# PROSPECTS AND PITFALLS OF THE *KYOTO PROTOCOL TO THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE*

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CONTENTS



## I INTRODUCTION

The *Kyoto Protocol to the United Nations Framework Convention on Climate Change*[1] seeks to mitigate dangerous anthropogenic changes to the Earth's climate by assigning to all Parties 'common but differentiated responsibilities'[2] that take into account each nation's contributions to the greenhouse effect, as

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1 Opened for signature 16 March 1998, 37 ILM 22 (1998) (not yet in force) ('*Kyoto Protocol*').

2 *United Nations Framework Convention on Climate Change*, opened for signature 4 June 1992, 1771 UNTS 107, 31 ILM 849 (1992), art 3(1) (entered into force 21 March 1994) ('*UNFCCC*'). As at 30 April 2002 the *UNFCCC* had been ratified by 186 countries.

well as each nation's capacity to remedy this contribution. This paper will address two of the flexibility mechanisms established by the *Kyoto Protocol* to achieve that end: the Clean Development Mechanism ('CDM') and the Emissions Trading Mechanism ('ETM').

After a brief overview of the Earth Summit in Rio de Janeiro ('Rio Earth Summit') and the Kyoto Conference of the Parties, the origins and operation of the CDM will be considered. Focusing on depth rather than breadth, the paper will then address the rules and modalities of the CDM by reference to three specific issues: project eligibility, the CDM's interaction with international investment law, and the expropriation of benefits accrued under the CDM. In relation to emissions trading, this paper will consider the rules and modalities governing participation in the ETM, problems arising from artificial emissions baselines, and the relationship between the ETM and the national responsibility principle in international environmental law. Two issues of fundamental significance to both mechanisms will then be discussed: supplementarity and the developed country leadership principle. In short, it will be argued that, while the CDM has the potential to advance the goals of the *Kyoto Protocol*, the ETM, in its conception and its operation, serves to undermine these goals. Finally, the likelihood of the *Kyoto Protocol* entering into force will be addressed, with particular reference to the position(s) of the United States and Australia, as well as the vitally important relationship between the developed and the developing world. In this final segment, it is argued that the largely self-interested position adopted by key developed nations has severely jeopardised both the *Kyoto Protocol* and the global climate that it seeks to protect.

## II BACKGROUND TO THE *KYOTO PROTOCOL*

### A *The* UNFCCC*: Precursor to the* Kyoto Protocol

In 1992 national leaders convened at the Rio Earth Summit to establish the parameters, principles and political commitment necessary to stabilise greenhouse gas ('GHG') concentrations in the atmosphere 'at a level that would prevent dangerous anthropogenic interference with the climate'.[3] Pervading nearly all negotiations was the geopolitical divide between the developed and the developing world. The developed countries, it was generally accepted, had emitted the bulk of climate-changing GHGs and should thus initiate and finance remedial action, while the developing countries insisted on their right to prioritise living standards (contingent, they argued, on energy-intensive economic development) over environmental concerns just as the developed world had done throughout the industrial age.[4] Thus the *UNFCCC* embodied a degree of acceptance by the developed world of its responsibility for climate change, subsequently known as the 'leadership principle'. Although prevented by the US from establishing substantive emissions reduction targets, the

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[3] Ibid art 2.

[4] Department of Foreign Affairs and Trade, Australia, *Submission to Joint Standing Committee on Treaties: Inquiry into the Kyoto Protocol* (2000) [1.5.5] <http://www.dfat.gov.au/environment/climate/jscot_sub.html> at 30 April 2002 ('*Submission to Joint Standing Committee on Treaties*').

developed world adopted an unenforceable hortatory commitment (in the language of 'should' rather than 'shall')[5] to reduce GHG emissions, while accepting voluntary undertakings to commit to future reductions from the developing world. In order to translate this agreement from political will into legal obligations, the Parties to the *UNFCCC* further undertook to meet at subsequent Conferences of the Parties ('COPs') at which legally binding emission reduction commitments would be quantified. The third of these COPs took place in Kyoto in December 1997 ('Kyoto COP').[6]

### B *The Geopolitical Context of the* Kyoto Protocol

By way of political background to the international climate change arena, it is helpful to consider briefly the key alliances that have arisen in relation to the *Kyoto Protocol*. Significantly, the US has brought enormous conservatism to the climate change mitigation table, largely due to domestic political forces that have effectively ruled out any multilateral measures that could threaten US economic interests. In the lead up to the Kyoto COP, the US Senate passed by a vote of 95 to zero the Byrd-Hagel Resolution calling on US negotiators at the Kyoto COP to eschew any options which might seriously damage the US economy or which exempted developing countries from accepting specific GHG reduction commitments.[7] In accordance with the Howard Government's broader foreign policy agenda, Australia has effectively tied itself to the US position, largely in order to protect its economically important fossil fuel sector; Australia secured significant concessions at the Kyoto COP which will be considered below.

Despite its position at the cutting edge of emerging global markets in solar and other renewable energy technologies, Japan aligned itself with the US and Australia in the so-called 'Umbrella Group'. This group also included Russia, Canada and most other economically advanced countries, with the exception of those belonging to the European Union, which has proven to be the most progressive force for climate change mitigation. At the extreme end of the pro-environment spectrum, the Association of Small Island States ('AOSIS') championed the cause of its members' continuing physical existence,[8] while China and the Group of 77 ('G77') — comprising most of the world's poorest nations — emphasised the developed world's responsibilities under the leadership principle established at the Rio Earth Summit.[9] Though not formally recognised as negotiating parties at the Kyoto COP, the influence of Non-Governmental Organisations, such as environmental groups and most

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5 Ved Nanda, 'The Kyoto Protocol on Climate Change and the Challenges to its Implementation: A Commentary' (1999) 10 *Colorado Journal of International Environmental Law* 319, 323.

6 Conference of the Parties, *Report of the Conference of the Parties on its Third Session, Held at Kyoto from 1 to 11 December 1997*, UN Doc FCCC/CP/1997/7 (1998) ('Kyoto COP Report').

7 S Res 98, 105th Cong (1997).

8 South Pacific Regional Environment Programme, *Climate Convention Update: SPREP Statement to Climate Conference*, Press Release (12 November 1998) <http://www.sprep.org.ws/PressRelease/COP4/COP4-10_.htm> at 30 April 2002.

