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AUSTRALIAN GREENHOUSE GOVERNANCE:

THE TWILIGHT ZONE

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SUMMARY

Australia is committed to limit greenhouse gas emissions in nine years' time to no more than 8% higher than an uncertain 1990 baseline. This is a formidable challenge requiring a cut of 25 percentage points or some 100 million tonnes of carbon dioxide equivalent from the Business-as-Usual expected growth by 2010. To put this into perspective, eliminating all Australian road transport including private cars would achieve a cut by 60 million tonnes.

Meeting the target will directly reduce global warming in about 50 years time by 0.001 degrees Celsius, at an opportunity cost estimated by ABARE as about 1% of GDP unless an emissions trading scheme is established. Therefore, if one accepts the Kyoto commitment, emissions trading and other flexibility mechanisms should be set up to minimise but not eliminate its negative impacts, while other beneficial returns from greenhouse governance, such as increased energy efficiency and improved technologies, must be developed driven in part by public enthusiasms for 'greenhouse' but mostly by economic returns.

Even so, Australia with a greenhouse limit and already world-leaders in efficiency in many areas, is faced by international competitors without such limits or efficiencies, so investments in energy-intensive value-adding industries may move offshore even though *global* emissions will increase. Australia may thus revert to a 'quarry' economy unless it can minimise the impacts of Kyoto and offset emissions against substantial new carbon 'sinks', and be given credit by way of emissions trading and other flexibility mechanisms. For example, a 34 million tonne sink could be established by a Western Australian proposal for challenging but achievable plantations over some three million hectares, with the major collateral benefit of countering dryland salinity on a scale that otherwise seems beyond reach, plus pastoral regeneration over eight million hectares.

An emissions trading scheme could deliver both the offsets and collateral benefits, at a cost, but no decision has been made to begin emissions trading. Only 'Discussion Papers' are being issued over the next six months while trees need to be put in the ground urgently to be growing vigorously by 2008 under an agreed methodology of trading, credits and verification. Decisive actions and assurances in greenhouse governance are required before both benefits are forfeited only because a command-and-control scheme like carbon taxes may seem simpler to administer than emissions trading.

To optimise such benefits and minimise costs, greenhouse governance in Australia must be improved, on large and small scales. Evidence is presented that the failures in transparency by misinformation and omissions that characterised greenhouse governance in the early 90s is not yet eliminated although significant progress is underway. Before Australia ratifies the Kyoto Protocol, the community and decision makers must have access to vital information which has not yet been made public or has not yet been collected.

INTRODUCTION

Australia is in a twilight zone of greenhouse governance, which may last another few years or indefinitely. It has signed but not yet ratified the Kyoto Protocol. So Australia has made a commitment to limit its greenhouse gases by the period 2008 to 2012, to 108% of what the nation emitted in 1990. But there is no law that says it must meet the commitment, a cut of 25 percentage points from expected growth, amounting to about 100 million tonnes of carbon-dioxide-equivalent emissions. To put this into perspective, if all Australian road transport, including all private cars, were eliminated the nation could cut its emissions by about 60 million tonnes. So the commitment is courageous. It seems that the treaty will not be in force for another 3 or 4 years, if then. The final form of the Protocol is still uncertain on issues of national interest.

A popular belief is that benefits from Australia meeting the Kyoto Protocol will outweigh the costs, and perhaps they can. Many opportunities and challenges are listed in the National Greenhouse Strategy (1998). For example, there may be immense collateral environmental benefits by part-financing vast tree planting programs to combat national community problems such as dryland salinity (Shea et al. 1998)[1].

But in the absence of the promised National Interest Analysis (NIA), costs and benefits are uncertain, because greenhouse governance is ubiquitous and often uncertain. We do know that the promised Australian reduction in greenhouse gas emissions would directly reduce global warming in 50 years time by only a trivial 0.001 degrees Celsius, at a cost estimated by the GTEM model of ABARE as about 1% in GDP or a few billion dollars annually (Kennedy et al 1998).

