Ethical Problems With Cost Arguments Made In Opposition to Climate Change Policies:

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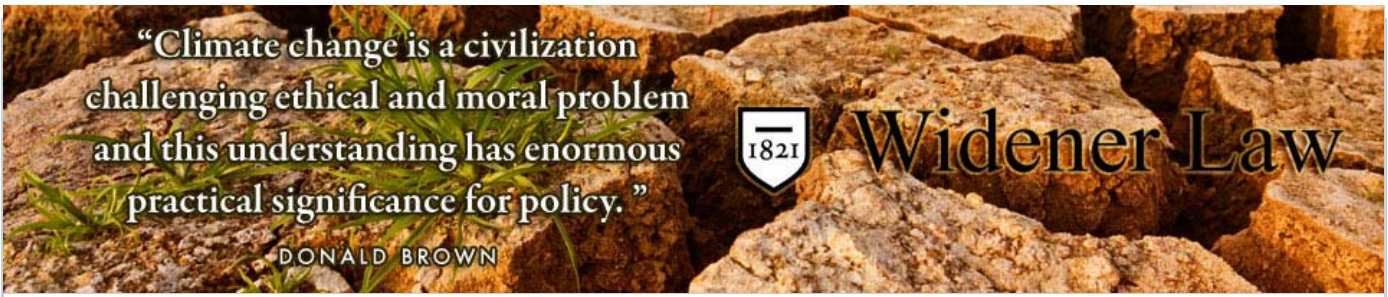

Ethical Problems With Cost Arguments Made In Opposition to Climate Change Policies: The Failure To Value The Harms That Will Be Caused by Doing Nothing.

I. Introduction

This post is one of a series of entries that has looked at ethical problems with cost arguments made in opposition to the adoption of climate change legislation and policies.

As we have seen in prior ClimateEthics' posts, with the possible exception of arguments that claim the science of climate change does not support action on climate change, by far the most common arguments against action on climate change are claims that proposed climate change policies should be opposed on grounds that they cost too much.

These arguments are of various types such as claims that climate change legislation will destroy jobs, reduce GDP, damage specific businesses such as the coal and petroleum industries, increase the cost of fuel, or simply that proposed climate change legislation can't be afforded by the public. This post is one of a series that identifies ethical problems with these cost arguments made against the adoption of climate change policies and legislation.

In the entry entitled **Ethical Problems With Cost Arguments Against Climate Change Policies: The Failure To Recognize Duties To Non-citizens,** ClimateEthics explained how cost arguments were often deeply ethically problematic because they ignored duties, responsibilities, and obligations to others to reduce greenhouse gas emissions. That is, cost arguments usually appeal to matters of self-interest and ignore responsibilities to others including the tens of millions of poor people around the world that are already suffering from climate change impacts or are vulnerable to harsh climate change impacts in the future.

In an entry entitled **Ethical Issues in the Use of Cost-Benefit Analysis of Climate Change Programs<** ClimateEthics explained why cost arguments were also ethically flawed because they often:

> *(a) ignore the fact that costs would be imposed on those who are causing the problem yet the victims of climate change that would benefit from taking action are some of the poorest people around the world, and thereby are inconsistent with theories of distributive justice; and*
>
> *(b) implicitly rely on "preference utilitarianism," a justification for non-action on climate change that is ethically flawed when applied to climate change for*

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several reasons.

In another recent post entitled recent post, ClimateEthics explained why costs arguments could not be made against climate change policies if greenhouse gas emissions led to human rights violations **Climate Change Policies: Increased Costs May Not Justify Human Rights Violations**,

This post now looks at how cost-benefit arguments made in opposition to climate change policies are also often ethically problematic because they fail to accurately identify the full damages of doing nothing on climate change.

The failure to adequately deal with the full costs of doing nothing stems from two problems with how the values of the benefits of taking action are calculated.

