Minerals Council Environmental Workshop: Greenhouse and the Minerals Industry Paper by Mike Waller, Chief Economist, BHP Ltd

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Perth

1. Introduction

Greenhouse is an economic and public policy issue of major potential commercial importance to the minerals industry and for our overall operating environment.

Debate continues around the science of climate change, as it should. But BHP accepts, as most businesses do, the international consensus among developed nations that the threat of human-induced global warming is of sufficient importance to warrant concerted international action to constrain the emissions of greenhouse gases.

This action is broadly described in the Kyoto Protocol – though much of the detail is still lacking. This paper explores some of the critical political and economic issues, which we see as being necessary to making progress. It does so on the eve of the most important Conference of the Parties since Kyoto – the sixth Conference of the Parties to the UNFCCC (COP6) at The Hague in November.

Accordingly after some brief comments on BHP's position in Australia, I will discuss some of the most important items on the agenda at COP6.

2. BHP and Australia's domestic greenhouse policy

Whether one agrees with our position or not, I think most would agree that BHP has recently taken a leadership role in the development of climate change policy in Australia. I will argue later that the climate change agenda is at heart an economic issue. It is accordingly a matter of some pride to me that BHP has been unusual amongst businesses for some years in giving its chief economist the principle policy advisory role to the Managing Director and CEO on greenhouse policy.

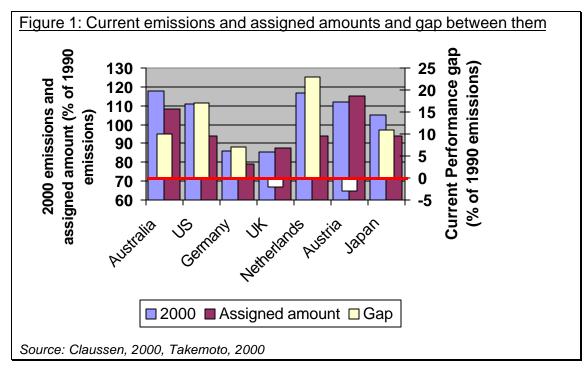
2.1 Permit Allocation

We recently released a position statement proposing that, should domestic emissions trading proceed, permits should not accrue to existing emitters – or to use jargon we are all becoming familiar with – permits should not be 'grandfathered'. BHP suggested governments should auction them, with revenue being recycled to broadly lower business costs. The position may or may not help BHP's 'bottom line' in the short term. But we could see no other equitable way through the political dogfight that would be unleashed by the process of deciding who should get what. This contribution to the policy debate has helped accelerate companies' consideration of their views of the appropriate policy

framework, with industry expressing a preference for a hybrid grandfathered/auction system.

2.2 The role of early action

We also believe that we are at a critical point in the Kyoto process. The task of meeting the targets is growing more difficult with each month that passes. Australia's industrial emissions are already about 118% of their 1990 levels and growing. And we are not alone. Japan is in a similar position *vis-a-vis* its Kyoto target despite is much slower rate of economic growth. And amongst the higher growth countries, industrial emissions in both the United States and the Netherlands are currently exceeding their Kyoto target by much more than Australia's current excess.



If this trend continues, the credibility of the Kyoto targets will be severely undermined. For this reason, we believe that there is a critical opportunity to use commercial incentives to abate carbon even before we move towards stronger policy measures such as emissions trading.

In a normal 'textbook' environmental problem of pollution, the answer would be fairly obvious. We should impose constraints on pollution and watch the level of pollution fall. In a global environment however, the game is very different. The reason is simple. We can lower our emissions, but if we do it on our own, we will impose costs on ourselves for negligible environmental gain. So the trick is to act in concert with others. But for others to join in, they must believe that the targets they are signing on to are practically achievable and broadly equitable.

At the same time that Australia and other Annex 1 countries are contemplating if and when to ratify the Protocol, major emitters are concerned about carbon risk – that is the potential cost of having to meet the costs of a carbon tax or carbon trading regime should one be introduced. In this context, we believe considerable progress can be made by recognising early action in such a way that firms could

'purchase' some cover against their carbon exposure by engaging in substantial acts of carbon abatement immediately.

