

Commodifying Carbon: The Ethics of Markets in Nature

Workshop summary. 16 July 2007

Osler McGovern Centre, Green College, University of Oxford

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Workshop Overview

Hosted by the James Martin 21st Century School, and organised by the Environmental Change Institute and the Programme on the Ethics of the New Biosciences, the workshop focused on the global environmental economic paradigm known as the 'carbon economy', specifically the treating of carbon emissions or information about carbon emissions as a tradable commodity, and whether the creation of a market in carbon emissions would be the most effective way to achieve the crucially important environmental goals of the 21st Century. **The key question addressed at the workshop was whether some form of market in carbon emissions ought to be adopted.** The ethical considerations of a carbon emissions market took priority in the discussion, in an attempt to adequately answer the question.

Format

The workshop gathered 43 participants from the disciplines of philosophy, geography and environmental science, for a one-day workshop of four themed sessions. Authors were identified and asked to write and circulate a short paper two weeks prior to the workshop; papers presented are listed at the end of the summary, available from the authors upon request. Discussants were given responsibility to summarize the session's papers as well as synthesize key challenges, opportunities and (dis)agreements therein. After comments from both discussants, authors were given opportunity to respond to comments, before the discussion was opened to all participants.

Event organisers

Environmental Change Institute www.eci.ox.ac.uk

The Environmental Change Institute (ECI) plays a leading role in the UK Government's three main climate research initiatives. ECI hosts the internationally-acclaimed UK Climate Impacts Programme; is a core partner in the national Tyndall Centre for Climate Change; and a lead player in the UK Energy Research Centre.

Program on Ethics of the New Biosciences Ethics Unit www.bep.ox.ac.uk

The Program identifies and analyses ethical issues and problems arising in the new biosciences, aiming to provide better knowledge and practical strategies to enable people to lead better lives and reason more critically for themselves regarding the ethical issues confronting them.

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Session 1: The Nature and Ethics of Commodification aimed to clarify the terms of the discussion, the nature of commodification, the ethical issues involved and the consideration of both of these in the context of a market in carbon emissions.

Facilitator: Mark Sheehan

Discussants: John Dupré, John O'Neill, Sarah Whatmore

Authors: Scott Prudham & Max Boykoff, Mark Sheehan, Stephen Wilkinson

John Dupré began by defining the term commodity as being something:

- with a price, accepted by buyers and offered by sellers
- fungible; any instance of a commodity would be exchangeable with another instance
- of instrumental value rather than intrinsic value; the only value being what someone could do with it, with no value in its own right.

Dupré described the act of commodification as turning something not already a commodity, into one. Dupré discussed the criticisms of commodification, that often the values attached to the commodity are displaced by introducing it to a market, such as with prostitution; a market produced from a set of values important and central to our lives, but often considered damaging to the value within that particular practice.

Sarah Whatmore praised commodification as the mechanism which could provide a series of legal procedures and regulated exchange, bringing intense regulation to something not previously subject to regulatory mechanisms.

Commenting on both the Wilkinson and M.Sheehan papers, Dupré noted:

- the distinction between descriptive and normative concepts of commodification. Dupré considered this unnecessary in the context of carbon
- the agreement that the market of carbon emissions would be fungible, with one carbon emission doing as much damage as another, if of the same size
- in conclusion, no particular problem with the commodification of carbon emissions.

The Prudham & Boykoff paper provided an explicitly Marxian perspective of commodification, Marx making the point of commodification under capitalism being qualitatively distinct from markets. Dupré noted that movement from production of use to production of exchange might displace the attempt to see emission reductions as part of an end in itself. In that sense, commodification would introduce other values which might actually be damaging to the initial value being considered, which Dupré related to the Marxian notion of commodity fetishism.

When considering Prudham & Boykoffs' discussion of carbon emission trading around the issues of equity and fairness; Whatmore noted the key aspects of the inequity being the 'polluter pays' principle of enabling those with more money to buy others emissions rights, alongside the inequity of the consumers of carbon emissions, those impacted by the emissions.

In line with both the M.Sheehan and Prudham & Boykoff papers, Whatmore highlighted that the essential part of a discussion on ethics would be the space/time issue involved in emissions trading. Atmospheric systems circulate carbon emissions in particular ways; where they are produced would not necessarily be the place where they have most consequence. Trading would provide an effort to fix the

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source of the emissions, even as they circulate and move on. She went on to relate this issue to 20th Century Philosophy of Law debate, which concluded that management of air, water, and other essential elements could not be effectively managed through the market; being impossible to regulate something which could not be seen and is inherently mobile.