First cost arguments fail to fully identify all potential harms and damages from climate change.

Second cost arguments usually discount the values of future benefits to be experienced from climate change, an approach which raises numerous ethical problems.

This post looks at ethical issues that arise because of the failure to fully identify and appropriately value all potential damages and harms that will be avoided if climate change policies and programs are enacted. A later post will look at the problems of discounting future benefits.

Ii. Ethical Failure To Identify The Values of Harms And Damages Avoided By Climate Change Policies.

As we have explained before, although many arguments made against climate change policies claim that climate change policies and programs are just too expensive without comparing the costs of action to the benefits of taking action or the value of the harms avoided by the action under consideration, most cost arguments against climate change are at least implicitly a claim that cost of taking action outweigh the benefits to be experienced if the action is taken. In other words, most cost arguments are implicitly a form of cost-benefit analysis (CBA).

Most proponents of CBA come to very different conclusions about what are the costs and benefits of climate change strategies. These differences are to be expected because as we shall see, Chas of climate change are largely assumption driven, not determined by unambiguous facts about costs and benefits of climate change policies. On some issues the differences among practitioners of CBAs in regard to the factual conclusion about magnitude of costs and benefits of climate change policies are attributable to differences in approaches to discounting future benefits, while other differences are explainable by different assumptions about the scope and magnitude of climate change impacts, differences in modeling assumptions, differences in how to value harms avoided by climate change policies, and even differences in assumptions about which policy interventions will be followed to reduce greenhouse gas emissions.As we will see in a later post, differences in which discount rate followed to assign a value to future benefits alone can create huge differences in the value of harms avoided by climate change policies.

And so, different CBAs have reached wildly different conclusions about the appropriateness of spending on climate change programs as a matter of maximizing efficiency. These huge differences stem from the fact that climate change is a problem that creates huge challenges about how to quantify both costs and benefits because of large uncertainties about the nature, magnitude, and timing of costs and benefits as well as the need to make normative assumptions about numerous

variables in actual cost and benefit calculations. That is both calculations of costs and benefits raise challenging methodological questions which raise ethical issues.

The “benefits” of global warming programs are generally understood to include the damages to human health and environment that would otherwise have been caused if the under consideration are not implemented The “costs” considered in CBAs relating to climate change are usually the costs to individuals and society of taking action to prevent climate change.

To perform CBA calculations for climate change, the person doing the assessment must determine which consequences of a global warming will be considered, whose assessments of harms and benefits will be allowed, and what time scale will be used in assessing the consequences. The CBA analysis therefore often rests upon imprecise judgments that are prior to the CBA calculus itself. These decisions cannot avoid making value judgments about how conservative the assumptions should be. Yet the CBA on the surface pretends to be “value-neutral.”

CBA originally was developed as a technique to compare alternative building projects whose costs and benefits would be experienced usually in a time span of no more than 15 to 25 years and whose benefits were relatively easy to quantify because only direct costs and benefits of the project were considered. (Munisange, et al 1996) . However, determining the benefits of global warming programs is a much trickier problem than most other public policy programs for which CBAs have been prepared because of its technical complexity of determining potential damages, the type of things that may be damaged by climate change, and the inability to determine when and where specific damages will occur. Determining the value of climate change impacts is particularly difficult because of the large time spans for which climate damages may be experienced and the great scientific uncertainties that must be faced to determine the actual timing, magnitude, and impact of global warming.