9 Federated States of Micronesia, *Statement by Vice President Leo A Falcam before the Third Conference of the Parties* (9 December 1997) <http://www.fsmgov.org/kyoto.html> at 30 April 2002.

particularly energy industry lobbyists, has been considerable throughout the climate change mitigation process.

Though clearly very cursory, this overview of the diversity of positions and interests in international climate change mitigation serves as a pertinent reminder that the *Kyoto Protocol* cannot be considered in a purely legal context, but rather, makes more sense as a creature of geopolitics, of international diplomacy, of free-market economic forces, of ethical imperatives, and of many other overlapping dimensions. The great challenge from a legal perspective has been to design a structure and accompanying mechanisms which fairly and effectively accommodate these various, often competing facets. This paper endeavours to reflect the multiplicity of this challenge.

### C *The* Kyoto Protocol

Negotiations began at the Kyoto COP under the shadow of a recommendation by the the Intergovernmental Panel on Climate Change[10] that, in order to stabilise atmospheric concentrations of GHGs at the 1990 levels, it would be necessary to reduce current anthropogenic emissions by 60 per cent.[11] This figure clearly went far beyond the reductions to which even the most environmentally progressive Parties (predominantly EU members) were prepared to commit. Ultimately, Parties in Annex I to the *UNFCCC* ('Annex I Parties')[12] agreed to reduce, between 2008 and 2012, emissions of six particular GHGs by at least 5.2 per cent from 1990[13] and 1995[14] levels. To accomplish this reduction, the *Kyoto Protocol* established several flexibility mechanisms.[15] These mechanisms have the dual purpose of assisting Annex I Parties in meeting their individual quantified emission limitation and reduction commitments ('QELRCs') by the most economically efficient means possible, and of encouraging developing countries to participate in GHG mitigation by availing themselves of cooperative ventures with developed countries, such as the CDM.

## III THE CLEAN DEVELOPMENT MECHANISM

### A *Overview of the CDM*

Article 12 of the *Kyoto Protocol* establishes the CDM whereby Annex I Parties may meet part of their QELRCs by investing in projects that contribute to sustainable development in non-Annex I Parties. These projects must be

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10 The Intergovernmental Panel on Climate Change ('IPCC') was convened in 1990 under the auspices of the UN Environment Programme and the World Meteorogical Organisation for the purpose of garnering the scientific consensus necessary to place climate change on the international political agenda.

11 Working Group 1, IPCC, *Climate Change: The IPCC Scientific Assessment* (J T Houghton, G J Jenkins, J J Ephraums (eds), 1990), xi.

12 *UNFCCC*, above n 2, annex I. Annex I consists of industrialised countries and countries in transition to a market economy.

13 *Kyoto Protocol*, above n 1, art 3(7). This article applies to carbon dioxide, nitrous oxide and methane.

14 Ibid art 3(8). This article applies to hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.

15 Ibid arts 6, 12 and 17.

approved by the Conference of the Parties serving as the Meeting of the Parties ('COP/MOP')[16] and must have '[r]eal, measurable, and long-term benefits related to the mitigation of climate change'.[17] Typically, a CDM project would entail a bilateral agreement in which an investor entity from an Annex I Party contracts to transfer funding, technology and personnel to an entity in a developing country to be applied to a GHG mitigation project, in return for which the investor entity receives Certified Emission Reductions ('CERs'). These CERs can then be applied to the QELRC of the investor entity's country in lieu of actual domestic reductions. It is anticipated that eventually an international market in CERs will be developed, assuming the entry into force of the *Kyoto Protocol*, in which CDM project returns will rival those accrued from traditional investments in international capital markets. Notably, the seventh COP in Marrakesh ('COP7') endorsed unilateral CDM projects whereby a developing country undertakes a CDM project without the investment of an Annex I Party and trades any resulting CERs on the international market.[18]

### B *Background to the CDM*

The concept of the CDM first arose in an international context in 1992 at the Rio Earth Summit, at which developed countries contended that GHG mitigation would be more politically and economically feasible in developing countries where labor and materials are cheaper and fewer vested interests in the fossil fuel technology sector exist.[19] This concept was reintroduced prior to the Kyoto COP by China and the G77 developing countries in the form of a 'Clean Development Fund' which would finance sustainable development projects in the world's poorest countries.[20] The concept was finally given legal substance in article 12 of the *Kyoto Protocol* following agreement on several features. First, the idea of a 'fund' was altered to that of a 'mechanism' so as to emphasise the concept of cooperative facilitation, rather than a new funding institution that may have competed with the Global Environment Facility.[21] Second, a win-win formula was adopted in the language of article 12(3):

> under the clean development mechanism:
> (i) Parties not included in Annex I will benefit from project activities resulting in certified emission reductions; and

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16 Ibid arts 12(3)(b) and 12(4).

17 Ibid art 12(5)(b).

18 Conference of the Parties, *Report of the Conference of the Parties on Its Seventh Session, Held at Marrakesh from 29 October to 10 November 2001*, UN Doc FCCC/CP/2001/13 (2002) [103] ('COP7 Report').

19 Albert Mumma, 'The Poverty of Africa's Position at the Climate Change Convention Negotiations' (2000) 19 *UCLA Journal of Environmental Law and Policy* 181, 190.

20 UNFCCC Ad Hoc Group on the Berlin Mandate, *Implementation of the Berlin Mandate: Proposals from Parties* (8th session), UN Doc FCCC/AGBM/1997/MISC.1/ADD.8 (1997) 8.

21 This facility, launched in 1991 as an experimental facility and restructured after the Rio Earth Summit, was established by the World Bank and the UN to encourage and organise international cooperation and finance actions to combat biodiversity loss, climate change, degradation of international waters, and ozone depletion.

(ii) Parties included in Annex I may use certified emission reductions accruing from such project activities with part of their quantified emission limitation and reduction commitment.

