

Is carbon offsetting a legitimate response to mitigating climate change?

Summary of the annual Tyndall Centre Forum 2007 at the Science Policy Research Unit, University of Sussex, 5 September 2007

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Summary

The annual Tyndall Centre Forum was this year a straw poll public debate on the validity of carbon offsetting as a credible response to climate change. In particular, it looked at the overseas development aspects of offsetting to ask the question, *Does offsetting do any good?* The idea for the topical debate – there is currently much media, business, NGO and science disagreement – came about as a result of the lack of objective information upon which an informed person may base a decision on whether or not to voluntarily offset. With this Briefing Note of the debate, the Tyndall Centre attempts to make an expert intervention to help put some independent evidence into the public domain.

Approximately half of the 100 strong audience of Tyndall researchers and invited guests voted that carbon offsetting is a legitimate response to climate change. 30% were undecided and 20% did not agree. This Briefing Note is a summary of the second part of the meeting - the debate. The Chair for the debate was Professor Diana Liverman from Oxford University.

Introduction

The format of this year's Tyndall Centre Forum enabled a series of speakers to present their expert evidence regarding what offsetting does or doesn't achieve. Subsequently, a debate took place (summarised here), where the expert panel and audience deliberated the validity of offsetting. A straw poll show-of-hands vote closed the debate.

The Chair for Part One, the expert evidence session, was Professor Kate Brown from the

University of East Anglia. The Chair for the debate, as summarised here, was Professor Diana Liverman at the University of Oxford. The debate panel comprised Dr Jim Watson, University of Sussex; Dr Kevin Anderson, University of Manchester; Leo Peskett, Overseas Development Group; and Franceska de Gasparis of the Greenbelt Movement.

Complete podcasts of Part One and Part Two are downloadable at www.tyndall.ac.uk

The Tyndall Centre thanks all of the speakers and the guest audience for taking part in this timely debate.

The Panellists gave their view for two minutes:

Dr Jim Watson, University of Sussex Energy Group and Tyndall Centre

Despite the sales pitch from offsetting brokers, I remain skeptical but ambivalent about offsetting. I am skeptical about the value of offsetting partly because there are so many different economic rationales at work and many competing prices. How do I know people pay the right amount set by brokers? When flying to China, according to Climate Care, it costs £17 to offset the emissions of that flight. But instead of offsetting, shouldn't we be evaluating the costs of the damage of that carbon? According to Government guidance on how to evaluate the social costs of carbon, it is between £59 and £630 for that flight. Or is it better to retire some permit-to-pollute credits¹ from the carbon exchange market so that no-one can ever emit that carbon again? The retiring of carbon permits for a flight to China would cost £30.

I accept that investing in offsetting projects in the developing world is cheaper, but is offsetting the best way forward to foster development? The

¹ Carbon credits are tradeable permits that give carbon emissions a monetary value per tonne. Companies buy credits from the international carbon exchange if they are going to exceed their emissions and sell credits back to the exchange if they have emissions to spare. 'Retiring' credits is the concept of buying credits from the exchange and then destroying them, reducing the overall availability of permits-to-pollute.

Kyoto Protocol's Clean Development Mechanism² has a lot of expectation loaded on to it, with its requirements to reduce greenhouse gas emissions, transfer low-carbon technology to developing countries, and further sustainable development. This is a lot to ask of a carbon pricing mechanism. The best way forward is to separate carbon reduction from development and we would support both, but not through offsetting.

Dr Kevin Anderson, University of Manchester and Tyndall Centre

In the absence of any meaningful emissions caps, I argue that offsetting does more harm than good in relation to climate change and I mean climate change and climate change alone. I'm not discussing Development. I have two principle objections: first is The Rebound Effect here at home which means that if we can offset our emissions overseas then we just carry on here with the same high carbon behaviour. That doesn't drive the low-carbon innovation needed here at home which technology may later be transferred elsewhere. Offsetting doesn't drive behavioural change either. I'm a rock climber and through offsetting, I can go clambering around the mountains near Barcelona as often as I like as long as I pay a few quid to offset the flight as often as I want. Offsetting is therefore no market signal to improve the train network to Barcelona and is no market signal for me to change my attitude. It doesn't make me think "why do I want to go to Barcelona? Why don't I climb in the Peak District instead?" Offsetting does not make me or anyone else think about things in the wider sense. I would argue that the rebound effect from offsetting actually makes us have greater emissions in the UK.