To determine impacts of future climate change, and therefore the value of harms that will be avoided if climate change policies are enacted and implemented, we need to know the amount of emissions that will be released in the future, how much of these emissions will wind up in the atmosphere, how much temperature change will be caused by increases in atmospheric levels of greenhouse gases, whether temperature changes will cause further non-linear responses in the ocean, terrestrial, and atmospheric systems, what impacts to human health and the environment will be caused by these changes in climate, and on what scale these impacts will be experienced. Many of these requirements for determining the benefits of climate change policies are not only not known but unknowable at the time the CBA calculations are made. To deal with the unknowable magnitude of climate change program benefits, CBA calculations make numerous assumptions which must make unavoidable value judgeship about how conservative these assumptions should be. If for instance, given that doubling the concentration of greenhouse gases in the atmosphere to 560 ppm CO2 equivalent may cause temperatures to rise between 2 and 9 degrees Centigrade, the CBA must make an assumption about temperature changes that will greatly determine the harshness of impacts. Then the assessor must make a judgment about what impacts will be experienced by different temperature changes. These assumptions raise values questions,yet these value judgments are not only not disclosed, they may be unknown to the person performing the assessment.

That is, for instance, although Africa will likely suffer in the is Century adverse climate change impacts of several different kinds including droughts, floods, increases in vector-borne and tropical diseases, loss of agricultural productivity and water supply, we don’t know precisely the location of the magnitude of these impacts.

Although we know that human activity is changing the climate, we do not know for

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sure the magnitude and timing of future warming and therefore the harms that could be avoided by the climate change policies that are under consideration to places like Africa. There is simply know way of knowing for sure.

Because of some feedback mechanisms in the climate system, such as clouds, whose effects on future climate is not well understood, it is impossible to know for sure the amount of damage that will be caused by human-induced global climate change. Yet CBA calculations must make assumptions about which damages from global warming will occur and then make assumptions about the value of these impacts. As we have seen in earlier posts there are huge ethical questions that arise when all values are reduced to amounts of money determined by 'willingness-to-pay" that certain harms will be avoided.

Many of the CBAs that have been performed for global warming assume that the climate will respond to increased greenhouse gases in a smooth mostly linear fashion and that the damages will be similar to those described by the IPCC. (Shogran and Toman 2000:26) For this reason, the CBAs that have been developed to guide climate change policy have assumed that the only negative impacts that will be experienced from human-induced climate change are those that come from mostly smooth linear responses of the climate system to increasing atmospheric concentrations of greenhouse gases. (Pierce et al., 1996)

Yet many scientists believe that much more catastrophic and rapid non-linear responses are possible. These catastrophic impacts of global warming are sometimes referred to as "climate surprises." They include rapid changes in ocean circulation patterns, rapid increases in sea level rise due to break up of the Antarctic ice shelf, non-linear increases in atmospheric greenhouse gas concentrations caused by sudden releases in carbon from permafrost melting and forest dieback, and unexpected saturation of carbon "sinks" that will rapidly increase atmospheric levels of carbon. The scientific disputes about potential catastrophic impacts of global warming have largely been focused on the probability of "climate surprises." That is, these "surprises" are plausible because it is well known that the climate system is capable of rapid non-linear changes which could create much greater and more rapid global warming impacts than those identified in the IPCC reports that for the most part assume that the climate system will respond gradually and smoothly. Although the scientific community agrees that these rapid and non-linear climate responses could occur, the CBAs that have been calculated for global warming usually have not assumed that any catastrophic impacts will occur in the foreseeable future. (Schnieder, 2000: 59)

In fact, the most influential CBAs relied upon by climate change program critics assume that no large sudden non-linear changes will take place even though it is possible that we could surprise in this century. (Schnieder et al, 2001: 60) Yet, because rapid non-linear responses are possible, any CBA that does not include identification of potential catastrophic global warming damages is making a value judgment that is hidden in the CBA calculations and biases these calculations in a way that underestimates the potential benefits of global warming programs.

Particularly ethically troubling in the case of climate change is how CBAs have dealt with these potentially catastrophic climate change impacts. For instance, some climate models predict as much as 6 degrees C warming by the end of this century and as one economists honestly admits the impacts of 6 degrees C warming is "located in the terra incognita of what any honest modeler would have to admit is a planet Earth reconfigured as science fiction. " (Weitzman, 2007:716) Alder comments on this problem by noting: " It is simply absurd to attempt to measure these impacts in monetary terms." (Alder 2009: 479). Yet ethics would require that we seriously consider all possible catastrophic outcomes, a significant limitation of how CBAs have usually characterized and considered the benefits of climate change policies.