Here I take Kyoto as a reality, and deal primarily with domestic post-Kyoto governance[2]. Much depends on actions by other countries, not discussed here.

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[1] I am pleased to acknowledge that I am working with the WA Department of Conservation and Land Management (CALM) and the W.A. Greenhouse Council on such issues. However, views expressed here are mine, and are not necessarily held at this time by CALM, the Council or the WA Government.

[2] Some failings of previous governance were documented in an earlier Academy publication (O'Brien, 1995a).

Australian greenhouse governance could rest on two foundations:

- a structure built on law, starting with international law driven by the Kyoto Protocol; and
- a structure built on knowledge that the Kyoto commitment benefits (a) the planet and (b) Australia.

A structure of law would require that the Kyoto Protocol is final, and (i) ratified by Australia; (ii) in force and with consequential (iii) Commonwealth, (iv) state and territory laws and regulations also in force. None of these four layers of heads of powers exists to control greenhouse gases.

A structure of knowledge would need as a foundation, documentary proof of 'benefits' from Australia's Kyoto commitment. Sixteen months after the Kyoto commitment was made, there is still no public document (i) of resultant costs and benefits, or (ii) justifying the choice of 108%. Even (iii) the actual value of the 1990 baseline is uncertain (NGGI, 1998). Furthermore, I do not know of (iv) any government document that dares to publish what *is* known, the trivial 0.001 degrees direct reduction in global warming.

So Australian greenhouse governance rests, not on law and not on knowledge, but on bureaucratic administrative practices and the goodwill and hopes of the community.

Kyoto turned into virtual reality the uncertain and variable fears of climate scientists. But, for the next 50 years, the impacts of *global warming* itself will be far less important than the impacts of the *governance* of global warming.

In the absence of:

- **black-letter laws fully debated by parliaments and exposed to public review;**
- **a National Interest Analysis; and**
- **major documents;**

it is essential that greenhouse governance in Australia be transparent, cost-effective, efficient and consistent.

This paper necessarily is limited by space to criticisms of governance not praise. **Information about the complexity and considerable progress in Federal greenhouse governance is available from the Australian Greenhouse Office, with up-to-date and official views at www.greenhouse.gov.au** Readers will find also it informative to compare this paper with official 'Questions and Answers' on this website[3].

THE KYOTO PROTOCOL

The Kyoto Protocol covers six greenhouse gases, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride. The contribution to global warming by Australia's greenhouse emissions amount to the equivalent[4] of almost 500 Megatonnes of carbon dioxide, about 1.4% of all global emissions from human-induced sources. By the closing date, 15 March 1999, 84 countries had signed the Protocol. Only 38 countries made commitments. Mineral exporters note that India, China, Brazil, and Argentina are not in the 38. NorthWest Shelf developers note that Indonesia, Malaysia and the Middle East, competitors in a buyer's market, are also not there. By comparison, the parent FCCC developed at the 1992 Rio Earth Summit, with no 'targets', received 176 instruments of ratification.

POLICY CHANGES AT KYOTO

I do not pretend to be objective about Australian greenhouse governance. Seven years' efforts to improve greenhouse governance (O'Brien 1990, 1995a) had seemed largely futile until **at Kyoto in 1997, Australia made major progress when it finally replaced three key faulty planks of the 1990 national policies:**

- in 1997 'Differentiation' or different targets for particular countries replaced the 1990 global 'Uniformity' 1990 which was 'no more scientifically sensible than a comparable percentage show-and-tell at a Weight Watchers' convention' (O'Brien 1990).
- an increase of 8% in the target replaced the 1990 Australian policy of a reduction of 20% ('Toronto target') which 'made no greenhouse nor economic sense for Australia' and which was 'merely a number plucked from the 1988 entrails at Toronto' (O'Brien, 1990)[5].
- the reality of 'Some Sacrifices' (Howard, 1997) replaced the 1990 Australian policy and myth of 'No Regrets', which should have been labelled 'Three Regrets' (O'Brien, 1995a).