This benefit is 'seen' by the environment in the form of lower emissions, but it is not recognised by the Protocol because the first 'commitment period' does not commence until 2008. Nevertheless, it makes a larger contribution to the goals of the Protocol than might at first seem apparent. This is because the abatement activity that such a scheme could generate could be instrumental in keeping the Kyoto targets within reach. Such schemes – in Australia and elsewhere – could save the Kyoto targets from going the way of the Rio targets.

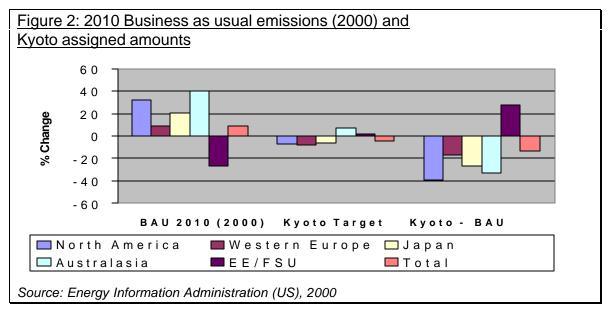
The critical question we must continually ask ourselves is 'Are we in a Post Rio' world. Or is Kyoto just the first of many re-runs in which we commit ourselves to targets, make a few gestures, and then get back to life as usual. Although it is not popular to say so, I think the answer to that question hangs very much in the balance. As I shall indicate later, recent modelling suggests there are policy approaches that build on Kyoto and achieve both better environmental and economic outcomes.

3. Equity & Australia's Target

Some argue that the target Australia received at Kyoto was unusually generous. This is not a fair assertion:

- several countries within the EU expect substantially larger allowances within the EU bubble than Australia received; and
- The change in emissions for Australia listed in the Kyoto Protocol is one of the largest in comparison with 'business as usual' projections.

Here are the most recent projections from the US Energy Information Administration.

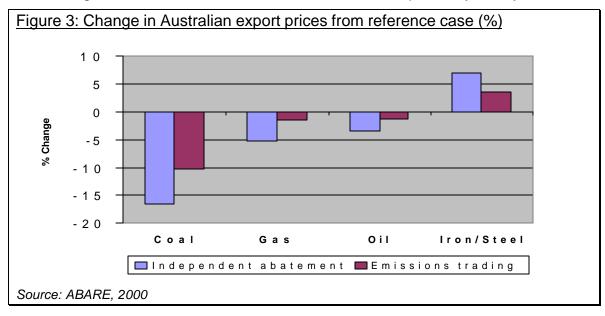


Australia's position is unique in many ways. Its role in the world economy as a major exporter of embodied energy leaves it critically vulnerable to certain design features of the Protocol. The Protocol will reduce the prices of Australia's export commodities, particularly coal and iron ore. It will also penalise us when we export carbon efficient fuel – such as LNG – to the

region, even though this is likely to reduce rather than increase global emissions.

And because of the composition of our exports and our geographic location, Australia is probably the most exposed country in the world to 'carbon leakage' – the shift of investment from countries with Kyoto commitments (where carbon emissions are priced) to countries with no such commitments.

Let me put some numbers around these effects from ABARE modelling. If the Kyoto Protocol targets were met independently by each country without trading, the price of coal, gas and oil would fall against the reference case by 16.5, 5.2 and 3.4 percent respectively. (By contrast the increasing cost of emissions in steel producing countries would drive up the price of steel by 7 percent). Annex 1 trading reduces these negative impacts by over one third for coal and about two thirds for gas and oil. It also moderates the rise in steel prices by nearly a half.



