 1685. See also Greenpeace Australia, *Sinks: Australia attempts to increase its fossil fuel emissions,* Greenpeace Australia, 2000.

183 Senator the Hon Robert Hill, *Opening Address to the High Level Forum on Greenhouse Sinks*, 18 April 2000, Department of the Environment and Heritage, Media Release and Speeches, environment.gov.au/minister/env/2000/sp18apr00.html (14/08/00), pp 3-4.

ratification.[184] The Parties will be required to agree on the difficult issue of the consequences that would be invoked if a party failed to meet its target. Australia supports a strong facilitative component to encourage implementation of Parties' commitments, but is yet to finalise a position on consequences.[185]

3.153 The developing countries will seek reassurance of financial and technological support in relation to concerns such as the cost of adaptation to climate change, and building institutional capacity to deal with greenhouse.[186] These countries are also requesting technology transfer beyond that associated with CDM. OPEC countries are seeking compensation for economic loss they might suffer as a result of any fall in oil prices arising from the emissions abatement policies of the developed economies.

3.154 In his submission, Professor Ian Lowe commented on a further issue of concern to Australia, that of leadership image:

> If our emissions appear to be growing without limit it is very unlikely that the world community will be sympathetic to our special needs. I think the world community believes that we got away with something at Kyoto: we got a more generous target and we got what is known internationally as the Australian provision that land use change will be included. If, with all that generosity, we still cannot meet our targets, I think we are likely to get a very dusty answer to any other pleas for consideration of our special role in the region.[187]

3.155 If the evidence submitted to this inquiry is correct, Australia's position at CoP 6 will be viewed closely by Parties that have less liberal targets agreed. Mr Ian Fry, Regional Coordinator for Pacific Bioweb, having attended a number of Meetings of the Parties, explained to the Committee:

> There are perceptions of Australia's position, and it is generally considered that Australia's position internationally is regressive. This is as a result of the actual Kyoto meeting, because Australia accepted a target that was an increase on its 1990 level when most developed countries accepted a reduction.[188]

3.156 CANA, in support of this view, summarised the international perspective:

> … we see the loopholes and the pushing for more loopholes in the Kyoto Protocol this year - and this year is crunch time for the Kyoto Protocol - as Australia being incredibly greedy. We already have the right under the Kyoto Protocol to grow by eight per cent. Some people believe that is quite

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184 *Proof Committee Hansard*, Canberra, 9 March 2000, p 3.

185 *Proof Committee Hansard*, Canberra, 9 March 2000, p 3.

186 Mr Ralph Hillman, *Proof Committee Hansard*, Canberra, 9 March 2000, p 3.

187 *Proof Committee Hansard*, Brisbane, 26 May 2000, p 563.

188 *Proof Committee Hansard*, Canberra, 10 March 2000, p 88.

> a big allowance. We then have the right to use the slowing land clearing to offset our increasing energy and transport emissions. Some estimates are that, with the natural slowing of land clearing over time, we can increase our energy and transport emissions by between 25 and 30 per cent. If, on top of that, we can gain another 10 per cent growth in our emissions from carbon sinks and another 10 per cent in emissions growth from buying rights to pollute through the CDM, then we essentially are seeing the Kyoto Protocol not being the driver for domestic action that we all want it to be… .[189]

3.157 The Committee acknowledges that Australia has led in some actions such as the preliminary work on a national emissions trading system and the introduction of a mandatory renewable electricity target, but in other areas is actively trying to minimise the need to cut industrial emissions. The opportunity exists for Australia to demonstrate its commitment to meeting its target, rather than being on the wrong side of a debate over cosmetic accounting techniques designed to show Australia in a good light.

Ratifying the Kyoto Protocol

3.158 To achieve any form of success, the Kyoto Protocol must aim for global participation and a high degree of measurable compliance.[190] To achieve maximum participation, requirements under the Protocol will have to be both realistic and achievable by the Parties involved:

> The more unrealistic the target is - considering the short timetable for action - the more costly it will be to meet it. And the more ammunition the treaty's opponents will have in order to work against it.[191]

3.159 The Kyoto Protocol does not enter into force until it is ratified by at least 55 Parties which accounted for at least 55 per cent of the total CO_2 emissions in 1990 (Article 25.1).[192]

3.160 Appendix 4 provides a list of countries which have signed, and also those which have ratified, the Protocol as at 13 January 2000.[193] The Committee was told that many countries will seek ratification based on the outcome of CoP 6 at the end of 2000. Ambassador Ralph Hillman noted:

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189 *Proof Committee Hansard*, Canberra, 10 March 2000, p 89.