Prudham commented that in the commodification of carbon they were worried about the production of emissions, not just permit trading, and that the production of emissions provided the vehicle for the accumulation of capital, uneven territorialisation, and the geography of the production and exchange of emissions as an economy.

Dupré considered the commodification of permits to emit carbon to be a very curious type of market, creating bureaucratic regulation from the tradition of pumping carbon emissions into a supposed infinite sink. Whatmore stated the importance of considering *what* the permit system would actually attempt to regulate, in terms of the particularity of carbon, its generation, the form in which it circulates, and whether it could be made visible via the processes in which it is produced, circulated and its impact in the world. The carbon market would not promote production; rather create a rationing system, run by a market. Dupré compared the emissions rationing system to that of health care, with the claim of energy consumption being as fundamental to the way we live as maintaining health; everything involving the consumption of energy, with people having varying needs for the commodity: either vital, or due to a wilful construction of a lifestyle surrounding the need.

John O'Neill presented philosophical arguments against commodification, with relation to the arguments presented in the three authors' papers. The arguments are available in downloadable format, so not presented in the summary report.

Session 2: Ethics, Outcomes and Carbon Markets examined the ethics of costs and benefits associated with a market in carbon emissions, the ethical significance of the environmental goals attained by such a market, and whether the attainment would be worth the potential costs.

Facilitator: Dave Frame

Discussants: Diana Liverman, Benito Muller

Authors: Dave Frame, Ed Page, Peter Sheehan

The paper presented by Frame focused on two issues, the scientific questions raised by a carbon market, and discussion of some of the policy failures, setting out scientific preconditions in which the market could work. Diana Liverman highlighted this paper as being unique within the session, raising the question of the type of scientific knowledge needed to commodify carbon, but noted that these could be interrogated further and better linked to specific challenges, such as the scientific questions posed by the commodification of carbon reductions. Liverman felt that the paper raised interesting questions in terms of the ethical position and obligations of scientists who engage in the science of the commodification of the carbon market.

In the paper, Liverman felt that the discussion of policy failures such as poor implementation, design, and goal structure, became very controversial, raising the discussion of blame and the footprint of the middle classes in the developing world. Frame responded that he considered markets to be very efficient, but also amoral,

easily arriving at a good or bad outcome. He suggested that with so many ways of getting it wrong, there must be certainty for scientists over what exactly is being aimed at.

Frame also stated that decisions must be made by the international community on what should be most urgently dealt with; a bundle of gases contribute to climate change, not just carbon. Considering the potential of global warming, Frame raised the contentious question of whether credits should be issued to those who pump sulphur dioxide into the atmosphere on the grounds that it is a good coolant, even though it causes acid rain, highlighting that it would be important to consider how closely all of these issues should be coupled together.

P.Sheehan's paper noted the moral imperatives related to climate change. In response to the papers consideration of global policy structure and the principles of an ideal market, Liverman pointed out that in the case of cap and trade, caps would need to be severe to reduce the risk of danger. She felt that P.Sheehan's paper would need to balance the moral imperatives of what the caps should be versus the political reality of what they could *actually* be, using the example of Kyoto in 1997, where she felt the moral arguments were lost in the discussion. In response to the papers pessimistic evaluation of regulation, Liverman highlighted that California's recent significant achievements on electricity, etc, were not founded on a market, but on regulation; suggesting strict regulation could have much to offer. Benito Muller continued by highlighting that in P.Sheehan's consideration of welfare theory, willingness to pay in advance for a wrongdoing should not give the right to cause harm, and considered this an unsuitable theory in the climate change context.

On discussion of Page's paper, which presented principles on the relationship between policy and equity, Liverman commented that the evolving governance of the market had led to incredible bureaucracy and state intervention emerging around the carbon market, and felt that Page might have made a false contrast in regard to his promotion of the market as more influential than regulation. Further, Liverman suggested that Page should interrogate more the fact that markets were not used to eradicate ozone or lead; the international community concluded that they were dangerous and either banned them or introduced strict regulation. Liverman concluded that if Page felt markets were more effective, then a stronger argument would need to be brought forward within the paper.