Third, the private sector was welcomed to the mechanism[22] in order to attract the capital, technological innovation and (supposed) operative efficiency considered necessary for the CDM to succeed as a market-driven, self-sustaining mechanism. The most recent developments at COP7 include the establishment of a CDM Executive Board authorised to approve project methodologies, monitor projects, accredit participating entities, and develop and maintain a CDM project registry.[23]

### C *Project Eligibility in the CDM*

One of the principle points of contention at the sixth COP in The Hague and Bonn ('COP6')[24] concerned rules governing the types of projects that may be undertaken for the purposes of the CDM. At the risk of oversimplification, two opposing positions have arisen in relation to this issue. On the one hand, developing nations have argued that it is their sovereign right under the principles of international environmental law to determine which CDM projects are suitable for their particular developmental and environmental needs.[25] On the other hand, more environmentally progressive nations have argued for an international benchmark of CDM project eligibility, emphasising the CDM's stated aims of fostering *sustainable* development,[26] a concept which, according to the EU, must necessarily preclude nuclear and sink projects from the CDM.[27] The issue of sink projects (including reforestation, afforestation, sustainable forest management, and the protection of endangered forest areas) has proven to be particularly thorny. Opposition to such projects has been led by the EU and the AOSIS on the grounds that GHG absorption through sinks cannot be accurately measured, and that Annex I Parties should focus on reducing their GHG emissions at source.[28] Further, it is also likely that such projects would lack the permanence that the CDM legally requires under article 12(5)(b) of the *Kyoto Protocol*. A breach of this article could potentially occur where gains from an afforestation project in one area might be negated by demand shifts and

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22 *Kyoto Protocol*, above n 1, art 12(9).

23 COP7 Report, above n 18, [105]–[106]. The Executive Board is provided for in the *Kyoto Protocol*, above n 1, art 12(4).

24 Conference of the Parties, *Report of the Conference of the Parties on the First Part of Its Sixth Session, Held at the Hague from 13 to 25 November 2000*, UN Doc FCCC/CP/2000/5 (2001); Conference of the Parties, *Report of the Conference of the Parties on the Second Part of Its Sixth Session, Held at Bonn from 16 to 27 July 2001*, UN Doc FCCC/CP/2001/5 (2001).

25 The most enduring expression of this principle can be found in *Declaration of the United Nations Conference on the Human Environment*, 16 June 1972, 1972 UNYB 319, 11 ILM 1416 (1972) ('*Stockholm Declaration*'). Principle 21 of the *Stockholm Declaration* affirms the sovereign right of states to exploit their own resources pursuant to their own environmental policies, subject to other binding international legal obligations.

26 This aim is articulated in the *Kyoto Protocol*, above n 1, art 12(2).

27 Lavanya Rajamani, 'Re-Negotiating Kyoto: A Review of the Sixth Conference of Parties to the Framework Convention on Climate Change' *2000 Yearbook of the Colorado Journal of International Law and Policy* 201, 218.

28 *Submission to Joint Standing Committee on Treaties*, above n 4, [1.4.3].

consequent deforestation in another area, or by future changes in the land use of the afforested project area. Sink projects are particularly attractive to investors from Annex I Parties because of their cost-effectiveness, costing approximately US$18 per ton of carbon removed from the atmosphere in the forestry sector, compared to US$136 per ton of GHG emissions prevented in the US energy sector.[29] Perhaps acknowledging some of these concerns, negotiators at COP7 agreed to adopt country-specific caps on the proportion of QELRCs that could be achieved through sink projects, and also made participation in the CDM conditional upon continued reporting of sink activities, including domestic efforts to protect biodiversity in sink projects.[30] Otherwise, negotiators at COP7 declined to address in any significant detail the issue of sink projects in the CDM, instead requesting a report from the Subsidiary Body for Scientific and Technical Advice outlining possible rules and modalities for further consideration at the ninth COP in 2003.[31]

### D *International Investment Laws, Trade Discrimination and the CDM*

A little discussed but potentially problematic modality of the CDM concerns its interaction with international investment and free trade agreements. At the crux of many international investment agreements ('IIAs') is the removal of measures that discriminate against some international investors to the advantage of other (particularly domestic) investors. By removing market barriers and distortions in this way, IIAs (supposedly) allow investors and investments to operate more efficiently. Where CDM projects are owned wholly or in part by foreign investors, they would usually be considered 'investments' within the meaning of IIAs, most of which encompass transactions conferring on investors 'contractual rights' or 'returns on investments'.[32] In particular, conflicts may arise where non-Parties to the *Kyoto Protocol* seek to invest in a CDM project pursuant to the anti-discrimination provisions in an IIA. Some environmental commentators suggest that discrimination in this context may be justified given both the difficulty of enforcing CDM rules against non-Parties to the *Kyoto Protocol*, as well as the incentive to join the *Kyoto Protocol* that such discrimination may provide.[33]

Furthermore, the *Kyoto Protocol*'s objective of promoting sustainable development in non-Annex I Parties may require CDM projects to use locally produced goods. To the extent that such requirements affect the unimpeded import or export of goods, they may contravene IIAs such as the World Trade

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29 Mumma, above n 19, 196.

30 COP7 Report, above n 18, addendum 1, Decision 11/CP.7.

31 Friends of the Earth (UK), *Negotiations Begin in Earnest* (2001) <http://www.foe.co.uk/campaigns/climate/news/marrakech_talks_nov_2001/1_november.html> at 30 April 2002.

32 Kevin Baumert, Jacob Werksman and Navroz Dubash, World Resources Institute, *Will International Investment Rules Obstruct Climate Protection Policies?* (2001) 9 <http://www.wri.org/pdf/investrules.pdf> at 30 April 2002.

33 Ibid 9; Jacob Werksman, Foundation for International Environmental Law and Development, 'Compliance Issues under the Kyoto Protocol's Clean Development Mechanism', *The Clean Development Mechanism: Draft Working Papers* (October 1998) 33 <http://www.field.org.uk/papers/pdf/ciuk.pdf> at 30 April 2002.

Organisation's *Agreement on Trade-Related Investment Measures*.[34] In light of these potential conflicts, it must also be noted that some IIAs include exceptions that allow a host country to override IIA provisions on the basis of vital national policy priorities such as the protection of human health and the environment.[35] However, with dispute resolution bodies facing potentially inflammatory questions about whether some non-Annex I Parties (having refused to accept QELRCs) can realistically claim that they consider environmental protection a vital national policy priority, future IIAs must clearly exempt CDM projects, or at least specify that, in cases of conflict, the *Kyoto Protocol*'s provisions will prevail.