190 Eileen Claussen, President of the Pew Center on Global Climate Change, *Kyoto – the best we can do or fatally flawed?*, Royal Institute of International Affairs Conference, London, 20 June 2000, p 2.

191 Eileen Claussen, President of the Pew Center on Global Climate Change, *Kyoto – the best we can do or fatally flawed?*, Royal Institute of International Affairs Conference, London, 20 June 2000, p 40.

192 The US share of global GHG emissions is 38 per cent (Peter Cameron, 'From Principles to Practice: the Kyoto Protocol', *Journal of Energy & Natural Resources Law*, 18(1), February 2000, p 1-18, p 11).

193 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, p xl.

> I do not think any Annex I country is considering ratifying the Kyoto Protocol before CoP 6, with the exception, I think, of France, which has made some noises. I think they are beginning the process but I doubt that they will ratify, however, before CoP 6. Most countries are waiting to get the outcomes they want on those four outstanding issues before they move to ratification. Currently, only 22 countries have ratified, and they are all developing countries, most of them very small developing countries.[194]

3.161 At this point, it remains unclear how many, and which, countries will ratify the Kyoto Protocol. However, Michael Grubb expresses the view that ratification by 55 Parties is not a high hurdle, and that the effective hurdle is the minimum fraction of emissions.[195] While the position of the US remains uncertain, the Protocol could enter into force by 2003 without the US. Michael Grubb pointed out that:

> Although the US administration dominated design of the Kyoto Protocol many in the US legislature remain relatively isolated from global realities and responsibilities, and reflect the deep resistance of the US body politic to emission restrictions.[196]

3.162 Australia signed the Kyoto Protocol on 29 April 1998, but has not yet ratified it, and Government members have indicated that they will wait for US ratification before doing so themselves.[197] The Minister for Environment and Heritage, Senator Hill, stated, after the signing, that ratification may have to wait for the resolution of outstanding issues such as the involvement of developing nations in abatement agreements and the design of an international system of emissions trading.[198] However, the Minister also stated that Australia would not wait for ratification before it moves to implement the Protocol's provisions and commitments. More recently, Senator Hill commented:

> Having achieved this outcome at Kyoto, our government believes that it is in Australia's best interests to bring the Protocol into legal effect sooner rather than later. To this end we have been actively involved in international negotiations to resolve the outstanding issues from Kyoto such

194 *Proof Committee Hansard*, Canberra, 22 June 2000, p 682.

195 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, p 255.

196 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, p xl.

197 Nick Hordern, 'Kyoto Protocol may have to be revised before US signs up', *The Australian Financial Review*, 17 September 1999, p 23.

198 Senator the Hon Robert Hill, *Warming to the Challenge: The role of Australian business in combating global warming*, An address to The World Business Council on Sustainable Development and the Australian Business Council Forum, Melbourne, May 5 2000, p 4.

> as flexibility mechanisms, sinks, and compliance. There is also a need to address the involvement of developing nations in this global effort.[199]

3.163 Dr Clive Hamilton, from the Australia Institute, noted claims from Australian industry that:

> … we [Australia] should not do anything until developing countries do and that the US Senate will not ratify the Protocol until developing countries do show meaningful participation.[200]

3.164 This response to ratification has also been supported by representatives of Australian industry. Woodside Energy Ltd explained:

> In an environment of uncertainty where there is no risk-sharing by the Australian Government, Woodside believes the current Protocol should not be ratified by Australia until the US has ratified it and there is meaningful enrolment of the non-Annex 1 Parties.[201]

3.165 Australia's position with regard to ratification of the Kyoto Protocol was clarified by Ambassador Ralph Hillman, who has suggested that ratification of the Protocol should occur following resolution of some of the current uncertainties regarding implementation of the Kyoto Protocol.[202] The key issues to be resolved were identified as: the rules and models for the flexibility mechanisms; the use of sinks; the compliance system; and involvement of developing countries in the Protocol and transfer of resources and technology.

3.166 There is support for the approach that, irrespective of any final decisions made at CoP 6 in relation to the flexibility mechanisms, Australia must ratify the Kyoto Protocol and send a clear message to the world that it is prepared to play its part as a good international citizen in resolving the greenhouse issue. Ms Lynette Thorstensen, a consultant for the Australian Consumers' Association, in support of this view commented:

> We would like to see the Protocol ratified as soon as possible by Australia. We do not believe we have to wait for the US, but we do believe we should be giving a strong signal of environmental leadership in this area.[203]

3.167 Professor Lowe also expressed concern that Australia should be seen to be taking a positive approach to the issue of climate change and noted that:

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199 Senator the Hon Robert Hill, *Warming to the Challenge: The role of Australian business in combating global warming*, An address to The World Business Council on Sustainable Development and the Australian Business Council Forum, Melbourne, May 5 2000, p 4.