These major changes in policy are not mentioned in the 110 pages of the 1998 National Greenhouse Strategy (see below). Governance continues to be opaque.

Former characteristics of governance were a lack of scientific rigour, even a disdain of science (O'Brien 1995a). With the new AGO, there are signs of recognition of the value of science and peer review.

THE NATIONAL GREENHOUSE STRATEGY

In theory, greenhouse governance in Australia should be guided by the National Greenhouse Strategy endorsed by the nine governments and released late in 1998. The Strategy articulates suites of proposed measures in various 'sectors', such as sustainable energy use. These measures are implemented as if the Kyoto commitment is L-A-W law. Developers, industry, planners and the community have little option but to accept this presumption, because greenhouse is politically correct and is often given top priority.

The Strategy reads like a public relations document to save face and assist international negotiations and domestic ideologies.

The Strategy is gravely flawed in many ways. For example, it contains no numerical estimates of global warming, so it cannot develop priorities and benchmarks for action against a specific target.

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[3] I commend AGO on this initiative, even though I criticise some of the Answers for casuistry.

[4] Molecule-for-molecule, the other gases are stronger than carbon dioxide in their potential for greenhouse warming, and their amounts are normalised to 'carbon dioxide equivalent' to allow for this effect.

[5] As discussed below, the Kyoto 8% seems more closely linked to auguries than to the atmosphere.

The 1998 Strategy claims it is based on the 1992 Strategy and praises the 'comprehensive approach' of the 1992 Strategy. It lists (page 1) five dot points of 'factors that have emerged and evolved since 1992' but does not mention the three key *contradictions* of three major planks of the 1992 Strategy, listed as dot points above. Misinformation, the characteristic of greenhouse governance in the early 90s (O'Brien 1995a), continues.

There is continued failure to have transparency in greenhouse governance. The Strategy concludes (page 99) with the finding:

Australia believes that ... the Kyoto target while challenging, is obtainable.

Yet the National Strategy gives no reference to a study that justifies this 'belief', because none is published. The present author does not share this belief, unless several major advances in greenhouse governance are implemented promptly and decisively. Even then, there remain uncertainties and there will be costs, including opportunity costs. One of the critical failures in greenhouse governance is that Chief Ministers make such assurances to Australians, based on 'beliefs' of faceless authors who are not called to account. Obviously greenhouse can be made politically popular if myths like 'no regrets' are supported by political leaders.

A NATIONAL IMPACT ANALYSIS (NIA) aka NATIONAL INTEREST ANALYSIS

The Strategy says (p.100) *that the impacts of proposed* [mitigation] *measures will be evaluated by the Australian community in a NIA which is required before Australia ratifies the Kyoto Protocol in its final form.*

A comprehensive NIA is the most urgent and most important greenhouse issue confronting Australia, and should be tasked to AGO. Without it, the nation flounders in uncertainty, with the inevitable consequence that bureaucratic determinism (O'Brien 1995a) causes delay and frustration. And the public is deluded into believing the country will bear no pain from Kyoto.

The promised NIA may well be a victim of diffuse greenhouse governance, being tied to the Department of Foreign Affairs and Trade as a precursor to ratification in possibly three years, instead of being an active strategic tool of the Australian Greenhouse Office (AGO).

GLOBAL WARMING

Australia is getting hotter
See www.bom.gov.au/climate/change

Mary Voice, head of the National Climate Centre, was reported as saying this long-term warming trend may be partly natural and partly due to greenhouse, but 'scientists are unable to unequivocally separate the contributions of these two effects'.

The Intergovernmental Panel on Climate Change (IPCC) reported in 1995 (Houghton et al. 1995) that 'the balance of evidence suggests there is a discernible human influence on global climate'.