But this is only half the story for Australian steel making. Our analysis suggests that our steel making costs could rise in each case by more than the price rises. This is hardly surprising since the price rises are the result of carbon cost increases but they are diluted by substitution away from steel and carbon leakage away from Annex 1 sourced steel

Furthermore, forces of this magnitude are likely to have a profound impact on the industry structure of one of our key customers, Japan. The impact of carbon scarcity on Japan's industry structure is obviously of great strategic importance to Australia's resource and energy intensive industries and Australia more generally. Most of you will recall the response of Japanese industry to the rising energy prices associated with the oil shocks of the 1970s. The Japanese aluminium smelting industry was effectively moved offshore – to a substantial extent to Australia.

It is worth emphasising that the changes and/or loss of growth necessitated by independent abatement are in an economic sense unnecessary costs, unnecessary disruption to peoples lives in Australia and Japan, and unnecessary political impediments in the way of meeting our joint environmental commitments.

It is also worth adding that the response in Japan could be much more dramatic than this. ABARE's model in effect assumes that the capital market in each of the

countries modelled is relatively efficient today. It follows from this assumption that, because of its greater capital intensity and energy efficiency, Japanese iron and steel production would be hit less hard than Australian iron and steel production. But in fact profitability in Japan's industry has been very low for a long time. This suggests that structural adjustment in Japan's steel industry may be much greater than model results are suggesting.

4. Essential Conditions for Effective Environmental and Economic Outcomes

These are very serious threats to Australia's producers and, by implication, to Australian jobs. They set the context for the conditions that the Kyoto Protocol must meet to deliver effective and acceptable environmental and economic outcomes for Australia and, I would argue strongly, the world. These centre around two key themes – comprehensiveness and flexibility.

4.1 Comprehensiveness

We must seize any opportunity practicable to reduce the economic impact of delivering on our greenhouse commitments, providing this does not compromise environmental performance.

Of course, this is not just an issue for Australian resource companies or Australia alone. Over time, greater economic efficiency will be shared between lower costs, greater prosperity and better environmental performance, as stronger carbon abatement measures become more economically and politically possible.

If the costs of carbon abatement are much higher than they need to be, this will not, as perhaps some hope, lead us towards some fundamental reassessment of our way of life. It is much more likely to undermine popular goodwill towards environmental action. How will Australians feel if, having agreed to make a fair contribution in reducing their carbon intensity, others dictate to them that they must play to their weaknesses rather than their strengths, that they must reduce carbon intensity in ways which are much more costly than they need be? Yet this is what some are arguing.

The dictates of economic efficiency, and in the view of Australian business, the preconditions for the survival of the Kyoto Protocol are quite simple. We need all the opportunities to abate and to absorb atmospheric carbon we can get. And because of that it is essential that the comprehensiveness and flexibility (including administrative flexibility) of the Protocol are maximised. **4.1.1 Sinks**

One such opportunity is sequestering atmospheric carbon in land based vegetation. This is critical for Australia because, in contrast to all the difficulties for Australia outlined earlier, this is an area of opportunity. There are potentially large environmental and economic synergies from greater carbon fixation on Australian agricultural land and on more marginal rangeland areas.

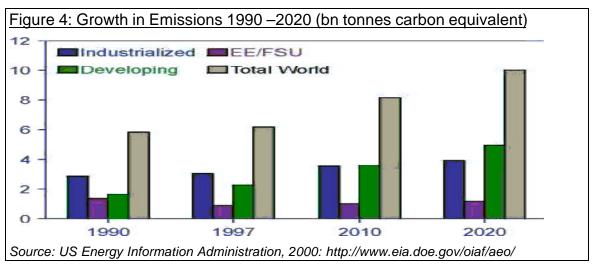
This would not only unlock low cost carbon abatement options. It would generate environmental benefits in addition to carbon abatement through reducing incentives to clear and introducing a new funding stream for restoring degraded land.

In the light of this it would be a tragedy not just for economic efficiency, but much more importantly for the environment if some green groups' view of sinks as 'loopholes' in the Protocol were to endure.

4.1.2 Developing countries

This is an aspect of comprehensiveness that is already of immense importance and will increase in importance still more in the next decade. We need all the abatement that non-Annex 1 countries can manage. The plain fact is that if we do not get developing country engagement, and get it soon, the developed countries will be fighting an increasingly futile battle.