Muller claimed to be more optimistic than Liverman when considering trading regimes and their implications. He stated that cap and trade could create more efficient control at a lower cost, alongside the reduction of emissions below the cap, if the permits were banked correctly. Muller also noted that with commodity comes the allocation of property rights, and that countries with a surplus in allocated rights could sell them to make a profit. In his response Page confirmed his scepticism of markets, but he felt a need for both markets and regulation. Page did not consider commodification an allocation of property rights, rather the giving of limited authorization.

Session 3: Ethics and Practicalities of Implementing Carbon Markets

considered some of the ethical issues associated with actually establishing a market in carbon emissions, representing a link between the previous theoretical session and the following session on justice.

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Facilitator: Catherine Bottrill

Discussants: Adam Bumpus, Steve Rayner

Authors: Catherine Bottrill, Emily Boyd & Jessica Boyd, Mike Goodman

Bottrill's paper focussed on the practical implications of creating an ethical carbon market, and considered the implementations of different systems for carbon trading. In response to Bottrill's paper, [Steve Rayner](#) suggested that she should use a more cautious approach when making assumptions on the form of a carbon market. He stated that he knew of no precedent for the kind of effort involved in creating a global 'top down' market in GHG emissions as Bottrill proposed. Bottrill responded by defending her proposition for a global market and highlighted the importance of participation of all players throughout the entire process.

Moving on to the issue of 'free-riding' Rayner warned that national boundaries were very ambiguous when considering the line between redressing the disadvantaged and free-riding, especially in the case of developing countries becoming industrialised. He also noted that the 'midscale' approach suggested by Bottrill hinged on a too simplified comparison to translate back to a carbon market which involves multiple gasses, countries and polluters.

Rayner concluded by adding the following points:

- When considering an acceptable level of pollution, the idea is reminiscent to the notion that there is an acceptable level of risk, and carries the problematic question of 'acceptable to whom'. The issue of the distribution of the pollution should be the issue here, rather than the acceptability of the pollution itself
- The complex question of who is responsible prompts the argument that you can divide emissions into both survival emissions and luxury emissions in the developed world. Rayner had recently roughly calculated that the energy emissions of the Indian middle class by far exceeded those of the whole of Australia. Therefore it would be dangerous to use the nation state as a unit of analysis for any ethical discussion about climate policy. The issue of blame could be extremely damaging when developing the climate change regime; blame is inextricably tied in with issues of coercion and social control, often part of the problem more than part of the solution
- On the point of the extent to which current generations should sacrifice for the welfare of the future, if future generations will be richer than any present one, should the current generation sacrifice at all? If significant redistribution cannot be agreed at present, then achieving them intergenerationally as Bottrill discussed would be impossible.

Discussing Bottrill's point on reducing GHG's and the trade-off for peoples' livelihoods, [Adam Bumpus](#) noted:

- Should the government trade if it will harm the welfare of people in that country? Issues of equity and development and the understanding of intergenerational poverty issues and GHG emissions must be considered in the global context, rather than purely domestic political negotiations
- Relating to practical implementation of upstream, midstream and downstream cap and trade systems, there would need to be a consideration of how targets interrelate to each other. As in the case of the EU emissions trading scheme, the allocation to influential players who could manipulate negotiations and contracts to get more emissions credits led to a price crash, some making a

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- profit, some a huge loss. There would be a need to question how companies would be involved in the market
- On the issue of governments from individual countries implementing the emissions markets – would they be economically ethical to their constituents, or environmentally ethical for the climate? There would be a strong trade off between the two
 - On the point of non-transference of wealth through markets, carbon markets which incorporate international development would be seen as capitalist accumulation. A Marxian perspective would consider the wider circles of accumulation, rather than only using the developing world for products that might be cheaper to produce; it should be used to produce cheaper emissions reductions in carbon, and so subsequently profit from having the available cheap reductions
 - On the notion of asymmetries in information, Bumpus gave an example from his own in Honduras, where the people on the ground of an offset project had no notion that it was related to a commodity being sold in the UK; investors are savvy who have great understanding of the markets they invest in.

Bumpus concluded that with developing countries suggested as the potential sellers of carbon units, the understanding of what selling carbon units really means would need to be unpacked. Alongside carbon markets generating capital flows and revenues, there is an importance in whether those would go directly to country governments, then whether those revenues were allocated or going into corporate hands. How the revenues were gathered and distributed would be important to discuss; also how accountable the states would be to local communities when spending those important revenues.

