

# Climate Change and Social Justice

**MUP SOCIAL JUSTICE SERIES**

Series Editor

*Dr Jeremy Moss*

The Social Justice (SJS), issued by MUP in collaboration with Melbourne University's Social Justice Initiative, aims to contribute to public and scholarly debate by providing critical insights into contemporary issues concerning social justice. The series also aims to highlight the value of interdisciplinary approaches to problems of social justice.

# Climate Change and Social Justice

Edited by Jeremy Moss



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FOREWORD

**Climate Change as an Equity Issue**

*Ross Garnaut*

I congratulate the Social Justice Initiative for creating this collection which will help fill out what has been an underdeveloped area of Australian thinking about the climate change issue.

I took about the same interest in climate change as the average literate citizen until mid-2007 when the Premiers and the then Leader of the Opposition asked me to conduct a review of the impact of climate change on Australia and of policies for Australia.

Some of the old wisdom of economic policy analysis is readily applicable in this area. There are some dimensions of this problem that require new analytic approaches. That's quite stimulating for someone at my stage of career, who has spent too long thinking about old problems.

The climate change problem is at its heart an ethical problem. It's a problem of income distribution. It is a problem of income distribution with dimensions that we don't often think about.

Climate change is first of all an intergenerational income distribution question. If we were only worried about the welfare of the human species during the rest of my lifetime, we wouldn't do much about climate change. The main impacts are longer term ones.

The most important potential impacts will have their effects over longer time periods. You have to value the welfare of future generations to want to do anything about this problem.

That is why so much of the discussion of Professor Nicholas Stern's report, which came out in Britain in 2006, revolved around a rather esoteric discussion of discount rates. The economic concept of discount rates as applied by Nick Stern turned out to be controversial. Since then, there has been much philosophical discussion of the right discount rate through which you should compare the welfare of different generations.

If you apply a commercial interest rate and discount future values to the present, then things that happen in a hundred years time don't count for much. If you discount at a rate of 7.2 per cent, the value of something that happens in ten years time is only half the value of the same thing if it happens today. The value of something that happens in twenty years time is only one quarter the value of the same thing if it happens today. So the discount rate that is applied to future income and wealth and welfare turns out to be crucial in forming a view about whether anything at all should be done about this problem.

There is also a dreadful international income distribution dimension to this problem. It might make perfect sense for a rich country like Australia to sacrifice some current income for the benefit of future generations. It will not seem quite as simple a matter for a poor country, with most of its people in abject poverty, that needs strong economic growth now to get people out of poverty and give people the luxury of thinking about environmental values and the welfare of future generations.

Regrettably, doing something serious about mitigation of climate change is going to require serious efforts from all, including developing countries. Developing countries have different perspectives from developed countries about the locus of responsibility for dealing with the problem. This has been apparent since the United Nations' Rio de Janeiro meeting of the early nineties first put a program of global mitigation on the international agenda. We heard then from developing countries that developed countries were responsible for nearly all of the concentrations of greenhouse gases that had then accumulated in the atmosphere. The developed countries had become rich by using fossil fuels and putting emissions in the atmosphere, so it was the developed countries responsibility to do something about it.

This was put forward as an ethical question. It was put forward as a question of international income distribution, related to historical responsibility, and also related in more conventional ways to equity. The rich should take responsibility for dealing with the problem and the poor countries should still be able to put their resources into getting their people out of poverty.

The problem with that approach is that we are running towards dangerous climate change so rapidly, and developing countries are now making such a large contribution to the growth of greenhouse gas concentrations in the atmosphere, that there will be no solution, unless the major developing countries at least are central parts of the mitigation effort from an early date. The work of my Review has helped to draw the world community's attention to the realities surrounding this statement.

There is also an awful domestic income distribution dimension to the problem. The most vulnerable in our community would be the most affected by climate change itself. If we don't do anything about the problem, it will be the old and the frail that suffer the worst health effects. People who are relatively well-off will be able to insulate themselves from the effects of climate change relatively easily, at an expense that is moderate compared with their own incomes and wealth. Poorer people in our society won't be able to do so. That defines income distribution and equity reasons for putting quite a lot of effort into avoiding dangerous climate change.

The first policies that are usually considered, unless you put other measures alongside them, will have disproportionately costly and damaging effects on people on relatively low incomes. These policies, unless other measures are implemented alongside them, will greatly exacerbate domestic income disparities. Large additional burdens will be placed on the most vulnerable in the process of trying to do something about the problem.

So climate change and the policy issues around it are at heart ethical questions, framed by the most difficult of income distribution dilemmas imaginable.

It's now well understood that many social and economic problems cannot be successfully treated with traditional linear analytical approaches. In the literature, these are called wicked problems. Wicked problems are contrasted with tame problems.

More than thirty years after the term was introduced from the urban planning literature, the Australian Public Service Commission in 2007 produced a guide to policy makers entitled *Tackling Wicked Problems*.

I note that climate change was defined as a classic example of a wicked problem, mainly because of the different stories or narratives that can be used to define the problem. The Public Service Commission usage of the concept of wicked problems has only recently been drawn to my attention. Before I was aware of it, in the ST Lee Lecture at The Australian National University in November last year I described climate change as a diabolical policy problem.