China alone is already the world's second largest emitter. At their growth rates, it will take developing countries frighteningly little time to match the emissions of the developed economies. And, excluding the economies in transition, the developing countries will do so before the first commitment period ends!



The evidence I have already presented shows how hard it will be to meet the obligations embraced at Kyoto even if we did so with perfect efficiency. Support will ebb away in the developed world if people see their efforts at emissions reductions overwhelmed by unfettered growth in carbon emissions in the developing world.

Of course, this is not to reject the developing economies' case for equitable treatment. But the approach must not be to shield the developing countries from the economics of carbon scarcity. Rather, if we are concerned to address third world disadvantage, we must ensure that the third world joins the global economics of carbon scarcity on favourable terms.

We already have the perfect model of how to address disadvantage at the same time as integrating an economy into the emerging world of carbon scarcity. In taking on Kyoto 'commitments' the Russian Federation joined the Annex 1 countries in the most favourable of circumstances. Its assigned amount of 100% of 1990 emissions substantially exceeds Russia's 'business as usual' emissions. Trading should allow Russia to sell those permits to the highest bidder.

This is the obvious way in which the developing countries can be brought into the fold. It should be of much greater ultimate benefit to them than the alternative ie. picking up carbon intense investment (via carbon leakage) that may not suit

those countries' skill, capital and resource endowments. Such investment may look like a blessing today. Ultimately, however, it could become an important political impediment to those countries taking on commitments, and an economic problem as the carbon price in developed and developing countries is equalised over time. And it would seem that that is inevitable at some stage either through developing countries taking on commitments or, more ominously, the collapse of the Convention within the developed countries.

In the meantime the Clean Development Mechanism (CDM) provides a model for some of the issues operating to benefit host countries by way of investment capital, technology and the earning of credits that can be sold into the developed world.

Even here, however, there is substantial manoeuvring for advantage going on, and a remarkable amount of disagreement. The Europeans and numerous members of the China/G77 bloc support what will in effect be a tax on CDM projects to be remitted to some developing countries. Whether or not one believes that the world would be a better place with more aid going to those countries, is it sensible that the taxes are to fall on a global environmental initiative, which will be quite difficult enough without these kinds of impediments?

There is another complication, which needs to handled carefully. In the economic jargon, the CDM is a 'baseline and credit' system. Carbon abatement is not measured against a total assigned amount as it will be in the Annex 1 countries but against a 'baseline', which will generally be drawn up on a project by project basis. This will introduce complexities, and scope for manipulation of the system. For instance, it could well be valid to award credits for not felling a forest that was going to be felled – but who is to say that it would have been cut down in the first place? It could well be valid to say that a gas fired power project abates substantially more carbon than the equivalent coal fired power station. But who is to say that coal was the most feasible alternative. How do we know that the gasfired power plant did not displace a renewable option? And how will claimed abatement be verified.

Clearly we need people with a focus on the integrity of the system – rather than profit seeking – to make the rules of the system. But the integrity of the baseline and credit system and the verification of abatement do not require intrusive regulation. It requires clear rules, which can be independently audited. As the system of private sector auditing illustrates in the developed world stockmarkets, audit can be independent without being run by government. And we need a compliance and enforcement regime that make it more worthwhile for investors to tell the truth, rather than cheat.

The same principles should apply to international arrangements for compliance and enforcement generally. The compliance and enforcement system must deliver the right incentives to parties to deliver on any commitments they have ratified. But it must also recognise the way in which international regimes must operate using the distributed sovereignty of co-operating parties, rather than one central source of authority which is the means by which national environmental policies can be enforced. It is appropriate too that it recognises the difficulty of what is being attempted in the Protocol. *4.1.3 Other Annex 1 countries*

The other side of comprehensiveness is the genuine involvement of the core Annex B countries. In this regard, both the Australian government and Australian

business have emphasised the importance of the commitment of the largest country – the United States.