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CBAs of global warming calculations must also rely upon unproven and hidden assumptions about what costs will be entailed by global warming programs. To determine costs of global warming programs, the assessor must make an assumption on which mitigation strategies and programs will be implemented and what the costs of each program will be. Along this line, according to one observer of global warming CBAs, "most of the analysis of costs in national studies of the impact of the Kyoto Protocol on the United States assume that the country will rely primarily on a narrow range of legal instruments, especially emissions trading and taxes on CO2 emissions (Dernbach, 2000: 10934)." That is, for instance, the cost analysis in CBAs that have looked at the acceptability of the Kyoto Protocol assume that there will be significant costs from a very limited number of reduction strategies, all of which rely upon economic instruments that use higher costs to reduce demand for polluting energy.

Yet greenhouse gas reduction strategies and programs could be implemented that have much lower costs than those assumed in the Kyoto focused CBAs. In fact, it is well known that some global warming programs could be implemented with savings to those who invest in them. (Dernbach 2000: 10948) For example, every dollar spent in California's electrical demand side management program in recent years has saved more than two dollars. (Dernbach 2000: 10975) For this reason, there is no way of calculating actual costs of most global warming programs without making assumptions about which method will be employed to achieve greenhouse gas emissions reductions and what the cost will be of the reduction method assumed. For this reason, industry and government analyses of costs of global warming programs have diverged greatly. The choice of which cost assumptions to make in a CBA must be understood to entail a value judgment about how optimistic or pessimistic the assumption should be. Yet the values assumptions about methods that will be deployed and their associated cost are usually hidden in the calculations that constitute the CBA while the CBA is often understood to be "value-neutral."

In performing its cost-benefits analysis of the Kyoto Protocol, the Clinton Administration itself acknowledged the following major uncertainties in its methods for determining costs: (United States, 1998)

- *First are the uncertainties that remain over the operational aspects of the Kyoto Protocol,*
- *Second are the inherent limitations of available models to analyze the costs of abating emissions,*
- *Third, it is extremely difficult to quantify the long-term economic benefits of climate change.*

In the face of such uncertainty about global warming impacts and their costs, every CBA that does not display a range of benefits that will be avoided or costs entailed by climate change programs is making hidden value assumptions, a methodological problem that is ethically dubious. As we have seen, particularly troublesome in this regard are how CBAs quantify potential catastrophic impacts of climate change, a problem that leads to a false sense of precision about something which is incalculable.

III. Conclusions

As we have seen it is virtually impossible to determine in a value-neutral way the values of costs and benefits that will be experienced by the adoption of climate change policies. Yet numerous cost arguments against climate change policies are made without disclosing these deep methodological and ethical problems with quantifying costs and benefits. As we have seen in prior ClimateEthics posts on CBA analysis, these ethical issues raise additional ethical questions including issues of procedural and distributive justice. Moreover, most cost arguments assume that only

the self-interest of the government making the cost and benefits calculations count: that there is no need to consider the obligations, duties, and responsibilities to others to reduce the threat of climate change. For these and other reasons discussed in prior ClimateEthics posts on climate change, there are deep ethical problems with most cost arguments made against climate change policies. Yet, policy makers, the press, and advocates and opponents to climate change policies rarely identify these ethical problems. As we have noted before, the ethical dimensions of climate change policies are the crucial missing element in the climate change debate in most of the world.

As we have noted before, of course there is a need to determine how to reduce climate change impacts at lowest possible cost. Therefore cost questions are relevant to climate change policy formation. Huge ethical questions arise, however, when cost arguments are used as justification for not taking action to reduce the threat of climate change.

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