200 *Proof Committee Hansard*, Canberra, 16 August 2000, p 910.

201 Woodside Energy Ltd, Submission 129, p 1300.

202 *Proof Committee Hansard*, Canberra, 9 March 2000, p 2.

203 *Official Committee Hansard*, Sydney, 22 March 2000, p 368.

> Senator Hill recently warned the business community that if the Kyoto agreement fell over what would replace it would almost certainly be an international agreement that was less generous to Australia. In terms of international politics I think that is almost certainly an accurate assessment.[204]

3.168 Dr Clive Hamilton of the Australia Institute agreed:

> I have argued that there would be very substantial benefits for Australia to ratify before the meeting in The Hague because it will not affect the coming into force of the Protocol as we are a relatively small player, but it will enormously increase Australia's bargaining position as a sign of good faith.[205]

3.169 In relation to addressing targets for greenhouse gas abatement, Senator Hill also argued that Australia needed to move towards decoupling economic growth from emissions growth. He pointed out that:

> Nations which continue in the ways of the past will inevitably face an even tougher, more costly task. It seems sensible that Australia should take precautionary action now to ensure it does not fall into this latter category.[206]

3.170 In support of Australia's intention to ratify the Kyoto Protocol, a working group of the Prime Minister's Science, Engineering and Innovation Council (PMSEIC), released a paper in June 1999 strongly advocating a proactive response from industry and government to the challenges and opportunities presented by global warming. The group recommended that the Government swiftly ratify the Protocol, that industry should take a leadership role in developing new technologies and opportunities for abatement, that Australia should prepare early for the trade in carbon credits and use the response to greenhouse to promote knowledge-based industries and exports.[207]

3.171 While targets at Kyoto are not yet legally binding, the working group notes the expressed intention of the Australian Government to act as if they were. If Australia waits for ratification while other countries act, it runs the risk of missing out on global opportunities.[208]

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204 *Proof Committee Hansard*, Brisbane, 26 May 2000, p 559.

205 *Proof Committee Hansard*, Canberra, 16 August 2000, p 910.

206 Senator the Hon Robert Hill, *Opening Address to the Insurance Council of Australia's Canberra Conference*, 10 August 2000, Department of the Environment and Heritage, Media Release and Speeches, environment.gov.au/minister/env/2000/sp10aug00.html (13/08/00), p.3.

207 Prime Minister's Science, Engineering and Innovation Council, *From Defence to Attack: Australia's Response to the Greenhouse Effect*, 25 June 1999.

208 Prime Minister's Science, Engineering and Innovation Council, *From Defence to Attack: Australia's Response to the Greenhouse Effect*, 25 June 1999, p 3.

3.172 It appears to this Committee that Australia will only consider ratifying the Kyoto Protocol after several key issues have been resolved. These issues include: the rules and modalities for the three Kyoto flexibility mechanisms - Emissions Trading, Joint Implementation and Clean Development Mechanism; important definitional and operational issues concerning the treatment of sinks; design of a system for compliance with the Protocol obligations; and participation of developing countries.[209]

3.173 Mindful of these issues, Professor Lowe summarised the likely situation for Australia at the next Convention of the Parties (CoP 6):

> The negotiations at The Hague are going to be difficult because some people see those measures as ways of ensuring that Kyoto works and others are seeing it as ways of making sure that Kyoto has no effect on them. I think it is going to be difficult. It seems to me that we are in a much better position to negotiate if we are approaching, as they used to say, the court with clean hands; if we can say that we are doing responsible things within our own political system to restrain emissions. If our emissions appear to be growing without limit it is very unlikely that the world community will be sympathetic to our special needs. I think that the world community believes that we got away with something at Kyoto: we got a more generous target and we got what is known internationally as the Australian provision that land use change will be included. If, with all that generosity, we cannot meet our targets, I think we are likely to get a very dusty answer to any other pleas for consideration of our special role in the region.[210]

UNFCCC Beyond 2012

3.174 Progress in implementing the Convention, for example through National Communications and In-Depth Reviews, financial assistance, technology transfer and methodological issues, is of critical importance to forging an effective response to climate change issues.[211]

3.175 The Kyoto Protocol will be reviewed on a regular basis and negotiations over targets for the post-2012 period are expected to begin no later than 2005. The intergovernmental process on climate change will continue to evolve as scientific knowledge improves.[212]

Planning for future targets

The Committee notes that, even if ratified, the Kyoto Protocol, would still fall short of what nature requires to allow the climate to restabilize.[213] Dr Geoff Jenkins, Director

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209 *Proof Committee Hansard*, Canberra, 9 March 2000, p 6.