### E *Expropriation of CERs*

A critical concern of many potential investors in the CDM is the possibility that CDM benefits accruing to investors may be expropriated, either directly by project host governments, or indirectly by the executive actions of such governments. In the former case, it is noteworthy that while CDM projects would not appear to be at any greater risk of expropriation than other foreign investments, recent history has demonstrated that foreign investments in the natural resources sector are particularly vulnerable to expropriation.[36] This vulnerability can be largely attributed to the extortionate deals brokered in the wake of decolonisation, in which developing countries (lacking capital, negotiating experience and thus bargaining strength) were persuaded to sign over their natural resources in long-term agreements with foreign investors at prices well below market value.[37] When true market values were revealed, or when domestic developmental needs began to include natural materials, post-colonial governments in such countries increasingly exercised their permanent sovereignty over the natural resources in which foreign investors had acquired contractual rights.[38] Given the concerns raised by many African Parties to the *Kyoto Protocol* about unequal bargaining power in the CDM,[39] and in the context of growing concern in the developing world about the exploitative tendencies of globalisation, CDM investors must be very careful to negotiate

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34 Opened for signature 15 April 1994, 1869 UNTS 299, 33 ILM 1197 (1994) (entered into force 1 January 1995); Baumert, Werksman and Dubash, above n 32, 11.

35 Baumert, Werksman and Dubash, above n 32, 11. Exceptions to this effect exist in the *Marrakesh Agreement Establishing the World Trade Organization*, opened for signature 15 April 1994, 1869 UNTS 190, 33 ILM 1154 (1994) (entered into force 1 January 1995), annex 1A (*General Agreements on Tariffs and Trade*) ('*GATT*') and the *North American Free Trade Agreement*, opened for signature 17 December 1992, 32 ILM 289 (1993), arts 2101–7 (entered into force 1 January 1994) ('*NAFTA*').

36 Baumert, Werksman and Dubash, above n 32, 11.

37 Ibid. For an example of such deals, see Naomi Klein's account of Shell's quite egregious commercial dealings with the Ogoni people of Nigeria, worth approximately US$30 billion to the oil giant between the 1950s and 1993: Naomi Klein, *No Logo* (2001) 425.

38 Baumert, Werksman and Dubash, above n 32, 11. Again, much of this expropriation was undertaken under the auspices of Principle 21 of the *Stockholm Declaration*, above n 25. For an example of an expropriation of natural resources by a government from a corporation, see *Texaco v Libya* (1977) 53 ILR 389, 17 ILM 1 (1978).

39 Environment and Development Action in the Third World Energy Programme, *From Joint Implementation to the CDM: Should African Positions Change after the Kyoto Protocol?* (1998) <http://www.enda.sn/energie/cc/cdm.htm> at 30 April 2002.

equitable deals with host nations, lest they find their contractual rights and invested capital expropriated.

Similar concerns have been raised in relation to indirect expropriation, in which regulatory measures imposed by host governments (for example, taxation or licensing requirements) serve to reduce the value of a CDM project asset.[40] To address investors' concerns in this matter, future COP/MOPs could follow the approach taken by *NAFTA*, whereby investors may recover from a host government any losses resulting from indirect, regulatory expropriation.[41] However, this approach may encounter difficulties in that domestic courts in some host countries may prove reluctant to compensate international investors, but not domestic investors, for losses from regulation that applies equally to both. A more practicable solution might be simply to require investors (who would generally be better able to protect their own interests) to incorporate such risks into the financial terms of any given CDM project contract, leaving competitive market forces to dissuade host countries from damaging their CDM investment reputations by undue expropriation.

## IV EMISSIONS TRADING

### A *Background to the ETM*

Article 17 of the *Kyoto Protocol*, the ETM, allows any Annex I Party that has reduced GHG emissions below its assigned national QELRCs to sell any such additional emission reduction units ('ERUs') to another Annex I Party, which may in turn apply these ERUs to their own national QELRCs in lieu of actual domestic reductions. This emissions trading scheme would parallel the eventual market in CERs anticipated by the *Kyoto Protocol*, in that both are market-based mechanisms aimed at providing Annex I Parties with flexibility to meet their QELRCs in the most cost-effective location and manner possible. As the ETM was introduced late in the Kyoto COP negotiations, the Parties were unable to flesh out the proposed scheme, instead opting to delegate the development of rules and modalities to subsequent COPs.[42] Importantly, negotiators at COP7 agreed on a principle of fungibility whereby credits from both CDM projects and emissions trading (that is, CERs and ERUs) should be treated equally.[43] By merging the two markets in this way, the fungibility principle, if implemented, is aimed at enhancing the viability and cost-effectiveness of the *Kyoto Protocol*'s flexibility mechanisms.

### B *Participation in Emissions Trading*

Ostensibly, article 17 restricts the right to sell ERUs to Annex I Parties. Leading proponents of this position argue that, since developing countries do not

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40 Baumert, Werksman and Dubash, above n 32, 11.

41 *NAFTA*, above n 35, art 1110.

42 *Kyoto Protocol*, above n 1, art 17. This article states that the COP, rather than the COP/MOP, will be responsible for elaborating the rules and modalities of the ETM.

43 COP7 Report, above n 18, addendum 2, Decision 15/CP.7.

have GHG emissions caps based on verified national baselines,[44] it would be too difficult to calculate the extent to which GHG mitigation measures in a developing country actually *reduced* the net national GHG emissions for that country. Further, some commentators have contended that as the US, a single jurisdiction with a relatively sophisticated bureaucracy, has thus far failed to make a domestic emissions trading scheme without emissions caps work effectively, it is unlikely that fragile international institutions, or a combination of national agencies with varying capacities, would succeed where the US has repeatedly failed.[45] Unsurprisingly, the exclusion of non-Annex I Parties from the ETM has met with vehement opposition from developing countries who insist on their equal right to improve standards of living (or at any rate, ameliorate poverty and starvation) under a global climate change mitigation scheme.[46] Though clearly wary of accepting emissions caps, an increasingly vocal African contingent has argued that, if the concept of emissions caps is reformulated as an allocation of the right to emit certain quantities of GHGs, then developing countries could participate coherently in the ETM.[47] By way of example, they point to the EU's differential assignment (within their *Kyoto Protocol* 'bubble' commitment)[48] of emissions entitlements based on the poverty index. Of course, assuming that this African position were adopted by the Parties to the *Kyoto Protocol*, the COP would still face the daunting task of equitably allocating emissions entitlements among the many and socio-economically varied non-Annex I Parties. More realistically, future COPs would seem likely to proceed with trading by Annex I Parties only, with non-Annex I Parties accepting an *articulated* injustice which might be translated into a future bargaining chip in the broader climate change negotiating process.