We know a fair bit about how to solve tame problems. It may not be easy, but we can see clearly how to go about solving them. A tame problem has a well defined and stable problem statement with a definite stopping point. We know when it's been solved. It has a solution which can be objectively evaluated as being right or wrong. It belongs to a class of similar problems which can be solved in a similar manner. It has solutions which can be tried and abandoned. It comes with a limited set of alternative solutions. Building a bridge or health screenings might be examples. Not necessarily easy, but linear, and there is a known, well worked out approach to a solution.

Wicked problems are different. Wicked problems are hard to define, so that people have different ideas on the nature of the problem. They have many interdependencies and multiple causes that interact. Wicked problems don't just keep still. They interact and evolve in a dynamic social context. New forms of wicked problems emerge, while one is seeking to understand and solve the original version. Or the solution leads to new, unintended consequences.

In the ST Lee Lecture in November of 2007 I said that the features contributing to the diabolical nature of the climate change policy challenge were uncertainties surrounding relationships between atmospheric gas concentrations and the timing and extent of dangerous climate change; the long lags between emissions and impacts, which made it difficult to rely on observation of impacts to prompt timely policy change; the need for unprecedented international cooperation for successful mitigation, alongside the existence of powerful incentives for each country to free ride on others; and the

complexity of the income distribution effects of climate change and effect of mitigation.

The first two issues relate to the uncertainty that surrounds the science of the issue. In this collection I should note how impressed I am by the uncertainty of the science on climate change. In the current state of scientific knowledge, the further you dig the more questions arise. I think that makes a case for higher levels of investment in the science, both nationally and internationally.

The third and fourth issues cover the income distribution effects. They relate to the uncertainty that surrounds the political economy of the issue. In November 2007, I said that policies which have large effects on income distribution invite fierce contest between competing interests. Climate change policy has the three acute dimensions of equity to which I've alluded, the intergenerational, the international and the domestic. The intergenerational equity question can be formulated formally in terms of discount rates. But it boils down to the question of the extent to which one generation should be willing to forego current consumption to allow greater consumption for future generations. Do we value the welfare of our grandchildren less than, as much as, or more than the welfare of ourselves and our children?

The international equity question arises because the costs of both climate change itself, and mitigation, vary greatly across countries. It is affected by views on the historical responsibility for current concentrations of greenhouse gases, which many developing countries consider to be important. Currently rich countries don't think those issues are so important.

There is also a huge difference between current greenhouse gas emissions of poor and rich countries. There will be no solution to the global climate change problem, unless there is constraint on growth in Indian emissions. But currently Australian emissions per capita are thirteen times as high for carbon dioxide as Indian per capita emissions.

How then do we carve out a global agreement that will enable the world to agree on a path that will have developing countries like India and China as part of the solution? This is an issue that I covered in the Interim Report that I put out in February 2008, and in detail in the Final Report (Garnaut, 2008)

Thirdly, there is the domestic equity question. This is the issue that I want to focus on here. Putting a price on carbon will be the central feature of any effective mitigation regime. This will raise the cost of many everyday items. The dilemma is, how do we design a scheme where such a cost is not unreasonably carried by households with low incomes? How do we ensure that climate change and its mitigation do not force highly regressive changes in income distribution?

When I first came to this issue, in a way that was more profound than that of a citizen interested in this as one of the large number of questions one comes across all the time, I was struck by the casual consideration of the income distribution dimensions of the solutions that were being discussed. We had had two major exercises in policy making around the emissions trading scheme. The first was sponsored by the states. This developed the National Emissions Trading Taskforce (NETT). Then the Howard Government in its final period set up a taskforce to recommend on an emissions trading scheme. A majority of its members were business people, with interests in energy, transport and other emissions intensive industries. They produced a report on the design of an emissions trading scheme last May 2007. The report to the Howard government recommended that the Australian Government should put in place an emissions trading scheme. In sectors of the economy together accounting for most emissions, it would be illegal to emit greenhouse gas without a permit. Permits, or most of them, would be given free to the people who are currently responsible for the emissions.

If you must own a permit before you can emit greenhouse gases and you restrict the volume of the permits—as is necessary if this is going to be the mechanism through which you gradually reduce your total emissions—then those permits to emit are going to have high value.

Economic analysis suggested to me that, in the industries producing goods and services for the domestic market, like electricity, this would lead to a very large income transfer from ordinary households to the corporations that were responsible today for large quantities of emissions.

The people who hold those permits have something of value. They'll have valuable assets. They will be, if you like, in a preferential

position in relation to that right to emit greenhouse gases. Anyone else competing with them will have to go into the market and buy permits.

The established producers have been given permits free. Now, in a market situation it would be unreasonable to expect the behaviour of established producers of emissions-intensive goods, on pricing or on investment, to be affected by the fact that they had received for free their permits to emit greenhouse gases. They will charge the value of the permit in setting the price of, for example, electricity or petrol for the domestic market. They will do that whether they have been given their permits free, or have paid for them. That's what economic theory would lead you to expect in a competitive market.