My second point is The Economic Multiplier Effect. Carbon dioxide and its warming effect remain in the atmosphere for 100 years. Because it is there for 100 years we need a high degree of confidence that the offsetting investments do not increase emissions over that 100 year period. Which offset broker can do a 100 year prediction? Offsets investments have absolutely no confidence limits that can be applied to them over 100 years, yet cumulative

² The Clean Development Mechanism intends for industrialised countries to reduce their emissions by investing in projects in developing countries that both reduce emissions and contribute to sustainable development, with the incentive that it is cheaper than investing in similar projects in more expensive rich countries

emissions last for that long a timeframe. Through the Economic Multiplier Effect we can tell you absolutely nothing about the accurate carbon accounting from your offset and investment. My conclusion is that given 50 to 100 years, society is very complex. Responding to a problem that is characterised by complexity with a simple Newtonian offsetting approach is intellectually dishonest and shameful, given the seriousness of the climate change issue that we are trying to address.

Leo Peskett, Overseas Development Group

Bringing the debate a bit more to the Development issue, offsetting must not only deliver benefits to the climate but also to the host nation where the offsetting project is taking place. First, there are lots of possible ways to define what those benefits are and I would argue that the overarching factor is that the people must somehow benefit from the project or programme. As we have heard, currently the evidence for offsetting to deliver financial benefits is complex and difficult in developing countries. It is an invisible and highly risky commodity that can be sourced from any location. This means that market access from those involved can be difficult and that the rules of the game are inherently buyer-led. Second and related to this, the market focuses on delivery of projects. That detracts from possible wider notions of what Development is or could be and the wider potential value-added that the market could otherwise offer to developing countries. Third, the governance in the marketplace is very variable with few safeguards on market distribution.

Is it possible to overcome some of these issues and make offsetting more legitimate from a development perspective? There are no easy answers but these are some conclusions to try to end with some positives. First, we could develop much better definitions of what the often-used term co-benefits is in the offsetting context. I have not seen a definition and I'd like to see more discussion of this. Second we should ensure that offsetting schemes do not only focus on doing no harm but on delivering real benefits however they are defined. Third and trying to shift the balance away from the purely technical and towards the social might have distinct implications on whether such a market exists in the first place. If offsetting is really to deliver on its dual aims that a lot of offsetting brokers claim that it can do for addressing climate change and pro-poor development then these factors are surely a must.

Franceska de Gasparis, Greenbelt Movement

We have heard a wide range of opinions and various positions. I am representing the African NGO perspective as Greenbelt Movement based in Kenya has worked in tree planting for the past 30 years and in particular with rural local women's groups. We see climate change and offsetting in the environmental context and we see climate change as a result of a global imbalance in natural resources. Our current behaviour has caused this global problem and it is not just about whether we want to go to the Peak District or not. We need to look at what is happening to rural Kenyans and rural people across the world. As we know, the tropical regions, Africa in particular, will be hardest hit by climate change. What does that mean for us? What are our responsibilities as individuals and as people who have been part of causing this problem?

I can tell you that Africans want to be part of the solution and that is really important here. This is a new market and a new opportunity. A clumsy first attempt in my personal opinion is to bring the environment into global markets for people to understand the real life cycle of the products that they buy: sitting on these chairs here has a carbon footprint as you all know. It is a much wider issue of whether I am just offsetting my flights; it is more about creating an approach to developmental change through a market-driven economy.

Widening out, how do we address the imbalance? Greenbelt thinks that tree planting is an absolutely critical part. I know that there is a lot of naysayer about tree planting. For rural Kenyans to be part of the solution a simple approach is to plant a tree. It doesn't require any special technologies. Yes the carbon market is coming along with technological problems and requirements for us but we have embarked on a World Bank project on one of the pilot carbon fund projects which is the only tree planting project. It is a complex and difficult process for us to go through and we have to work closely with the Government, working on Government gazetted lands with the Forestry Department. This is an interesting social changes model which can both impact on people here and in Kenya and around the world. I want to encourage you from the Kenyan perspective, to really embrace offsetting as an opportunity and to see it as an opportunity. Yes, it's a debate and yes, there are lots of problems but lets at least try to move forward and start looking at this as a way of providing environmental solutions. Finally, I

would like to add that when you are doing your offsets, instead of going to one of these private companies to do offsetting for you, it is your responsibility to know where that money is going. Is it really going to deliver the type of solution that you want? What sort of profit do you want to be taken off the top? If it's going to an energy efficiency project, is that really going to improve the livelihoods of people who are receiving those stoves? Do they get any financial benefit from that? With tree planting there is a livelihood opportunity for rural people. I can't say that tree planting is going to be an effective carbon offsetting model but I can say that it is a first attempt to bring this into the debate and to give you an opportunity to be a part of the problems that we are facing. Our Founder won the 2004 Nobel Peace Prize for her links between environment, peace and democracy. That was the first recognition between the Nobel committee that environment is critical when we are looking at these issues.

Discussion from the audience

Ian Eiloart

I am not an academic but a local Councillor. I have never driven, have made energy saving changes to my home, and plan to do more as money allows. And a panellist is flying to China to talk about climate? What is going on?