The Boyd & Boyd paper focussed on the interplay between states and markets, how markets change the states role and responsibility, and what this might mean for democracy. Bumpus discussed the lack of incentives for the state to develop a country, his research in Honduras highlighted that some states witness no form of development from the government, apart from at election times. Rayner noted that the Boyds' discussion on states shirking responsibility and accountability for the climate should have considered the issue of transaction costs, particularly where those costs end up as profit for those in the carbon trading business. E.Boyd questioned Rayner on how it would be possible to gain the information which would provide adequate analysis of transaction costs to highlight inequality.

The Boyds' paper set out three reasons to suggest why reduction strategies have special normative relationships to goals of poverty reduction and development. Rayner commented on the notion of historical responsibility that the acceptance of corporate bodies being essentially 'immortal' (the body being held responsible intergenerationally, rather than individuals), would be an inconsistent principle with the per-capita equality argument used alongside it in the paper. He also commented on whether there were any practical difference between the polluter pays principle and of deep pockets bearing the cost, questioning which principles should be mixed to best deal with the problem.

On the Boyds' highlighting of the concerns arising from the CDM in regard to the strong link between realistic effective planning policies and sustainable development, Rayner commented it was an incorrect notion that with policy on sustainable development, climate issues would be included. Likewise correct climate policy would introduce major problems and inequities in terms of sustainable development.

Finally, the Boyds' question of whether CDM would be acceptable if it would inhibit development, Bumpus raised the issue of whether the markets could be formed in such a way as to be progressive. Rayner posed the question of whether climate change had been considered a sufficiently large threat to scrap all other environmental goals. After two decades of attempting to get climate change taken seriously, the concern of carbon governmentality and the culture of environmental correctness now prevent further work; all other environmental issues being subjugated into the issue of emissions reduction. E.Boyd questioned whether the idea of a trade off between the sustainability agenda and the climate agenda was actually delusive, and whether a hierarchy of agendas was thus being created from something which does not actually exist.

Goodman presented a paper on carbon offsetting, contrasting the model of fair-trade with the ethics of care, discussing the need for uber-regulation within the market and transparent, accountable systems for purchasing carbon offsets. The paper highlighted that unlike the fair-trade market, carbon offset companies were not being clear on where and how the money received from offsets were used, which Bumpus considered to be changing, with a more recent move toward fair-trade carbon and better unveiling of the commodity to see what occurred behind the scenes.

Bumpus also discussed the controversies surrounding the carbon offset market, the difficulties of verification, alongside the issue of individuals buying the ability to not change their behaviour, stating that the ethics of buying carbon offsets were deeply tied to concern over whether development could be incorporated into the carbon. Currently within the market a premium could be obtained for carbon with proven development benefits, internalizing the cost of development into the metric of carbon.

Rayner felt that the carbon market had dominated emissions mitigation discourse, which in turn dominated the discourse of climate change, and that if emissions reductions were considered a serious policy issue, then focus should be placed on larger corporate emitters, rather than the increased responsibility being placed on individuals.

Session 4: Justice and the Commodification of Carbon examined the socio-economic consequences of the introduction of a market on carbon emissions, and whether the potential injustice connected with a market in carbon would outweigh the environmental benefits which such a market would deliver.

Facilitator: Max Boykoff

Discussants: Timmons Roberts, Henry Shue

Authors: Simon Caney, Paula Casal, Richard Starkey, Andrew Williams

Casal's paper contained a philosophical debate on taxing expenditure, rather than taxing income. Both **Henry Shue** and **Timmons Roberts** prompted the question of how this could be enforced; reducing income taxes and increasing consumption taxes was considered highly valid by Roberts, however he felt that the paper was too optimistic regarding steeply progressive green taxes and there would be a need to consider how to reduce the resistance to the tax; noting that individuals consume in large amounts and would wish to continue doing so. Although Roberts agreed with Casal's suggestion that individuals were being overstressed by the need to consume, Roberts felt her arguments would need to be more rigorous on making these taxes

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just; the justice system would need to apply beyond the outcome of more stress or unhappiness.

The paper by Williams compared tradable permit systems and allocation schemes, presenting information on how these revenues could be distributed. Williams wrote that the polluter pays principle would be too simplistic, with groups differing in their resources and backgrounds. However, Roberts argued that the principle was still accepted internationally, and that many national laws have been based on the principle, providing a good grounding for an ethical approach to carbon emissions reductions.