Scepticism about this view remains strong among some scientists. A contrarian view of some 15,000 is available on the Internet at www.sep.org

CSIRO climate scenarios now suggest that greenhouse warming of Australia by, say, 2030 will be in the range 0.3-1.4°C instead of the 2-4°C popular in 1988-91. To the extent that an 'average' in the range can be used, the 'average' is now about a quarter of that eight years ago. Greenhouse impacts have been 'postponed' (O'Brien 1990). CSIRO fax (03) 9239 4444 can provide the latest climate scenarios, discussing uncertainties. Based on the past decade, I expect Australian greenhouse governance to remain immune to such improvements in knowledge.

IMPACT OF THE KYOTO PROTOCOL ON GLOBAL WARMING

For the past several years, international treaty negotiations on greenhouse have been driven by trade and politics rather than by global warming. But one should know how much any global warming itself might be reduced by the Kyoto commitments by 38 developed countries to reduce emissions by a consolidated 5% by 2010.

Michaels (1998), a long-term critic of much greenhouse science, assumed that the whole world reduced emissions by the US commitment, by 7%, so his figures are a significant over-estimate, about double.

He finds that Kyoto commitments would reduce global warming in about 50 years by less than 0.2°C.

Michaels' estimates imply that Australia's Kyoto target would reduce global warming in 50 years by about one thousand part of a degree. Back-of-the-envelope calculations using IPCC estimates of global warming of two degrees by 2100 and Australia's 1.4% share of greenhouse emissions give much the same number.

Some people seem offended at my back-of-the-envelope calculation. They argue that Australia has a duty to make such commitments. I have no difficulty with recognising this as a responsible view, but equally cannot see why this should conceal reality. If the cost is perhaps 1% of GNP, one should know what one is buying. And one must prepare for the inevitable future demands at future international meetings, to do more.

DEFINING AND MANAGING THE KYOTO TARGET FOR AUSTRALIA

Before the Kyoto Convention in December 1997, 'Business as Usual' expectations were for a 33%[6] increase in emissions by 2010 (Hill, 1998). However, in the Prime Minister's statement

[6] Readers may find it useful to relate these percentages and tonnages to the real world. Take 10% here as about 40 Megatonnes of carbon dioxide equivalent (Mt CO_2-e). All national road transport produced about 60 Mt CO_2-e in 1996. The national use of fertiliser in agriculture produced about 14 Mt CO_2-e.

of 20 November 1997, the expected growth was 5% less, only 28%, perhaps because of voluntary commitments by industry under the Greenhouse Challenge program to make reductions of 22 million tonnes by 2000.

The chronology of greenhouse governance is then clear, in a progression from 28, to 18 to 8%:

- On 20 November 1997 the Prime Minister announced $180 million measures to 'reduce our net emissions growth [from 1990 to 2010] from 28 to 18%, or some 39 million tonnes'. The Land-Use Change sector was 'excluded'.
- On 11 December 1997, at Kyoto Australia committed to reduce the growth by a further 10% to 8% above the 1990 baseline. This step was made, it is said, because Australia thought it *'has a relatively inexpensive and easy way of cutting its total emissions by reducing land clearing* [particularly in Queensland and Western NSW]' (Alan Tate, ABC, 10 Dec '97).

But this *'relatively inexpensive and easy way'* is now problematical. The National Greenhouse Gas Inventory (NGGI) 1996 revised Land-Use Change estimates of emissions for 1990. NGGI at www.greenhouse.gov.au/inventory/highlights.html gives the 'revised best estimate for land clearing emissions in 1990 [of] 90 Mt, *33 Mt less than the previous estimate*' used as the baseline at Kyoto [emphasis not in original]. The 10% 'pad' of Kyoto negotiations seems lost.

It is important to recognise that, other than Estonia, Australia is the only country with a Kyoto target whose land-use change and forestry sector is believed to be a net *source* of emissions. All other OECD countries have this sector as a *sink*. Uncertainties are large, as shown above.