### C *The Problem of Hot Air*

Amongst the most widely criticised pitfalls of the *Kyoto Protocol* is the concession granted to Russia and the Ukraine whereby these two countries are only required to stabilise GHG emissions at the 1990 levels, rather than making substantive reductions.[49] Due to the economic collapses experienced by these two countries in their transition to market economies, in the year 2010 GHG emissions will be at an estimated 15 per cent *below* their collective 1990

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44 A country's emission cap consists of its 1990 level emissions baseline minus that country's assigned emission reduction as embodied in each country's individual QELRC. As Australia, Norway and Iceland negotiated an increase in GHG emissions at Kyoto, emission caps for these countries would consist of 1990 levels *plus* each country's assigned emissions increase.

45 See, eg, David Driesen, 'Free Lunch or Cheap Fix? The Emissions Trading Idea and the Climate Change Convention' (1998) 26 *Boston College Environmental Affairs Law Review* 1, 81.

46 Environment and Development Action in the Third World Energy Programme, above n 39.

47 Ibid.

48 Countries can form an agreement to fulfil their commitments jointly under the *Kyoto Protocol*, above n 1, art 4, known as a 'bubble' agreement. The EU, under its bubble agreement, has entitled Portugal (the EU's poorest country) to a GHG emission increase of 40 per cent above 1990 levels, while requiring Germany to reduce its emissions by 25 per cent below 1990 levels: see *Kyoto Protocol*, above n 1, annex B.

49 Ibid annex B.

baselines,[50] thus allowing Russia and the Ukraine to trade these substantial surpluses of ERUs without actively making any domestic emissions reductions. Consequently, Annex I Parties purchasing this 'hot air' will need to make fewer domestic emissions reductions in order to meet their *Kyoto Protocol* QELRCs, with obvious ramifications for substantive climate change mitigation. Clearly a very generous carrot to encourage the participation of Russia and the Ukraine, this seemingly counterproductive concession is echoed in a similar provision known as the 'Australia Clause'.

### D *The 'Australia Clause'*

Article 3(7) of the *Kyoto Protocol* allows Parties for whom, in 1990, land use changes constituted a net source of GHG emissions, to include any such emissions in the calculation of their 1990 baseline. As Australia is the only developed country in which vegetation clearing (with its consequent GHG emissions) occurs to any substantial extent,[51] article 3(7) applies almost exclusively to Australia. The article allows the Howard Government to claim a five tonne per year increment in GHG emissions, bringing Australia's 1990 emissions baseline to 26 tonnes per year; the highest per capita GHG emission level in the world.[52] Given that the Howard Government negotiated at the Kyoto COP a QELRC of eight per cent *above* its already artificially high 1990 baseline,[53] the 'Australia Clause' not only undermines the substantive environmental progress made by other Annex I Parties, but also dramatically weakens Australia's environmental credibility (and thus negotiating clout) in the international environmental arena. The Howard Government based its claims to special treatment (by way of both article 3(7) and its eight per cent QELRC increment) on the particular vulnerability of its economy to measures that jeopardise the international competitiveness of its fossil fuel based industries.[54] However, political commentator Peter Christoff warns that, while Australia's stance at the Kyoto COP may be cost-effective in the short term, the Australian economy may suffer substantially when future governments are forced to overhaul the energy-intensive fossil fuel dependent industries that are already so deeply entrenched in Australia's economic landscape, even before the added protection offered to such industries by Australia's stance at Kyoto.[55]

Perhaps more pertinent for present purposes is the way in which article 3(7) serves to exemplify the political concessions that are increasingly destabilising the legal framework upon which climate change mitigation depends.

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50 Greenpeace, *Greenpeace Analysis of the Kyoto Protocol* (1998) [18] <http://www.greenpeace.org/~climate/politics/reports/kyoto.pdf> at 30 April 2002; Rajamani, above n 27, 208.

51 Land clearing also occurs, though to a much lesser extent, in the UK and Estonia, thus allowing these two Parties to avail themselves of art 3(7): Mumma, above n 19, 186.

52 Ibid.

53 Ibid 187.

54 See, eg, Peter Christoff, 'From Global Citizen to Renegade State' (1998) 10 *Arena Journal* 113, 119–21.

55 Ibid 124.

### E *Emissions Trading and the National Responsibility Principle*

According to principles of international environmental law, all countries are under a general duty to prevent activities occurring within their own territorial bounds from causing serious environmental harm to neighbouring countries, or to the global commons.[56] The assignment of QELRCs specific to each country at the Kyoto COP is prima facie consistent with the principle of national responsibility, as each individual country is held to account for its own contribution to climate changing GHG emissions. However, the ETM threatens to undermine the national responsibility principle by making it almost impossible for a purchasing country to ensure its own compliance with its QELRC. Purchasing countries are largely unable to verify first, whether the ERUs that they have purchased represent actual, achieved reductions, and second, whether those actual reductions are, in fact, surplus to the vendor country's *Kyoto Protocol* QELRC.[57] Admittedly, it might be possible to determine the latter question at the end of a given *Kyoto Protocol* compliance period. If, however, this question is answered in the negative (ie the vendor country has sold ERUs without having met its *Kyoto Protocol* QELRC), then by this time the purchasing country may well have 'spent' these illegitimately traded ERUs on GHG emissions in excess of its own QELRC, thus breaching the national responsibility principle. Moreover, the ETM may also diminish the legal precision which is vital to a national government's understanding of *its own* obligations under the *Kyoto Protocol*. Whereas the *Kyoto Protocol* initially translated the *UNFCCC*'s fairly amorphous goals into precise physical obligations, the ETM will facilitate *virtual compliance* and a steady erosion of the clarity with which national governments understand the amount of emission reductions they are legally obliged to realise. Consequently, civil societies may encounter difficulties in holding their national governments accountable for violating *Kyoto Protocol* obligations, as very few citizens will be able to identify with certainty what these obligations entail.[58] The extent to which the ETM undermines both domestic and international accountability is contingent upon the ability of future COPs to quantify the proportion of emission reductions within a specific QELRC that Annex I Parties are permitted to realise by non-domestic means. Debate surrounding this quantification is at the core of the highly contentious issue of supplementarity.