210 *Proof Committee Hansard*, Brisbane, 26 May 2000, p 563.

211 unfcc.de/resource/process/components/road/roadahe.html (17/07/00), p 1.

212 unfcc.de/resource/process/components/road/roadahe.html (17/07/00), p 1.

213 Ross Gelbspan, 'In Focus: The Climate Crisis and Carbon Trading', *Foreign Policy in Focus*, vol 5(20), July 2000, p 2 (foreignpolicy-infocus.org/briefs/vol5/v5n20climate.html).

of the Hadley Centre for Climate Prediction and Research in the UK, explained to the Committee that:

> There is not a unique pathway of emissions in order to stabilise concentrations in the atmosphere. The sorts of pathways that IPCC have come up with in order to stabilise at twice the preindustrial levels, 500 parts per million, involve allowing a small change up to maybe 9 or 10 gigatonnes per annum globally over the next 100 years or so but then really a quite rapid decrease and eventually, over a few hundred years, down to levels of maybe 70 per cent cutback in emissions compared to today's.[214]

3.176 This scenario was confirmed by the Chairman of the IPCC, Dr Robert Watson. Dr Watson argued that the:

> Kyoto Protocol is only a small, albeit very important, first step towards the ultimate objective of the convention. The reason for that is very simple: if we were to want to stabilise the earth's climate, we would have to have global emissions lower than they are today. The emissions today are about six billion tonnes of carbon in the form of carbon dioxide from energy systems and about another one or one-and-a-half billion tonnes of carbon from deforestation. So the total emissions today are about 7½ billion tonnes. … . At the moment we have every year an increase in the atmospheric concentration of CO_2 of about 3½ billion tonnes per year. … . If we were to want to stabilise the climate, eventually the emissions would have to decrease to between two and three billion tonnes of carbon per year.[215]

3.177 A salutary warning about the likelihood of more stringent targets in future was provided by Mr Paul Flanagan from Pacific Power:

> So, if we think way beyond the Kyoto commitment period, we are going to have to be doing a lot more than we are thinking about now if we are actually even to stabilise CO_2 emissions at twice preindustrial levels. That, presumably, can only be achieved over time through the setting of progressively more stringent and binding international targets.[216]

3.178 At Kyoto, Australia was fortunate to win a target of 108 per cent. What will the next target be? In the Committee's view, Australia should not wait for further emissions targets to be imposed by an international community. Mindful of past victories won, Australia should accept an ambitious but fair target for the second commitment period and begin to work methodically towards it now. Australia can become a world leader on the greenhouse issue and should look to reap the benefits, rather than be over-protective about the costs.

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214 *Proof Committee Hansard*, Canberra, 9 March 2000, p 26.

215 *Proof Committee Hansard*, Canberra, 9 March 2000, p 36.

216 *Official Committee Hansard*, Sydney, 22 March 2000, p 364.

3.179 Australia must hold itself accountable to the international community by looking beyond the immediate commitment period, further developing its strategic thinking about greenhouse gas emissions (e.g. reductions through the development of renewable energy sources in the long term), and ensuring that its response is transparent and verifiable.

Recommendation 10

The Committee recommends that the Commonwealth Government take a leadership role in international negotiations on climate change, with a view to moving through Australia's treaty-making process in a timely manner to achieve ratification of the Kyoto Protocol, including:

- **urging other countries to ratify the Protocol;**
- **starting to work constructively with developing countries to encourage them to adopt binding targets as soon as possible and to ensure global emissions constraints; and**
- **ensuring adequate targets are in place beyond the first commitment period to stabilise atmospheric concentrations of greenhouse gases.**

Australia and the Future of the Kyoto Protocol

3.180 Australia played an important role in the international community's response to ozone depletion. It has the opportunity at CoP 6 and beyond to take a similar leadership role over greenhouse issues.