There is no public document showing:

- how the $180 million Federal program will achieve a 10% reduction (from 28 to 18%); and
- why a further 10% reduction (from 18 to 8%) was thought at Kyoto to be achievable.

It is now 16 months since the Kyoto decision. The continued lack of vital documentation is unexplained and, on an issue with such wide implications, it is not acceptable greenhouse governance.

IMPACTS OF THE KYOTO TARGET ON AUSTRALIA

Many of the 'easy' greenhouse reductions were made or in progress voluntarily *before* Kyoto, under programs like Greenhouse Challenge.

Greenhouse governance now has, or should have, two overarching questions:

- can Australia meet its Kyoto target?; and
- what will be the impacts of meeting the target?

The National Greenhouse Strategy answers both questions (page 99):

Australia believes that ... the Kyoto target while challenging, is obtainable.

There is no document in the public domain which justifies this 'belief'.

Opportunity costs include the cost of industries not investing in Australia as well as greenhouse constraints on expansion of current industries.

ABARE has developed a Global Trade and Equilibrium Model (GTEM) which suggests that meeting the Kyoto target would reduce Australian GNP by 1%, unless an emissions trading regime was established, when it might drop to half this amount (see below).

At Kyoto the developing countries have made no commitment to targets, despite the fact that they will contribute about half the global greenhouse emissions about the time of the first commitment period, 2010.

So an energy-intensive industry such as an aluminium smelter may move offshore from Australia because of greenhouse constraints in Australia which developing countries do not have.

Greenhouse governance could thus reverse Australia's moves towards maturity in changing from a 'quarry' to more value-adding industries. Ironically, because of the fixation on *national* targets, the likely effect is a net increase in *global* emissions if the developing country cannot match Australian efficiencies and/or fuel sources.

Again this impact has been obvious for a decade (O'Brien 1990, page 36).

Again, national interest has been subsumed by political correctness that is actually contrary to global interests.

EMISSION CONTROLS AND COSTS: EMISSIONS TRADING AND 'CARBON TAXES'

Australia has no co-ordinated *control* of greenhouse emissions. It can *persuade* Australians and industry to take mitigating measures. But many of the easy yards have been gained, usually producing economic benefits or savings through reduced use of energy. Further greenhouse mitigation may involve costs.

There is no extensive public debate about the legislative mechanics whereby the Commonwealth would work jointly with the States on implementing greenhouse emission controls. Compulsory participation would likely be restricted to major emitters, because of administrative costs. To ensure that mitigation is made, penalties may be imposed *pour encourager les autres.*

Historically the mitigation of greenhouse emissions focused on carbon dioxide and reducing emissions of it at source by means of increasing energy efficiency and reducing energy demand. Governments discussed the concept of carbon taxes, and several introduced them. Kyoto extended the scope from carbon dioxide to six gases, but it also introduced important flexibility into the total system of mitigation.

The Kyoto Protocol provides three flexibility mechanisms (see www.greenhouse.gov.au) FIX fccc, of which emissions trading is most discussed. Emission 'permits' would be granted rather along the lines of ration coupons or perhaps a taxi plate. It is generally claimed, but sometimes disputed, that a market-based system of emissions trading offers the least-cost method of meeting Kyoto, preferable to a 'command and control' approach. But the system is complex and governance requires minimum transaction costs to work in the real world.

The Strategy gives no guidance on emissions trading, but governance progressed on 19 March 1999 when AGO issued its first discussion paper (www.greenhouse.gov.au/emissionstrading/paper1) with three more papers to come at two month intervals.

This Paper is presented '*not as a definitive analysis - but as a framework for further discussion*'. But extensive discussions have already occurred. The House of Representatives Standing Committee on Environment, Recreation and the Arts (HORSCERA) provided an interim report www.aph.gov.au/house/committee/envrion/index.htm, the NSW Government has taken a position, and professional views have been canvassed in various conferences, such as *Trading Greenhouse Emissions, Bureau of Transport* (October 1998), with 13 papers. It is simply that no decisions have been made and the chariot of 2008 is winging ever closer.