## V SUPPLEMENTARITY AND LEADERSHIP IN THE MECHANISMS

### A *The Supplementarity Debate*

The issue of supplementarity has dominated recent attempts to elaborate the rules and modalities of the *Kyoto Protocol*'s flexibility mechanisms. On the one

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56 This principle was first articulated in the *Trail Smelter Arbitration (US v Canada)* (1938 and 1941) 3 RIAA 1905. It is beyond serious argument that the principle has crystallised into customary international law, and has also been given expression in international agreements such as Principle 21 of the *Stockholm Declaration*, above n 25. See Ian Brownlie, *Principles of Public International Law* (5th ed, 1998) 284.

57 Driesen, above n 45, 64.

58 Ibid.

hand, the Umbrella Group (and in particular the US and Australia) has emphasised the principle of cost-effectiveness laid down in the *UNFCCC*,[59] arguing that Annex I Parties would be severely deterred from ratifying the *Kyoto Protocol* by any requirement that quantified the proportion of emissions reductions within a specific QELRC that must be realised domestically.[60] This position arises from the very high relative expense of realising reductions in developed countries, which are largely more energy-efficient, making further emissions reductions technology-intensive and thus expensive. The Umbrella Group argues that emission reductions in developing countries are, by contrast, much more affordable due to the low labour and material costs and the comparatively low levels of technological development prevalent in those developing countries.[61] For example, in 1998 Janet Yellen, Chair of the White House Council of Economic Advisers, claimed that emission reductions realised in the US cost on average US$125 per tonne of carbon equivalent, while the same reduction in developing countries cost on average between US$14 and US$23 per tonne.[62] On the other hand, many developing countries, together with the EU, have advocated a cap on the amount of non-domestic reductions that Annex I Parties are permitted to apply to their *Kyoto Protocol* QELRCs, arguing that significant domestic emission reductions in the developed world, and in the US in particular, are politically and environmentally crucial to the success of the *Kyoto Protocol*.[63]

### B *The Legality of Supplementarity in the* Kyoto Protocol

The legal provisions concerning supplementarity set down in the *Kyoto Protocol* are ambiguous and have consequently served to undermine the certainty, and thus the efficacy, of the *Kyoto Protocol* in general. In relation to the CDM, article 12(3)(b) holds that Annex I Parties may use CERs accruing from CDM activities to contribute to compliance with 'part' of their individual QELRCs. A literal reading of this provision would suggest that the Umbrella Group's opposition to caps of any kind is legally untenable. However, recent COP/MOPs have repeatedly failed to quantify the 'part' to which article 12(3)(b) refers.[64]

In relation to emissions trading, article 17 (having been included in the *Kyoto Protocol* in the dying hours of the Kyoto COP negotiations) states simply that ERUs purchased from other countries must be 'supplemental' to the purchasing country's domestic compliance measures. Again, while unrestricted trading would seem precluded by the *Kyoto Protocol*, recent COPs have been unable to

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59 *UNFCCC*, above n 2, art 3(3).

60 Submission to Joint Standing Committee on Treaties, above n 4, [1.3.2].

61 Monica Matthews, 'Comment: The Kyoto Protocol to the *UNFCCC*: Surveys of its Deficiencies and Why the US Should Not Ratify This Treaty' (2000) 9 *Dickinson Journal of Environmental Law and Policy* 193, 208.

62 Centre for Science and Environment, *Politics in the Post-Kyoto World: CSE Briefing Paper No 2* <http://oneworld.org/html/cmp/cmp334.htm#cam> at 30 April 2002.

63 Matthews, above n 61, 211.

64 The collapse of negotiations at COP6 has been largely attributed to the Parties' failure to reach agreement on this issue: Christian Egenhofer and Jan Cornillie, Centre for European Policy Studies, *How the EU Can Revive the Kyoto Protocol* (1998) <http://www.ceps.be/Commentary/Mar01/Egenhofer.htm> at 30 April 2002.

reach agreement on the extent of this supplementarity.[65] From a strictly environmental perspective, Greenpeace has advocated that 99 per cent of emissions reductions should be realised domestically.[66] Perhaps more sensitive to political exigencies, the EU initially advocated a 95 per cent domestic reduction requirement, but by the conclusion of COP6 had expressed willingness to accept a 50 per cent domestic reduction requirement.[67] The EU's position has demonstrated the realpolitik considerations that threaten to derail the *Kyoto Protocol* flexibility mechanisms. More specifically, in the face of growing US/EU duopolies — and consequent trade wars — in several key production sectors,[68] the EU has strongly supported capping the *Kyoto Protocol*'s flexibility mechanisms, partially for fear of the Umbrella Group emerging as a CER/ERU trading bloc, effectively excluding the EU from the international CER/ERU market.[69] However, the EU's bargaining position in this matter has been substantially weakened by its unwillingness to accept any caps on non-domestic compliance within the EU 'bubble' assignment, a catch-22 of potentially dire environmental consequences given the EU's emerging role as the driving force behind global climate change mitigation.

With neither the Umbrella Group nor the EU willing to compromise on the matter of supplementarity, negotiations collapsed at COP6, leaving negotiators at future COPs with the unenviable task of resolving the issue of supplementarity, while simultaneously protecting the environmental integrity of the flexibility mechanisms from the more mercantile imperatives of the international business sector.[70]

### C *The Leadership Principle*

The seemingly self-interested position adopted by proponents of uncapped emissions trading would appear to breach the developed country leadership principle laid down in the *UNFCCC*'s underlying principles.[71] It may be argued that culpability for this breach lies not with national governments, but rather with the apparent contradiction in the *UNFCCC* between, on the one hand, the leadership principle, which requires Annex I Parties to take the first political, technological and financial steps towards climate change mitigation, and, on the other, the cost-effectiveness principle from which the flexibility mechanisms draw their conceptual rationales. Arguably, the CDM has the potential to reconcile this contradiction, as its operation depends largely on Annex I Party initiative and investment. By facilitating 'virtual compliance' with obligations through the purchase of ERUs, the *Kyoto Protocol* seems to require very little

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65 John Anderson, Weathervane, *Why the Climate Change Conference Failed: An Analysis* (2000) <http://weathervane.rff.org/negtable/COP6/analysis_anderson.htm> at 30 April 2002.

