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Climate Ethics

Ethical Analysis of Climate Science and Policy

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The Stern Report Acknowledges Certain Potential Ethical Issues Created By Standard Economic Analyses Of Climate Change Policies

By DONALD A BROWN on January 20, 2007 6:24 PM | [0 Comments](#) | [0 TrackBacks](#)

On October 30, 2006, Sir Nicholas Stern, Head of the United Kingdom Government Economics Service and adviser to the UK government on the economics of climate change and development, issued a report on the economics of climate change that has received world-wide attention. (Stern 2006). The 700-page report is the most comprehensive economic analyses of climate change yet and is widely being cited for its claim that climate change could push the world into a deep global economic recession. According to the report, the costs of stabilizing climate change, although not trivial, are significantly less than the costs of delay in taking action.

The report found that unchecked climate change could lead to losing at least 5 percent of global gross domestic product each year (Stern 2006, vi). According to the Stern analysis, if we take into consideration the reasonable possibility that there could be unexpected abrupt climate changes, the loss to the global economy could be as much as 20 percent of GDP (Stern 2006, vi). Yet, taking action now would cost just 1 percent of global gross domestic product (Stern 2006, vi).

The Stern report recommends quick action on climate change on the basis that total global welfare will be maximized if action on climate change is taken now. In basing its recommendations on total global welfare, this report is similar to other cost-benefit analyses of climate change policies in that its conclusions are based upon the value of measurable consequences of policy options or inaction.

Although lauded by most commentators, the Stern report also has been criticized by some economists largely on the basis of its approach to discounting future benefits. (See, e.g., Nordhaus 2006.) Despite these controversies about discounting, the Stern report acknowledges certain potential ethical issues with standard economic analysis of climate change policies.

Cost analyses of climate change policies can help policymakers understand which solutions are cost-effective and what will be the economic impacts of climate change policies. These economic analyses, therefore, can provide valuable information to policy-makers. However, standard cost-benefit analyses of climate change policy options used as the basis for climate-change policies have been criticized on a variety of ethical grounds (Brown et al, 2006) Notable in the Stern report is not only its express acknowledgement of some of these potential ethical issues of standard economic analyses but also its inclusion of some recommendations about how to deal with some of the ethical issues. For this reason, the Stern report can be understood as a positive step in reconciling cost-benefit analyses of climate change policies with potential ethical constraints on the use of standard economic analyses alone to determine climate change policies.

The report identifies several types of ethical issues raised by standard approaches to cost-benefit analysis used as prescriptive policy tool that include:

A. Certain general ethical constraints on the use of cost-benefit analysis as the sole prescriptive guidance for climate change policy-making include:

â€¢ In addition to welfare considerations, policy-makers may need to consider ethical perspectives that are based upon equity, justice, and rights (Stern 2006, 23).

â€¢ Questions of intra- and inter-generational equity are centrally important issues for policy-makers to consider (Stern 2006,23).

â€¢ Climate change policy analyses should consider ethical judgments and presumptions that are not usually considered in standard economic approaches to climate change (Stern 2006, 28).

â€¢ Standard use of cost-benefit analysis that assume a single government decision-maker raises certain ethical questions including the need of those who use cost- benefit analyses to consider how people in one country should ethically respond to the impacts of their actions on others (Stern 2006, 29).

â€¢ Notwithstanding the results of any cost-benefit analysis of climate change policies, if rights theories are applied to climate change, there could be a moral, if not legal, responsibility to



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reduce the threat of climate change that has particular force on those groups or nations whose past consumption has caused climate change (Stern 2006, 42).

â€œ If rights to protection from adverse impacts of climate change are taken seriously, it could be argued that all have the right only to emit some very small amount of greenhouse gases, equal for all, and that no-one has the right to emit beyond that level without incurring the duty to compensate (Stern 2006, 42).

â€œ Because climate change is a global problem, policy-makers in different countries cannot choose their own policies on atmospheric stabilization targets because both the distribution of efforts to reduce emissions will be inefficient and inequitable (Stern 2006, 288).

â€œ There are large uncertainties in economic models of impacts particularly in regard to possibilities of the impacts from high temperatures and abrupt and large-scale changes in the climate system which are the greatest risks we face from climate change yet these are the areas that we know least about scientifically and economically. For this reason, the models should not be taken as illustrative, not as prescriptive (Stern 2006, 144).