In fact the Protocol is written so that it can come into force without the ratification of the United States. But we all know that it cannot survive for any length of time without United States engagement.

It is easy to be moralistic in ones approach to this topic. It looks like a position that lacks principle and leadership to say that we should be amongst the last to ratify. Yet to me there is principle in the position being put. It is the principle of a small country with plenty to lose and virtually no environmental benefits to offer the world by acting unilaterally.

If Australia were using this approach to mask a real desire to torpedo the Protocol and to mask behind the scenes activity - which sought to undermine other countries' commitment to the Protocol - then the moralistic perspective would be more telling. In the current circumstances, doubts about Australia's approach only survive in my mind at least only until I consider the alternatives – which effectively risk unilateral action on behalf of Australia.

4.2 Flexibility

The other great issue is flexibility. We should attack any problem most vigorously where it is easiest to solve. That means pursuing the lowest cost abatement tasks as the highest priority. The system to deliver that outcome is international emissions trading and its variants. These are subsumed in the protocol under the four 'Kyoto mechanisms':

- Emissions Trading;
- Action Implemented Jointly;
- The Clean Development Mechanism (CDM) and
- Joint Fulfilment such as the EU 'bubble'

The Europeans and some of the developing countries support taxing the CDM and restricting its coverage of sinks. They want the mechanism necessary to deliver the integrity of baselines within the CDM, extended to Joint Implementation where this serves no sensible purpose (since JI occurs within an international 'cap and trade' system which must meet its own integrity requirements). And they want to impose restrictions such as supplementarity, taxation and additional enforcement obligations on emissions trading. One possible motivation for such approaches is to reserve to those within the European bubble the advantages of flexibility and, by imposing greater constraints on other flexibility mechanisms, impose costs on one's competitors in international markets.¹

Certainly the Europeans are choosing some of the highest cost means of abating carbon, despite the fact that they have a relatively easy abatement task ahead of them – owing to the windfall from recent gas projects and East German 'hot air'. If they want to deliver on agreed environmental commitments in these ways, they should certainly do so. But it seems extraordinary that they should feel the need to constrain other countries in finding the best joint solutions for themselves and between themselves.

It seems to be the essence of good policy and good management that the issues of compliance and enforcement and the use of the mechanisms should be separate – with some exceptions in the case of the CDM to the extent necessary to meet its unique integrity requirements. Unless the use of the mechanisms raises genuine compliance and enforcement issues which undermine an integrity the Protocol would otherwise have, compliance and enforcement arrangements for use of the flexibility mechanisms should be the same as those for independent abatement.

5. Two views of the world

One way of looking at the differences of view I have discussed so far is to distinguish very broadly between two views of climate change. One is more preoccupied with the immediate politics and perceived rights and wrongs of carbon emissions and with using the climate change debate to address some perceived historic wrongs. Broadly speaking, this is the approach of the European Union and some of the developing countries.

The other focuses on the practicalities of meeting the environmental challenge, which, because environmental action must be funded, is ultimately an economic challenge. It is mindful of the need to minimise the cost of achieving one's objectives. The fundamental questions it asks are "what does the environment see?" and "how much does it cost?" It wants to maximise the beneficial environmental impact and minimise the cost and it is willing to address any equity questions which seem right or which are necessary to making practical progress. This defines the so-called 'Umbrella Group' which is essentially the non-EU developed countries.

There is a contest between these two approaches to climate change. I believe that only one provides a practical way through the perils of global environmental action. But no one needs to impose answers on others. If we have doubts about different approaches, then countries should respect each other's sovereignty, and achieve their commitments in whatever way they consider appropriate.