I have a fair bit of faith in economic analysis. Some people don't. For those who don't trust economic theory, I suggest looking at the experience of other countries that have introduced emissions trading schemes. When the Europeans set up an emissions trading scheme a number of years ago, they went about things in the way that Prime Minister Howard's committee suggested that Australia went about them. They gave free permits to the big energy companies supplying domestic markets. The people who were responsible for that bit of European public policy might have believed the energy companies when they said, 'Give us the permit free and we won't charge much for electricity'.

What happened next was not surprising, at least to the economist. The price of the permits was factored into the electricity price. Every time the carbon price went up a bit, which is a necessary part of the process of reducing greenhouse gas emissions, households paid more. They became poorer and the profits of the energy companies went up. This wasn't compensation for having to buy the permits. This was actually a transfer of wealth. The market capitalisation of the big energy companies on the London, Berlin and Paris stock exchanges increased. It was a wonderful time to be a shareholder in those companies. But this transfer from ordinary households to the big energy companies poisoned the scheme politically. People began to be resistant to the idea of a rising carbon price because it simply led to a transfer of income from ordinary households to the energy sector. That is one of the reasons why, under political pressure, European countries started giving out more permits. That led to, at

one stage, a collapse in the carbon price nearly to zero. So the European emissions trading scheme for a while didn't do the job that it was supposed to do.

It was always naive to think that giving a free permit to an emitter would affect pricing behaviour. There is no more reason to expect that giving a free permit to an energy company would have an effect on pricing of petrol or electricity, than to expect that someone who inherits a house from a deceased relative would take into account the fact that that house had been received at no cost, in setting a sales price. Some things don't usually happen in a market economy.

The Europeans have learnt their lesson. At least, the Treasury bureaucrats in Berlin, London and Brussels, have learnt their lesson. The recent green paper on the post-2012 arrangements, the post-Kyoto arrangements for Europe, anticipate that all of the permits for the domestic energy sector will now be sold by auction. No doubt there will be political resistance to the European proposal. No doubt lots of arguments will be developed to justify free issue of permits to domestic energy companies. The recommendation from the officials in Brussels and Whitehall and Berlin, is based on analysis as well as experience. The Treasury bureaucrats who are responsible for the post-2012 proposals would have had a clear idea five years ago of the consequences of giving permits free to domestic energy companies. They found it difficult to make the case then. Now their analysis is supported by the experience of what actually happened.

When we started our work on climate change policy in the middle of the year, I was struck by the absence of consideration, of income distribution matters. Since the middle of last year, our review process has come some way to putting onto the public stage a range of ideas for handling income distribution effects of mitigation policy. The climate change review so far has gone further on the international elements, and as you will have seen, especially the international story in the Interim Report. On domestic distribution, I think we've succeeded in having the idea accepted that deliberate measures will be required to counteract the potential perverse income distribution effects of an effective emissions trading system. In the time leading up to our final report in September, we will seek to refine our thoughts on measures to counteract adverse income distribution

effects associated with the introduction of the emissions trading scheme.

Unmitigated climate change—not doing anything about the problem—would do great damage to the poorest in our community. The rich can look after themselves reasonably well, even in an environment damaged by climate change. Putting a price on carbon runs the risk of damaging the welfare of low income Australians immediately but also through the structural pressures that it puts on the economy. An effective emissions trading scheme will affect differentially various sectors of the economy and various geographic regions. It is possible that it could hurt some industries in ways that did substantial damage to some communities. We need to recognise these possibilities, and have polices to manage their consequences.

The centrepiece of climate change mitigation in Australia is going to be the introduction of a national emissions trading scheme. It's not the only way to go about dealing with mitigation. A lot could be done through regulation. That has been the main focus of the Californians, although Governor Schwarzenegger wants to take that further and introduce an emissions trading scheme soon. Californian regulation has significantly reduced the growth of energy consumption.

We are not going to be able to maintain the steady mitigation policies over long periods of time that are necessary to get our emissions down, unless our community thinks that the policies are fair. For that reason, getting the income distribution effects of the emissions trading scheme right is an essential part of getting the scheme itself right. Looking after low-income Australians is not part of the design of the scheme itself, but the success of income distribution policies will determine whether the intrinsic operations of the emissions trading scheme will work.

The world is not going to get the global warming problem under control unless the sorts of issues raised in this volume this are successfully discussed in many, many countries. Global warming is not a problem that Australia can solve on its own. It is worthwhile for Australians to make a major mitigation effort only because our making that effort is essential to the world making the necessary effort. There is not going to be any action on reducing greenhouse gas emissions by China or India or Indonesia or Brazil unless all

developed countries are making a major effort. If developed countries are making effective efforts in mitigation, it will still be a challenge to recover commitments to adequate emissions constraints from all major developing countries. Without all developed countries making major efforts, there is no chance of developing countries making the necessary effort.

So developing an equitable international framework is another essential condition for dealing with the global climate change problem and the essays collected in this volume make a valuable contribution to thinking about this problem.

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