66 Greenpeace, above n 50, 6.

67 Rajamani, above n 27, 216.

68 Matthews, above n 61, 212. Probably the most diplomatically damaging of these trade wars has arisen from the tension, in the agricultural sector, between the EU's Common Agricultural Policy and the US's Export Enhancement Program.

69 Ibid 216. It must be noted that a host of other factors informed the EU's stance, not the least of which relates to the geography of the EU's low lying north-western continental regions.

70 Egenhofer and Cornillie, above n 64.

71 See discussion in above pt II(A).

active leadership initiative from Annex I Parties. At a more abstract level, the departure of key developed countries from the *UNFCCC*'s leadership principle may also serve to erode the international norms that were so crucial in uniting the international community at the Rio Earth Summit. In theory, the international community agreed at the Rio Earth Summit that the normative ideal of 'common but differentiated responsibilities' reflected its collective values and aspirations on the issue of climate change.[72] On one level, the Umbrella Group's repudiation of this norm deters developing countries, in particular, from adopting more active roles in the process of climate change mitigation. On another, perhaps more important level, it has been suggested that this repudiation has the capacity to fragment the international cooperative community into a collection of self-interested polities, thus undermining the consensus-building in which international legal cooperation, more generally, is rooted.[73]

## VI THE LIKELIHOOD OF THE *KYOTO PROTOCOL* ENTERING INTO FORCE

### A *The US Position*

It is no oversimplification to assert that the Bush Administration's recent withdrawal from the *Kyoto Protocol* has severely jeopardised, if not prevented, its entry into force. To enter into force, the *Kyoto Protocol* requires ratification by 55 countries responsible for at least 55 per cent of 1990 global emissions.[74] Given that the US emitted 36.1 per cent of the world's GHGs in 1990,[75] it may well be that, as declared by Christine Todd Whitman of the US Environmental Protection Agency, 'Kyoto is dead'.[76] The US has cited as its principal objections to the *Kyoto Protocol* its potential damage to the US economy[77] and the lack of 'meaningful participation' from the developing world.[78] In relation to the former objection, a study undertaken by Wharton Econometric Forecasting Associates has found that compliance with the *Kyoto Protocol* would cost the US 2.5 million jobs and would cut 3.2 per cent from the country's Gross Domestic Product.[79] It must be noted, however, that this study was sponsored by the petroleum industry and is thus of questionable objectivity. Indeed, its findings have been challenged by the US Department of Energy, which asserts that compliance could be achieved by 2010 with no cost to the domestic economy through aggressive investment in energy efficient technologies and the restructuring of the electricity industry.[80] In relation to the latter objection (concerning developing country participation), the US has adduced statistics to the effect that, even assuming the full compliance of all Annex I Parties, the

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72 *UNFCCC*, above n 2, art 3(1).
73 Driesen, above n 45, 4.
74 *Kyoto Protocol*, above n 1, art 25(1).
75 Rajamani, above n 27, 207.
76 John Anderson, Weathervane, *Kyoto is Dead, US Says* (2001) <http://weathervane.rff.org/features/feature114.htm> at 30 April 2002.
77 S Res 98, 105th Cong (1997).
78 Sean Murphy, 'Contemporary Practice of the United States Relating to International Law' (1999) 93 *American Journal of International Law* 470, 493.
79 Matthews, above n 61, 222.
80 Ibid.

*Kyoto Protocol*'s concessions to developing countries translate to a 32 per cent rise in global emissions by 2010.[81] However, statistics can also be adduced (again from the US Department of Energy) to the effect that China and India *reduced* their collective GHG emissions by ten per cent between 1995 and 1999, while the US *increased* its emissions by six per cent in the same period.[82] Of course, statistics can be found to tell any story, including academic narratives; for present purposes, one might consider President Bush's encapsulation of the ideology that seems to underpin his administration's stance at the Kyoto COP: 'first things first are the people who live in America.'[83]

### B *Developing Country Participation in the* Kyoto Protocol

Given that the *Kyoto Protocol*'s long-term viability seems contingent on active participation by developing countries, it seems important to consider the extent to which the flexibility mechanisms embrace developing country perspectives and thereby encourage such countries to accept QELRCs in the future. To this end, the Center for International Environmental Law ('CIEL') has articulated a catalogue of developing country concerns about the equity and inclusiveness of the CDM. As a starting point, the CIEL points to the legal and ethical imperative in article 12 that CDM projects assist developing countries to achieve sustainable development.[84] Flowing from this imperative are several rules that the CIEL insists are necessary in order for developing countries to feel meaningfully included in the CDM's design, operation and accrued benefits. For example, the COP must develop domestic institutional capacities to allow host countries to evaluate proposed CDM projects and negotiate equitable project contracts.[85] Further, all affected constituencies must be notified and given a real opportunity to participate in individual project design, implementation and monitoring.[86]

These two proposed rules articulate only a small sample of a vast catalogue of concerns; they stand as a legacy of the continuing marginalisation of developing countries in international fora, a problem historically rooted in first world self-righteousness, and further exacerbated by the acute poverty in much of the developing world. Albert Mumma gives poignant expression to this marginalisation in his account of Africa's negotiation parameters in the climate change arena. Mumma firstly contends that to negotiate successfully, a polity requires substantial resources in order to develop, popularise and consistently articulate a position, not only during negotiations, but also long before them, and continuously after them.[87] By way of contextualising Africa's negotiating position, Mumma recalls that at the fourth COP in Buenos Aires, the US

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81 Driesen, above n 45, 21.

82 Rajamani, above n 27, 236.

83 Robert Scheer, 'Toxic Texan Spouts the Mantra of Big Oil', *The Age* (Melbourne, Australia), 9 April 2001, 15.

84 Centre for International Environmental Law, US, *Designing a Legal and Institutional Framework for the Clean Development Mechanism* (1998) <http://www.iisd.ca/linkages/journal/ciel.html> at 30 April 2002.