For the 'Umbrella countries' that will involve trade to reduce the cost of action. For the European countries it will involve less trade and more government-togovernment deals. Likewise the Europeans have faith in elaborate regulated outcomes such as edicts on the fuel efficiency of vehicles and renewables targets. Many in the Umbrella Group would consider such arrangements arbitrary, would point to the way in which they squander valuable resources on high cost environmental projects and would despair at the chances of a government committee coming up with the right targets to aim for. They would want to achieve the same environmental result at lower cost through a competitive emissions trading system. Each could go their own way. However this does not seem to be the way the Europeans see it. They believe that the former approach should govern not only their own reaction, but also that of other nations. That approach will compromise the fairness and efficiency of the Protocol, thereby undermining long term commitment to it. The Europeans have consistently argued for restrictions on the use of 'hot air' and flexibility mechanisms – that is with the exception of the 'hot air' and the flexibility mechanisms they intend to benefit from themselves. Thus, while proposing a variety of arbitrary restrictions on the three Kyoto mechanisms of greatest interest to the Umbrella Group, they propose that the mechanism of greatest use to themselves – Joint Fulfilment under Article 4 which sanctions the European

'bubble' – should remain wholly unfettered. Of course it should remain unfettered: what possible use could there be in imposing restrictions on it? But so too should other flexibility mechanisms be unfettered.

Likewise they are indignant that some will benefit unduly from the ability to access Russian 'hot air' – the excess of Russian business as usual emissions over their assigned amount. But they will be making full use of East German hot air within the bubble to meet their own commitments.

5.1. Principle based diplomacy

Given the situation in which we find ourselves, I believe we should adopt what I call 'principle based diplomacy'. Currently Australia's 'bottom lines' – the diplomatic positions that we have indicated are most critical to our commitment to the protocol – have tended to revolve around some of the most intensely practical issues, such as the size of our target or assigned amount.

With other countries, particularly the Umbrella group, we have many other objectives on the table. But the extent to which we are prepared to compromise them remains unclear. It appears that we are hoping for some resolution of these issues to emerge from COP6 and subsequent negotiations that offers us a reasonable compromise between the objectives of all countries.

But we should not make compromises where to do so not only undermines our own and our negotiating partner's interests, but undermines the efficacy of the Protocol itself and also basic political principles such as the principle of subsidiarity and respect for nations' sovereignty.

Under the approach being suggested here, Australia – and sympathetic negotiating partners – would serve notice that, in our view, not all proposals from our fellow signatories should be treated similarly. For instance, we would argue that, as a matter of principle, countries should be free to negotiate about the size of their respective targets, but how they achieve their commitments should be decided in an exercise of their own sovereignty.

We could take a similar position on the assignment of instruments and the related issue of the use of flexibility mechanisms. There are two points here. One is that, as a matter of the efficacy of the Protocol, we should maximise the flexibility available to countries providing this helps them achieve the objectives of the Protocol – ie reducing global emissions. The other is a point of equity and political principle. A system of international cooperation cannot prosper in the absence of clear understandings about roles and responsibilities that make sense and that are not resented as unnecessary incursions into the sovereignty of the parties.

Of course, such an approach risks adding an additional constraint to successful negotiations. It risks the failure of the Protocol. But so too does any genuine negotiating position. So too do the constraints on flexibility which principle based diplomacy would resist. In a world where parties are seeking to protect their own interests and values in the context of others doing likewise, a negotiating strategy defines where one is prepared to say 'enough is enough' and walk away. The right place to make that stand is over a principle that, if not adhered to, will not just sacrifice Australia's and other countries' interests but would compromise the Protocol and make failure all but inevitable.

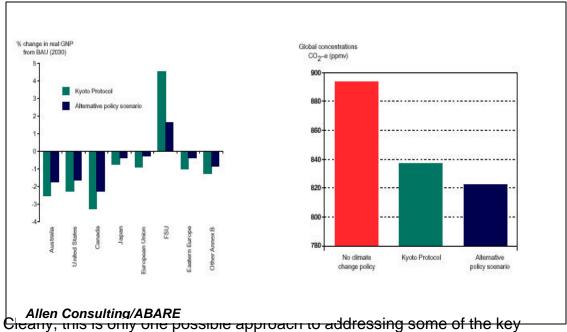
6. Building on Kyoto

Clearly, both the current trajectory of emissions and the differences of view over key design and implementation issues described above present very major challenges to delivering on an equitable and environmentally effective Protocol.