David Hurst

If Kevin does not think that £20 on an airfare does not make a difference then he should speak to RyanAir who are making a fuss. Trade between people is always benign. If we have a woodman and a flintsmen trading then they get better spears. Here we are talking about trading emissions reductions. That is what we want to achieve. That is what the word needs and the best way to do that is to trade them. What we need to trade is a rationale, sensible, weights and measures system so that we know what we can buy and have the market mechanisms. It does seem to me that the government and policy making has failed completely to provide us with any sort of rationale weights and measures system. We don't even know most of the time whether it is carbon or CO2 that is being traded. What's the difference so to speak? It seems a policy failure all the way around. And in those circumstances the only real thing you can do is offset.

Robert Watson, UEA

I'm strongly in favour of offsetting. We do need to get the additionality³ right, we need to get the price right, I do not believe that it will stifle innovation in the private sector. It was the only thing that allowed us to have the most stringent targets in the Kyoto Protocol. Without it there would have been much lower targets. And what we have are not good targets anyway and would have been even lower. Several countries would not have signed Kyoto without trading. It is an efficient resource allocation mechanism which is the most cost-effective. The offsets are cheaper in developed problems than developed. I can be pro-poor as long as it does cost-effectively reduce carbon which means accurate verification that is badly needed. You don't need to understand the baseline for 100 years you need to understand it for the length of that particular project.

Nick Pidgeon, Cardiff

I'm not for or against offsetting and that is because both Kevin and Mike Mason who are against and for, made assumptions about human behaviour. Kevin said we will get a rebound and Mike said we don't want people to oscillate between despair and denial. I would argue as a psychologist that we don't know enough about how people would view these schemes. What we do know about the public is that they are quite complex. The public is different in its make-up and, actually, it is an empirical question about how these schemes will work in practice. There is a research question in there for us all.

Jaquie De Chazal, UEA

Is the questioning about carbon reduction or carbon neutral? Theoretically it is about carbon neutral and that needs to be made clear.

John Shepherd, University of Southampton

I want to speak in favour of carbon offsets. They are clearly not enough and only part of the picture but the main problem at the moment is they are not expensive enough. So the thing to do is go out and buy lots and lots and lots and make life really difficult for brokers so that they can only sell offsets at a higher price. And in response to the last comment, if you buy only the straight amount then that gives you

³ 'Additionality' means the project and its emissions reductions must have come about as the result of the funding through offsets, not that the project was already underway or the emissions reductions were anyway going to happen.

neutrality. If you want to achieve something more buy double or triple and really make a difference.

Alice Bows, Manchester

It was commented that an offsetting scheme could double the expenditure in a single household. Given that we know that there is a relationship between energy consumption, CO₂ and GDP and income, how can we show over time that that doubling in household income is not going to lead to a doubling in CO₂ emissions?

Peter Martin, CarbonSense

In our work with business I have found that offsetting can be a useful process for engaging with the issue and counterpoints have said it can be a distraction from taking serious action. From my experience, when working with quite a wide range of businesses I'd say that some of the first businesses that tried offsetting had some genuine intent to do something good to address the problem. Mostly I think that that is no longer the case. My experience is that nowadays it is mostly a distraction.

Myfanwy Price-Jones, Carbon Aided

Most of our clients come to us because they want to reduce their emissions and find very quickly that they can only reduce their emissions by 10-30% within the actual budgets that they have available. By being able to use offsetting they find that they can go further and achieve an objective of becoming carbon neutral. However they do genuinely have a commitment to try and reduce the amount that they offset over time.

I would like to draw your attention that some offsetting projects are highly innovative low carbon projects. They have found that unlike wind technologies with price support which provides new technologies with a way to survive in that nascent phase, the offset market provides much needed support for a great many other types of low carbon innovation. We've been developing a green cement project, whereby rather than producing cement from first principles which many of you realise is a highly energy intensive process giving rise to direct process emissions, this project involves the use of waste industrial slag and grinds that up to make a cement substitute. That project would not be viable if they were not able to provide an income from offsets. There is a direct way that offsetting encourages innovation.

Julian Wright, Environment Agency

We seem to be talking about offsetting our future activities. How much does the panel think that we have a moral obligation to offset our past activities? If so, how much would we have to pay to a Broker?

Arnaldo Mathuesuen, Oxford

My concern is the Governance structure. The Clean Development Mechanism has a governance structure supposed to be tied to development and there are many doubts about it. The offset market has a huge potential and once it becomes a business it could be a concern for many rural communities that are marginalised from the political and economic power relations if there are already problems that are affecting livelihoods around the world.

Michael Buick, Climate Care

I challenge that the public are too naive to offset the emissions that they are unable to reduce in other ways. I have seen some of our projects and I suggest others do also.

The debate Chair then asked for one minute concluding remarks from all of the experts - the Part One speakers and the Part Two debate panellists.