85 Ibid.

86 Ibid.

87 Mumma, above n 19, 202.

delegation consisted of 83 people conducting think tanks, publishing daily newsletters, organising side events to promote private sector interests; in short, relentlessly propounding the 'developed country viewpoint'.[88] By contrast, the typical African delegation consisted of two to four people, most of whom were able to attend only because of the two free air tickets provided to each developing country by the UN Secretariat.[89] Forgetting for a moment the power dynamics inherent in geo-realpolitik, this inequality of bargaining power serves to highlight a fundamental flaw in the structure of climate change negotiations: key Annex I Parties will not ratify without 'meaningful' developing country participation, yet developing countries cannot realistically be expected to participate until 'meaningfully' included in negotiating fora.

### C *The* Kyoto Protocol*'s Prospects without the US: The Importance of Australia's Support*

With the *Kyoto Protocol*'s entry into force still technically possible without US ratification, EU leaders especially have continued to garner support for the embattled agreement. In Germany, the Director General of the German Environment Ministry, Rainer Hinrichs-Rahlwes, has advocated ratification without the US, so as to pave the way for the superpower's participation in the future.[90] In this respect the EU has led by example, agreeing to complete ratification of the *Kyoto Protocol* by 1 June 2002, and thus raising the total number of ratified members from 53 to 67.[91] The EU's Environment Commissioner, Margot Wallstrom, predicts that ratification will cost 0.06 per cent of Gross EU Product if efficient compliance measures are used, or up to 0.3 per cent if less efficient measures are adopted.[92] Further ratification by Japan, Russia, Canada and Australia would suffice to meet the collective emissions threshold required for the *Kyoto Protocol* to enter into force.[93] While business and conservative political interests in Canada seem to be hindering efforts to ratify the *Kyoto Protocol*,[94] environmental commentators have suggested that the EU's ratification will prove very persuasive in Tokyo and Moscow.[95]

In this respect, Australia holds a position of fundamental importance in the climate change mitigation process; a position that it seems increasingly keen to eschew. Despite the significant concessions granted to Australia at the Kyoto COP (in the form of its artificially high baseline and eight per cent emissions increase), the former Environment Minister Robert Hill declared that ratification by Australia 'would be silly … if the world's largest emitter wasn't prepared to

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88 Ibid.

89 Ibid.

90 Rajamani, above n 27, 237.

91 As at 30 April 2002.

92 Greta Hopkins, *EU: Activists Cheer Kyoto Ratification* (2002) <http://www.corpwatch.org/news/PND.jsp?articleid=1954> at 30 April 2002.

93 'Germans Plan to Save Kyoto Deal', *The Australian* (Sydney, Australia), 7 April 2001, 14.

94 'Canada Minister Sees No Kyoto Ratification By June', *Reuters News Service* (London, UK), 25 March 2002 <http://www.planetark.org/dailynewsstory.cfm/newsid/15176/story.html> at 30 April 2002.

95 Hopkins, above n 92.

do so.'[96] Although Australia's position should be considered in light of the Howard Government's prioritisation of the Australia/US relationship (largely grounded in trade and security imperatives), former opposition leader Kim Beazley's recent electoral pledge to ratify the *Kyoto Protocol* served to throw the ball into the Australian populace's court. Although the *Kyoto Protocol* was admittedly not a major dimension of Mr Beazley's electoral platform, the Australian populace's choice to return the Howard Coalition to office must say something about our collective concern for climate change mitigation, or even for the environment more generally. The re-elected Howard Government has since abandoned any pretence of support for multilateral climate change mitigation, instead adopting bilateral measures with the US.[97] According to the EU's Environment Commissioner Margot Wallstrom, the Bush Plan (which caps emissions of three GHGs, but not carbon dioxide), to which Australia has acceded, will allow the US to increase its emissions by 33 per cent.[98] Presumably, Environment Minister David Kemp's 'Climate Action Partnership' with the US will allow Australia to inflict a proportionally equivalent blow to international climate change mitigation efforts.[99] Greens Party Senator Bob Brown commented thus on the Climate Action Partnership: 'Last year I said that on climate change we have a choice between present President Bush and our grandchildren. Clearly the Howard government has chosen Bush.'[100]

## VII CONCLUSION

Ostensibly, the CDM has enormous potential. Clearly, its rules and modalities, of which this paper has addressed only a few, will require a great deal of refinement if the mechanism is to operate efficiently and equitably, while at the same time preserving the environmental integrity of the *Kyoto Protocol*. Conceptually, however, the CDM's inclusiveness would seem to vindicate its operational pitfalls and to justify the hard work that the refinement of its rules and modalities will require. It seeks to bridge the growing divide (of which the environment is only one dimension) between the developed and the developing world. It seeks to re-establish the ideal of cooperative, creative engagement upon which the *UNFCCC* was based, and upon which the Earth's climate appears to depend. In short, the CDM has inspiration; it now needs a good deal more perspiration.

The ETM, in its conception and its operation, is more problematic. It is exclusive, riddled with counter-productive political concessions, and if it is not developed and implemented in strict adherence to the principles laid down at the

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96 Annabel Crabb, 'Howard Backs US View on Greenhouse Treaty', *The Age* (Melbourne, Australia), 16 April 2001, 1.

97 'Australia: Govt Accused of Climate Sell-Out', *Australian Associated Press*, (Sydney, Australia), 3 January 2002 <http://www.climateark.org/articles/reader.asp?linkid=8391> at 30 April 2002.

98 Hopkins, above n 92.

99 Federal Minister for the Environment and Heritage, Commonwealth of Australia, *Australian/US Climate Action Partnership*, Press Release, No K109 (27 February 2002).

100 'Australia: Govt Accused of Climate Sell-Out', *Australian Associated Press* (Sydney, Australia), 3 January 2002 <http://www.climateark.org/articles/reader.asp?linkid=8391> at 30 April 2002.

Rio Earth Summit, it will allow developed nations to replace environmental imperatives with profit. In this sense, the ETM seems to exemplify the deeper cultural forces which seem to be shaping the development of the *Kyoto Protocol*. Now, more than ever, both the *Kyoto Protocol* and the global climate it seeks to protect desperately need developed nations to expand their sphere of responsibility, both geographically across national borders, and temporally across generations. Instead, we are seeing key developed nations at worst abandoning their responsibilities completely, and at best crafting a market mechanism that seems likely to entrench further the paradigm of short-term self-interest. At this point, however, politics and law diverge, and ultimate responsibility for the global climate vests back in civil societies. Time will judge whether or not we are up to the challenge.