Against this background, the Minerals Council, together with BHP, Rio Tinto, WMC and Pasminco, have been looking at the environmental and economic implications of building on the Protocol to address the current deficiencies. The approach modelled by ABARE and MONASH for Allen Consulting involves:

- the Kyoto targets for developed countries applied in a new commitment period (2015-20);
- developing countries gradually incorporated in emission reduction targets;
- a wealth/technology transfer from developed to developing countries equivalent to the benefits derived by developed countries from delaying Kyoto (\$A440bn); and
- an international R&D program directed towards developing new fuel technologies, leading to a less GHG-intensive energy base.

As far as I am aware, this is the first time any serious analytical effort has been devoted to examining an alternative approach. The results are interesting in that they produce both a better environmental outcome and a smoother economic transition.



deficiencies in the current international climate change framework. But it does serve to illustrate that there are effective alternatives that deserve much more attention in policy-making circles than they have received to date.

7. Role of NGOs and Government

Given the tripartite nature of today's session on climate change, I thought I would hazard some reflections on the role of my counterparts in the green movement and in government. The reflections are offered provocatively, but not without sympathy for their roles in the ecosystem of environmental policy making. All I can offer in return is my own preparedness to listen to what others have to say.

7.1. From green politics to green outcomes

A great deal of credit must go to the green movement for prosecuting the cause of action against climate change. Ten years ago, it was very hard to see how international action could be taken. Thanks in large part to the green movement, today we now have concerted international action on the subject.

In one sense the easy part is behind us. That is identifying and getting agreement to do something about the issue. The strategy that the green movement has used so far has been a moralistic strategy. I use that term without any pejorative intent whatsoever. Where it was easy for everyone to evade responsibility by saying that greenhouse was a global problem so it should be someone else's responsibility, the green movement insisted that all of us bear responsibility. And so we have an international consensus in favour of global action against climate change and the beginnings of the architecture to change things.

But as I have intimated, earlier, Kyoto was not the first time that the nations of the world committed themselves to specific action on climate change. That occurred at Rio. But the targets quietly slid out of prominence as they became progressively harder to meet them. Today there are a few countries, which have met their Rio targets of 1990 emissions by the year 2000. But they have achieved this more by good luck than strong policy action and material sacrifice from their populations.

Often moralism is a healthy start to doing something in the world of policy. An example is tax avoidance. We had to get angry before the political will was there to tackle the kind of tax avoidance that was commonplace in the early 1980s. But after we got angry, after we moralised about the fact that it is not good to avoid your taxes, we moved on to policies which did not rely on shaming people into paying their taxes. They forced them to do so.

There are parallels in the world of greenhouse in a range of ways. The mindset that produced willingness to action is one that was often preoccupied with the downside of our current prosperity. It was therefore naturally sympathetic to the claims of the developing world. It was easy therefore to agree to the idea that climate change was a problem produced predominantly by the developed countries and the corollary of that idea – that at the first instance at least it should be tackled by the developed countries. Yet, as I believe I have shown, we need not jettison a concern with the developing world by insisting that their economic behaviour needs to reflect carbon scarcity.

I believe green groups could be particularly persuasive in bringing about that change that would not only be the greatest contribution to addressing concerns around climate change by keeping the Kyoto process on track. It would also provide a much more effective way of assisting the developing countries than

artificially inducing them to establish energy intensive industry to fund 'emissions avoidance' in the developed world.

Further, while there may remain some political mileage to be had from demonising the worst emitters, we need to move from there towards systems that reflect those values in the only way which allows firms in competitive markets to reflect them in market prices. Unfortunately, just as firms cannot last in the market if they defy its laws, the same goes for price systems within countries. We must move beyond moralism, but we cannot do it without a high degree of international co-operation. If we disobey these economic laws, our efforts on behalf of the environment will be futile.