The longer decisions are delayed the more that governance of emissions trading in Australia may seem so vexatious and complex that carbon taxes may become attractive because of simplicity of administration (eg see Dobes 1998 on the transport sector). The desire to show Australia as a decisive nation meeting artificial international schedules may once again over-ride Australia's national interests and the quality of the decision.

If that happens, then the extensive win-win Australian capabilities of using tree plantations to (i) offset emissions and (ii) obtain enormous collateral environmental benefits (Shea et al. 1998) will be lost.

It might be thought that Australia's national interest would never allow such a double loss to the nation. But past events in Australian greenhouse governance do not give cause for confidence.

The complexity and interactions between difficult choices is acknowledged. No solution is attempted here.

EMISSIONS TRADING AND THE FARMING OF CARBON TREES

One potential win-win situation is the planting of trees to act as carbon sinks and simultaneously provide collateral environmental benefits. Australia is well-placed to exploit the approach, but international sceptics and conservation critics remain opposed. Detailed negotiations on the rules and definitions are continuing at international levels, refining the Kyoto Protocol.

Shea (1998a, 1998b) points out the powerful incentives and returns in extensive tree planting in Western Australia. Over the past 10 years some 100,000 hectares of E. globulous tree crops have been established on farmland by the Government and private investors (Shea 1998a). It is projected that by 2020 there will be 800,000 hectares, with the capacity to sequester six MtC per annum and produce 13 million cubic metres of wood fibre annually. This strong infrastructure and technical expertise in management and accountability over the past decade allows exciting prospective use of greenhouse opportunities.

The collateral environmental benefits of such plantations can be immense, if carbon in trees becomes a source of revenue to assist vast tree planting to ameliorate extensive areas of dry-land salinity, for example If an emissions-trading regime is established, Western Australia could provide an average annual offset of 34 Mt CO_2-e by planting 3.1 million hectares and regenerating eight million hectares of pastoral land over a 10-year period, 'a challenging but achievable task' (see Shea et al, 1998b).

To put this potential new carbon 'sink' into perspective, it could offset an 8% growth in Australian emissions. McIlwraith (1998) reports that greenhouse emissions from six projected new ventures in Western Australia alone would consume the entire 8% Australian allocation.

Ironically, this 'sink' is also about the same quantity as the 'relatively inexpensive and easy way of cutting its emissions' that Australia reportedly thought it had at Kyoto, only to find it slip away in the 1996 revisions of the National Greenhouse Gas Inventory (NGGI).

At present the NGGI established for the Rio FCCC of 1992 is being continued, even though its years are six months out of phase with a Kyoto (calendar) year, and the rules regarding land-use change are different under the Kyoto Protocol of 1997 and the original Rio Convention. A National Carbon Accounting System is being established, with links to the national Land and Water Audit.

Governance of such complex programs with minimum transaction costs yet maximum validation remains a concern. And there is an urgency to get trees in the ground well before the first commitment period, which begins in nine years. This year will be a critical one for greenhouse governance and action in the field.

AN AUSTRALIAN 'BUBBLE'

Australia was a leader at Kyoto in arguing for differential, not uniform, targets for different nations within the United Nations. But the ideology of uniformity is still to be overcome ***within*** Australia, although the National Strategy gives token acknowledgement of regional diversity.

One key to understanding why it will be difficult to raise a rational debate about differentiation within Australia lies in an 'East-West effect' (O'Brien, 1995b). National strategies and

greenhouse governance are usually driven by the older, developed States, principally NSW and Victoria (the 'East'), neglecting frontier, resource-rich States, such as Queensland and Western Australia (the 'West').