Esteve Corbera, UEA

Two brief points. We found it difficult as researchers to put our noses in the voluntary market and the Clean Development Mechanism and I call for more openness and transparency in the market. Why is it so difficult to research in this context? My second point is that I would recommend to someone wishing to offset, they don't go through a broker but look for an organisation in a developing country developing its own projects that puts the money directly where the capacities are being developed. I have experience from Mexico where 50% of the money remains in the UK for management purposes and 50% goes to Mexico. My advice is not to go through a Broker.

Andrew Scott, Practical Action

I'm all for us all doing more than the policy framework sets for us and I'm all for the maximum amount of resource going into developing countries that we can generate and lever. But what is needed by poor people in developing countries is help to adapt to the climate change that is going to affect them. It is funding for adaptation that they need, not funding for mitigation.

Adam Bumpus, Oxford

This isn't a clear cut issue where you are completely for or completely against. There are nuances that really need to be looked at both on the carbon accountancy side but fundamentally on the development side. There are issues of equity included in offsets where value added along the chain of these sorts of commodity are created and can we see development that comes along through offsets for adaptation to climate change. Can we see these pulled together and a research agenda from the academics and crucially practitioners? We need transparency in the market and to research together because without transparency there is no progressive possibility.

Mike Mason, Climate Care

We are criminally negligent if we do not spend the limited resources that we've got on the things that deliver most benefit. Offsets are over and above what society has decided that society has decided is the most it can do. We've got to go over and above. It's all very well criticising us but we've taken a million tonnes of CO₂ out of the atmosphere and by the end of next year we will have taken 4 million tonnes. If you don't like what we do, then give us some constructive criticism and other solutions.

Jim Watson, Sussex

I'm ambivalent about offsetting and I've stopped. As a consumer rather than as an expert I've stopped because I am deeply confused and not sure whether it is the right thing to do or not. And then I'm not clear on how much I should pay and how much good it does. I agree that the Clean Development Mechanism was absolutely essential to get the developing countries on board but I worry about the huge expectation that that mechanism is going to lead to development AND technology capacity building AND all sorts of other things. The CDM should be something to which you add other funding initiatives and capacity building initiatives. I was taken also with John Shepherd saying we should pay more than marginal costs. It partly allays my worry about paying too little but perhaps we should multiply by several times what we are paying for offsetting so that we are doing more than neutralising. That would make me feel better about offsetting.

I'm not deeply pessimistic about what governments can deliver as I don't think that we will be in the same place in five years at all. The way that Climate Care's argued for the most expensive domestic low-carbon technology – solar PV on the roof – and compared it to offsetting costs - is a little dishonest. There are

very many cheaper things that a homeowner can do and I would not advise solar PV as the first step to reduce emissions.

Kevin Anderson, Manchester

I agree completely with offsets provided they are within very stringent emissions caps. I earn £40,000 a year which is 2.3 times the median of UK people. John Shepherd earns a lot more. Bob Watson I have not enough zeros to put on his salary, as with Mike Mason. Tax our income and buy the treadle pumps for Africans. I am only too pleased for that. But then do not let us have the indulgence of thinking that lets us off our emissions to fly first class around the world.

No-one mentioned the complexity issue. At the end of the day the complexity issue is that by offsetting performance cars - a lot of sexually deficient men buy very fast cars with big engines which emit far more CO₂ - we can't carbon account for that rebound. And wood burning stoves. We should clearly have cleaner stoves so that women live longer and have more kids that emit more CO₂. You cannot do these assessments and we should have more stoves, but our energy indulgencies should not pay for them

Leo Peskett, Overseas Development Group

I don't think we can criticise the government policies too much because the voluntary offsetting market is feeding from the policies. To bring it back to development and the need for trade, there has been very little unpicking of what the differences are with the carbon offsetting market compared to other trades, and what they feel the implications and impacts of

these other trades in the places that are being invested.

Francesca de Gasparis, Greenbelt Movement

When you offset and work with the right partner doing the right work in the appropriate way, then it should be in the development model and you will see the added benefits coming with your offsetting payment: such as working with rural women in a way that really changes their lives - changes that create new livelihoods and so-on. Those are added benefits that you might be willing to pay more for. You can also look at other atmospheric gases and offset those to look at really addressing your ecological footprint. From the Kenyan perspective the forest cover is now down to 1.7% and the UN has said that it needs to be at least 10% to deliver the type of ecological services that the population needs to be sufficient. We are looking at a massive development challenge and we need to expand our approach to broaden the way that we work and the carbon market is potentially a way that we can do this.

In conclusion to the debate, Is carbon offsetting a legitimate response to mitigating climate change? a show of hands from the 100-strong audience of Tyndall researchers and invited guests showed:

**50% in favour of carbon offsetting
20% against
30% undecided/don't know**

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