

Which moral principles, if any, should be used in allocating carbon dioxide emission rights across different states?

“It is a mistake,” he said, “to suppose that the public wants the environment protected or their lives saved and that they will be grateful to any idealist who will fight for such ends. What the public wants is their own individual comfort. We know that well enough from our experience in the environmental crisis of the twentieth century... don't ask me to stop the Pumping. The economy and the comfort of the entire planet depend on it. Tell me, instead, how to keep the Pumping from exploding the Sun.” (Asimov 1972:50)

## Introduction

In addressing this question, I will take it as read that the rate at which carbon dioxide (CO<sub>2</sub>) emissions is rising is unsustainably high, in that if current trends continue, a serious threat is posed to climate stability, and, if unchecked, changes in weather patterns will occur that will have severe impact on people all around the world. While it may be argued that one strategy would be to adapt to the changing weather conditions rather than attempting to reduce CO<sub>2</sub> output, I will assume agreement that this is not considered a viable option. In other words, the question to be addressed is: given agreement that CO<sub>2</sub> emission levels must be reduced, or at least controlled, what principles of fairness or morality govern how we should decide to do this?

## A Finite, Global Resource

Based on the assumption that we treat the earth's annual ability to cope with CO<sub>2</sub> as a finite natural resource, we need to focus on how that resource may be exploited fairly. Unlike other natural resources for which there is contention, it has no geographical affinity: while arguments about who should be permitted to make use of the water that flows down the

Nile may be based on the locality of its source, or which countries lie in its course, the atmosphere is a global phenomenon, and so does not naturally “belong” to any particular location or state. This cuts both ways: while no nation can claim an exclusive right to deplete the resource, neither can anyone abdicate responsibility for playing a part in its management.

### Per Capita Quotas

The most obvious simple way to share a global resource fairly would seem to be to divide it equally between all members of the global population. This is what Gardiner refers to as “Equal Per Capita Entitlements”. Specifically, we work out the total capacity of the environment to absorb CO<sub>2</sub>, and derive a per-person allowance based on the population of the globe at some point in time. Individual states are allocated notional allowances based on their populations, and are free to treat those allowances in whatever way they think best – including trading them with other states (as permitted by the Kyoto Protocol), or devolving responsibility to smaller groups within the state. However, while on the face of it this may seem fair, there may be grounds on which such a proposal could be challenged. It may be, for example, that people living in cold or remote environments have a disproportionate reliance on CO<sub>2</sub> producing technology (for heating or transport) than people who live in tropical areas, or conurbations. On a larger scale, it may be the case that countries in the developing world are at a disadvantage when it comes to reducing CO<sub>2</sub> emissions, since they do not enjoy the same level of technology available to more advanced

nations, and so the relative cost to them of conforming to any quota system would be greater. Perhaps the notion of *per capita* quotas itself could be challenged: for example, it may be seen as unfair that a small but populous country has more right to pollute than a one which is much larger but with a sparse population. I do not think that any of these arguments is fatal, but it shows that the *per capita* proposal must be defensible.

### More radical approaches needed

Unfortunately, recent estimates suggest that the amount of CO<sub>2</sub> presently being generated worldwide already exceeds the earth's ability to cope: "The report underscored that greenhouse gas abundances continued to increase in the atmosphere and that very substantial cuts in emissions would be required for the stabilisation of greenhouse gas concentrations in the atmosphere" (IPCC 2001:22). In other words, even if a mechanism (perhaps *per capita*) could be agreed upon, and trading of emissions quotas were to take place, there is no way that this approach alone could resolve the issue of environmental damage. Any trading mechanism based on current levels of CO<sub>2</sub> emission will be insufficient, since there is no "slack in the system" at the moment. It is unavoidable that some people will need to reduce the amount of CO<sub>2</sub> that they currently generate. What further criteria could be used then, to decide quotas for CO<sub>2</sub> emission rights, and to provide a moral framework to encourage states to reduce their emissions?

## Types of Effect

One way to approach this is to consider the effects of not curbing emissions. I will separate these into four categories: local, remote, short-term and long-term. Local effects are those which directly impact the emitter; remote effects are those which have either no impact, or only an indirect impact. Short-term effects are ones which can be expected to occur within the lifetime of the emitter, and long-term those which affect future generations.

## Local and Remote Effects

In some cases, it may be argued that there is a distinction between moral responsibility for local effects and remote effects. For example, if a country on the other side of the world is experiencing famine due to poor government policy, there may be a positive duty to help them (it would be commendable for us to do so), but there is no negative duty (we are not doing wrong by not helping, since the problem is not one that we have created). However, in the case of global warming, this distinction cannot be made: it may so happen that our country is fortunate not to suffer hurricanes and floods, but those countries which are can legitimately point to our actions in producing excess CO<sub>2</sub> as being at least partly responsible. Moreover, it is quite possible that a country suffering as a result of changes in weather patterns may not be capable of taking action to reduce CO<sub>2</sub> emissions to any significant extent. In other words, given that the problems caused by excessive CO<sub>2</sub> emissions are global, then it makes little moral difference whether the effects are local or global.

## Short-Term and Long-Term Effects

Current research suggests that global warming will have both short- and long-term effects.

So far as the long-term effects are concerned, it is arguable whether we have any moral responsibility towards future generations: we cannot know exactly how things will turn out for them, and if the world is made significantly worse off by our CO<sub>2</sub> emissions, the individuals who suffer the consequences will not be in a position to exact retribution on us for harm that we are judged to have caused to them. Are there any moral justifications for ignoring such effects? One such might be a consequence of what Parfit:1982 refers to as the “Future Individuals Paradox” (FIP), namely that actions taken now determine the identity of individuals not yet born. Specifically, while the earth's climate may have deteriorated in a hundred years time, the set of individuals experiencing that climate will be different from the set that would otherwise have existed, should we now take action to address CO<sub>2</sub> emissions. Since our actions, while admittedly having a negative effect on climate, have brought into existence individuals who otherwise would not have existed at all, it can hardly be said that we have made their lives worse than they would otherwise have been; in fact, we have arguably improved their lot, assuming that existence is preferable to non-existence.

In my opinion, the FIP, while interesting, does not help us to establish moral guidelines: assuming for the sake of argument that our actions now cause a different set of individuals to come into existence, then even if we have improved their lot, it presumably must be the

case that we have had a corresponding deleterious effect on individuals who we have caused not to exist. And in any case, it seems just as reasonable to argue that the course of history has a momentum that in the long term overcomes the effects of any actions we may take: that there is a kind of “temporal inertia” at work, and that nothing we do can affect the identity of persons in the far future. So while it may be the case that long-term effects of climate change are a cause for concern, it is difficult to construct an argument on purely moral grounds for taking action to mitigate such long-term effects.

In summary, in dealing with the problem of CO<sub>2</sub> emissions, we need to take into account the facts that the moral obligations are based on the short-term effects, and that these obligations fall on all members of the global community, not just those affected by adverse weather conditions.

## Conclusion

Given what has been said, what are the moral principles that can be used to allocate CO<sub>2</sub> rights? In my view, while the *per capita* approach may be rather blunt an instrument, there is no fairer way to attack the problem. The issue of climate change is sufficiently urgent that action should be taken now to deal with it. It has been shown that an argument can be made that states have a negative duty to address the problems, without having to appeal to the long-term effects of emissions. Although it may be the case that some unfairness results by the implementation of a simple system, the benefits of doing so outweigh any disadvantages, and the argument should be made that once the system has been

implemented, it can be tailored to account for anomalous effects (such as people living in cold or remote areas).

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