Another tactic of greenhouse politics is to argue that somehow Australia is risking becoming a pariah. Australia came to international greenhouse diplomacy with very high per capita emissions and a determination not to have arrangements foisted upon us that did not take into account our unusual circumstances.

Of course, from one perspective the role of the green movement in the political ecosystem will always be to argue for more rather than less environmental action. That is accepted. On the other hand, like any other country, Australia must pursue the joint task of delivering on environmental objectives at the same time as defending its own interests in the community of nations. No one else will do that for us.

There is not some one-dimensional trade off between Australian economic prosperity and the environment. Defending our own national interests while other countries vigorously represent their own interests is not environmental vandalism. It is a wholly necessary aspect of the achievement most of us are striving for – global cooperation to reduce greenhouse emissions.

7.2. The role of Government: Risk minimisation or risk optimisation

As someone with a long history in the Civil Service I appreciate the difficulties faced by Government. One issue of importance is risk. Governments are, by their nature risk averse. I believe the situation we are in is so difficult that we should not be trying to minimise risk in government. We should be trying to reduce it by all means. But, for both government and business, some risks will need to be taken if we are to find our way through. We need to risk, as we did at Kyoto, the uninformed wrath of the world in standing up for ourselves. If we do otherwise our target would not only be inequitable. It would be unachievable.

We also need to have the courage to venture beyond the textbook. For we are not the textbook situation – where a sovereign policy maker seeks the most efficient policy. We are in the middle of history, in the middle of what we hope will become a self-organising system of global co-operation on climate change. The BHP proposal for recognition for early action does not come out of the textbook. This is because it proposes rewarding companies for action that confers no apparent benefit on Australia in the terms of the Protocol that does not recognise abatement before the first commitment period. Yet I have set out the ways this could make a contribution to the underlying aims of the Protocol at a critical time.

Also, we need to address a growing crisis in voluntary action. Firms are becoming increasingly wary of taking voluntary action under the greenhouse

challenge program because they fear that that action could disadvantage them if emissions trading permits are 'grandfathered' and because, so far, Governments have only said that they would not like to penalise firms for early action. Boards need more than this if they are to commit funds to substantial abatement projects. This is at a time when, in our view, firms are ready to really focus on carbon abatement as a commercial issue and move somewhat beyond 'no regrets' action so as to mitigate forward carbon risk, particularly for new, long lived projects.

As I have said to Gwen Andrews personally, my view is that we need a program to recognise early action that is sufficiently generous that it leads firms to cross the threshold and make carbon abatement a serious commercial issue at all levels within emitting firms. Those firms will not do that; they cannot do that if they must engage with government in lengthy negotiations seeking to draw administrative distinctions between 'regrets' and 'no regrets' action. Without this we cannot move from the point we are currently at – that of mutual risk minimisation - towards true risk optimisation for firms and for the country.

8. Conclusion

My most central message is that if there are serious obstacles in the way of a basic level of efficiency in tackling climate change via the Kyoto Protocol we should wait until those obstacles are removed. It is hard to think of anything more damaging to the cause of global environmental action than being consigned to constantly re-running the Rio Earth Summit in endless variation. We are not so far away from a world where we commit ourselves with ever increasing solemnity to ever more unlikely looking targets, and then fall progressively further short at every attempt.

If the Kyoto Protocol does not establish a momentum towards efficiency of environmental action – namely ever increasing comprehensiveness of coverage and flexibility of action - it will fail and, in so doing, undermine the very cause that inspires it.

References

Claussen, Eileen, 2000, President, Pew Center On Global Climate Change, "Kyoto -- The Best We Can Do Or Fatally Flawed?" at http://www.pewclimate.org/media/transcript_riia.cfm

Energy Information Administration, 2000, International Energy Outlook, Washington, http://www.eia.doe.gov/oiaf/aeo/

Hillman, Ralph, 2000, Speech by the Australian Ambassador for the Environment, Enviro 2000, Sydney Convention and Exhibition Centre, 12th April, p. 2 at www.dfat.au/media/speeches/department/000412_enviro.html