Simplistically, the 'East' might respond to Greenhouse governance by phasing out old and inefficient industry, much as a unified Germany did with East Germany, with economic benefits.

But the 'West' has high rates of growth of industry and population (see above).

Efficient governance of such 'East-West' differences and tensions will be a key to optimising Australia's response to Kyoto and minimising economic costs.

I paraphrase the Prime Minister (Howard 1997) advocacy of international differentiation:

> *Uniform target proposals that do not take these circumstances* [of uniqueness] *into account will place an unfair penalty on* [some States and Territories in] *Australia.*

The National Interest Analysis will be a fraud unless the East-West effects of a 108% target issue are quantified and various options explored with varied costs and various impacts on different parts of the nation, different industries and different communities.

CONCLUDING COMMENTS

This paper is directed towards a rational risk-management program to allow Australian policies, strategies and greenhouse governance to deal cost-effectively with recent and future international political developments and scientific understanding of global warming[7].

Greenhouse measures adopted in Australia can be categorised in four ways:

- as to their impact on the important international negotiations;
- as to their impact on global warming;
- as to their cost effectiveness; and
- as to their collateral impacts on other environmental and/or societal issues.

Bureaucratic determinism (O'Brien, 1995a) is focused heavily on the first dot point. It appears embarrassed to mention the second. It has yet to address extensively the final two.

Australia is acting as if the Kyoto Protocol was already in force and L-A-W law. Yet there is a lack of public documentation giving factual information about both the foundations and the consequences of compliance with Kyoto. Australia is acting as a developed country while it is actually a hybrid, a developed/developing country. By signing the Kyoto Protocol this market-based economy gave a massive advantage to its international competitors which largely did not sign.

The NIA will be the only opportunity to articulate the impacts on Australia and therefore it should be brought forward urgently, as a practical instrument of risk management. It should become a strategic planning tool and made the responsibility of the Australian Greenhouse Office, rather than be simply a rationale for ratification driven by the Department of Foreign Affairs and Trade. Urgently-needed decisions on emissions trading require information from an NIA, not borrowing from other countries with different circumstances.

The impacts of *Greenhouse global warming* will be small for many years, and never significant in many aspects of Australian society, such as communications and many service industries. But the ubiquitous impacts of *Greenhouse governance* will be immense. Greenhouse and the Kyoto Protocol have many uncertainties but in themselves are realities of national importance.

The potential economic cost and opportunity cost to the Australian community of inadequate or ill-informed advice on greenhouse to Government seems immense, unmatched[8] among environmental issues for the potential economic impact across a vast swathe of community activities and interests.

Yet clever and responsible greenhouse mitigation measures can yield collateral environmental benefits and economic returns aside from greenhouse.

There are great opportunities to use the greenhouse dynamic to achieve significant returns in many aspects of Australian life. An honest national statement should express Australia's wish to join other developed nations taking initiatives on a wide range of issues, including energy efficiency, tree planting and sustainable development, of global value and inspiring community support, and that fears of global warming offer a political and trade platform to achieve such ends.

One must have very grave concerns at much existing greenhouse governance, its lack of foundation in laws or in public documentation, and its refusal to acknowledge past errors in policy. Australia cannot make a sensible decision about ratification without a National Interest Analysis, but equally it cannot continue to operate in a twilight zone, with ubiquitous uncertainties and opportunity costs.

There are difficult decisions to be made on extraordinarily complex issues. But there are major opportunities which will be lost and unnecessary costs which will be incurred unless greenhouse governance becomes comprehensive, decisive, transparent, informed, cost-effective and Australian.

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[7] The fact that greenhouse policy was decoupled from science around 1990 does not mean it must always be so. The US Senate debate about Kyoto will be a key.

[8] Elsewhere I have cautioned that the economic and opportunity costs of inadequate greenhouse governance will far outweigh any adverse impacts of inadequate governance of native title issues. Greenhouse will definitely reach into suburban backyards, houses and cars.

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