3.181 National and international research in climate change has highlighted the potential costs of adverse climate change to Australia. Dr Jenkins pointed out that:

> We would see, certainly, a warming over Australia of maybe two or three degrees over the next 50 years or so. We see changes in rainfall, but again the problem with rainfall is that it can be quite model dependent. We do not have the same robustness of conclusions for rainfall as we do for temperature… . But in some cases, in the most recent model runs, we have seen changes of maybe up to 30 per cent less rainfall in parts of Australia, particularly in Western Australia.[217]

3.182 Dr Watson, representing the IPCC also noted that:

> Australia, of course, is significantly affected by the El Nino phenomena, and so I think one of the key questions is whether or not there will, as I say, over the next 100 years, be more El Nino events, and, as we know, in Australia, when you have an El Nino event, one gets some quite dry conditions. So

217 *Proof Committee Hansard*, Canberra, 9 March 2000, p 25.

> obviously, if indeed one were to see a trend in El Nino, one might start to project more dry events, hence having some potential impacts on agricultural productivity in Australia.[218]

3.183 The Committee established that ABARE had not undertaken any full impact assessment which took into account the costs of the physical impact of climate change on Australia or globally.[219] Dr Fisher, representing ABARE, explained that, at present, the organisation does not have the models capable of undertaking that sort of study.

3.184 The Chief Executive of the AGO, Ms Gwen Andrews, also acknowledged that there could be substantial costs to Australia from climate change:

> I think we all agree that, yes, there is a cost of not acting, and it is certainly a cost that governments are seeing and a cost that more private sector organisations are now viewing as a real future potentiality.[220]

3.185 It became very clear to the Committee, during its inquiry, that more information and research about the potential impact - and cost of that impact - of climate change on Australia is needed. However, as discussed in chapter 2, Australia faces potential serious impacts on biodiversity, the Great Barrier Reef, agriculture, human health, tourism and built environment. It is of serious concern to the Committee that there is such a dearth of knowledge in regard to the potential costs of not acting. In the Committee's view, such potential costs to Australia and its region need to be considered in any discussion about the costs of abatement.

3.186 The Kyoto Protocol does provide a necessary diplomatic framework for nations to address the climate crisis and defines the basic structural elements upon which efforts to address global warming in the twenty-first century will rest. Given the flexibilities in the agreement, many of the details of which are still to be decided, the specific commitments required by the Protocol are modest in terms of both environmental and economic impacts. Evidence indicates that implementing the Protocol commitments themselves will neither halt global emissions growth nor have a significant impact on economic growth. Nevertheless, the commitments represent a fundamental change of course and a structure which, if ratified, implemented and expanded for subsequent periods, offers the chance of an effective international framework for arresting and reversing global warming.

3.187 Unlike the majority of developed nations, which will need to reduce emissions on average 5.2 per cent below 1990 levels, Australia's 'victory' at Kyoto has meant that it will be able to increase 1990 emissions to 108 per cent, to be met on average during the first commitment period between 2008 and 2012. The consequence of this victory, however, which also included the insertion of the so-called 'Australia clause'

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218 *Proof Committee Hansard*, Canberra, 9 March 2000, p 36.

219 *Proof Committee Hansard*, Canberra, 23 June 2000, p 823.

220 *Proof Committee Hansard*, Canberra, 9 March 2000, p 9.

in relation to land clearing, damaged Australia's international reputation and may have important consequences for Australia in future climate change negotiations.

3.188 Dr Clive Hamilton, Director of the Australia Institute, pointed out that a greenhouse-constrained future left Australia with important choices:

> The Australia clause was a 'get out of jail' card, which the Australian Government is going to exploit for all it is worth. If I can mix my metaphors, it is also a poisoned chalice. While the rest of the industrialised world is making a transition to the next generation of energy technologies, Australia is locking itself into fossil fuels. Instead of exporting fossil fuels to Japan as we do now, we will end up importing renewable energy technology.[221]

3.189 Reducing greenhouse emissions presents costs but also opportunities. Overall, Australian policy frameworks emphasise a need to reduce emissions at least cost to the economy, a view which the Committee broadly endorses. The responsible use of Kyoto flexibility mechanisms, and a domestic emissions trading system, will also reduce costs. A sensible path of reductions, which avoids excessive action too early or too late, is the best option.

3.190 The potentially huge long term costs of climate change, both to Australasia and globally, also need to be borne in mind. The opportunity to act now to reduce or avert these costs is an important and valuable one. Developing a serious national approach to abatement will help Australia grasp this opportunity, along with the opportunity to develop new domestic and international markets in renewable energy and other technological innovations.

221 *Proof Committee Hansard*, Canberra, 10 March 2000, p 58.