B. Particular features of climate change that raise ethical questions include:

â€œ The fact that climate change is truly a global problem with highly inequitable impacts raises ethical issues. This inequity stems from the fact that poor countries and poor people in any given country suffer the most from climate change not withstanding the fact that rich countries are responsible for the bulk of past emissions (Stern 2006, 28).

â€œ Certain things that will be harmed by climate change require that cost-benefit analyses expand the understanding of welfare to consider harms and benefits to entities not always included such as education, health, and goods appearing at different dates and in different circumstances (Stern, 2006, 28).

â€œ Because impacts of climate change will be on future generations and other nations, the use of cost-benefit analysis raises very firmly questions of rights (Stern 2006, 41).

â€œ The unavoidable need of some to adapt to adverse climate change impacts because it is too late to prevent some harm from climate change raises important ethical questions (Stern 2006, 37).

â€œ Ethical questions about climate change policies arise because developing countries are particularly vulnerable to the physical impacts of climate change because of their exposure to an already fragile environment, an economic structure that is highly sensitive to an adverse and changing environment, and low incomes that constrain their ability to adapt (Stern 2006, 93).

C. Frequently used cost-benefit calculation methods that aggregate harms and benefits create ethical issues that include:

â€œ Cost-benefit analyses procedures that determine how benefits of climate change policies are aggregated (i) within generations, (ii) over time, and (iii) according to risk, create ethical issues that need to be considered by policy-makers (Stern 2006, 28).

â€œ Additional ethical questions arise from aggregation methods because climate change consequences for poor people in different circumstances can be distinctly very different and these differences must be faced directly (Stern 2006, 30).

â€œ Aggregating social utility across individuals to come up with a measure of social welfare is not always consistent with ethical perspectives based upon rights or freedoms (Stern 2006, 30).

D. Standard economic measurement methods of harms and benefits when applied to climate change create certain ethical problems that include:

â€œ Expressing adverse impacts from climate change on human health and environmental quality in terms of changes in incomes alone creates certain ethical problems (Stern 2006, 30).

â€œ Using "willingness-to-pay" as a measure of value of climate change harms could be ethically problematic (Stern 2006, 31).

â€œ Modeling costs of climate change impacts over many decades, regions and possible outcomes demands that we make distributional and ethical judgments systematically and explicitly (Stern 2006, 143).

â€œ Many ethical systems would reject using "willingness-to-pay" as the measure of human life usually used in the models that wind up put much higher values on human life in rich countries than in poor countries (Stern 2006, 148).

â€œ Scientific uncertainty about the impacts of climate change at different atmospheric stabilization goals is an argument for more, not less, demanding goal because of the size of the adverse climate change impacts in the worse-case scenarios (Stern 2006, 284).

E. Procedural justice questions that follow from the use of cost-benefit analyses include:

â€œ The fact that future generations are not represented in policy decisions based upon welfare maximization creates certain ethical problems particularly in regard to how economic analyses usually discounts the value of future benefits (Stern 2006, 31).

Because of these acknowledgements of the ethical limitations of standard cost-benefit analyses, the Stern report can be understood not only as a strong economic argument for urgent action to reduce the threat of climate change but also as an argument for the urgency of including ethical analysis as an essential analytic tool and an indispensable augmentation to economic arguments for climate change policies. The Stern report is to be lauded for this conclusion, however to implement these insights policy makers will need to seek the advice of those who are knowledgeable about ethical issues raised by climate change.

To deal with some of the ethical criticisms of standard economic analyses of climate change

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policies, the Stern report not only identifies these ethical issues, it also includes some economic analyses that could help policymakers deal with these ethical issues. For instance, because of the ethical problems with aggregating harms and benefits across space and time, the Stern report disaggregates some harms and benefits across regions of the world and in time. This, at least, helps policymakers who acknowledge ethical obligations to take into account harms to others regardless of changes in aggregate global welfare. Armed with this information, policymakers could consider harms to those who are most vulnerable to climate change in developing policy. Yet, such a strategy does not completely deal with the ethical concerns particularly if the policy maker decides to ignore harm to others on the basis of economic considerations. If persons have duties not to deprive others of life, health, or liberty without their consent, then welfare considerations cannot justify policies that kill people or damage their health.

Although the Stern report identifies ethical issues that arise in the use of economic analyses of climate change policies, it is not complete. Additional ethical issues that policy makers need to be mindful of are set out in the White Paper on the Ethical Dimensions of Climate Change (Brown et al. 2006). <http://rockethics.psu.edu/climate/whitepaper-intro.htm>

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