Shue referred to an article by Michael Grubs on 'Seeking Fair Weather', which claimed that fairness and efficiency in the specific form of incentive effects, might point toward different distributions of emissions permits. Shue stated that if distribution principles were levelled specifically to emissions, the principle of distribution of emissions, not rents from emissions, must be applied, which would take away flexibility.

Starkey's paper explored philosophical theories and their implications for the proposal of equal per capita allocations of emissions permits, summarizing that amongst the major theories most would support the practice. Shue posed the question of what should be done with this information, and how the decision would be made about equal per capita emissions.

Starkey also discussed national circumstance, and how different countries and the people within them have differences in terms of how much they need, prompting the question of how much they should be allocated in terms of rights to pollute the atmosphere. Roberts felt that the paper contained an interesting discussion on the evolution of property themes but noted that the paper should not consider that all libertarians would reject conceptions about carbon sinks, as within each group there were always a wide range of opinions held.

Caney's paper drew distinction between the bearers of justice from climate change, the individuals' duty to mitigate against the individuals entitlement not to suffer, concluding that it might not be possible to achieve both, forcing a trade off. The paper also considered useful criteria for the assessment of whether a mitigation policy could provide effective protection from dangerous climate change.

Roberts felt that Caney's points on how to distribute national permits were extremely important, as although distribution could create a resource purse for states which receive higher amounts of permits, many of those countries might not be just, raising the question of whether money should be distributed to them regardless of their lack of democracy. There would need to be consideration of whether that money would be passed onto communities to address development and other basic human needs.

Shue discussed who should be the rights bearer in the case of emissions permits, stating that the distribution of permits should not compromise sustainable development. He felt that the weakest defensible requirement would be that emissions permits be distributed in one or more of the ways compatible with every human being enjoying a minimally adequate standard of living within a reasonable period of time.

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Roberts concluded the session by stating that there needs to be more direct discussion regarding the global redistribution of wealth, with those causing the most problems paying the most, and that there will be no solution on climate change unless the development agenda of the south is met.

Glossary of Terms

- Cap and trade – an environmental regulator would establish a “cap” to limit emissions from a designated group of polluters, to a reduced level. Those capped emissions would then be divided up into individual permits, which represent the right to emit that amount
- CDM – Clean Development Mechanism; an agreement under the Kyoto Protocol which allows industrialised countries with a GHG reduction commitment to invest in projects which reduce emissions in developing countries
- GHG – Greenhouse gas
- Free riding - those who consume more than their fair share of a resource
- Market - an arrangement allowing buyers and sellers to perform a voluntary exchange of goods or services

Authors and Papers Presented

Contact the authors for copies of the papers at the email address provided.

Bottrill, C. *The practicalities of creating a carbon market.*

catherine.bottrill@eci.ox.ac.uk

Boyd, E., & Boyd, J. *Revisiting the CDM: Exposing the limits of markets for development.* emily.boyd@eci.ox.ac.uk

Caney, S. *Carbon trading and justice: is carbon trading just?*

simon.caney@politics.ox.ac.uk

Casal, P. *Equality of consumption? The case for progressive green taxes.*

e.p.casal@reading.ac.uk

Frame, D. *Carbon as a scientific commodity.* dave.frame@ouce.ox.ac.uk

Goodman, M. *Exercising the New Geographies of Guilt in Bonfire Ethics: Some Comments and Questions about the Moralities of Carbon Markets vis a vis the 'Fair Trade Effect'.* michael.k.goodman@kcl.ac.uk

Page, E. *Climate change, equity and emissions trading.* e.a.page@warwick.ac.uk

Prudham, S., & Boykoff, M. *The market (in) climate: dangers of enrolling carbon (formally) into the world of capitalist commodification.*

maxwell.boykoff@eci.ox.ac.uk

Sheehan, M. *The Wrongness of Commodification.* mark.sheehan@bnc.ox.ac.uk

Sheehan, P. *Ethics, outcomes and carbon markets.* peter.sheehan@vu.edu.au

Starkey, R. *Allocating emissions right: are equal shares, fair shares?*

r.starkey@manchester.ac.uk

Wilkinson, S. *The moral concept of commodification.* s.wilkinson@peak.keele.ac.uk

Williams, A. *Just carbon markets.* andrew.williams@warwick.ac.uk