

Carbon offsetting: sustaining consumption?

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Abstract. In this paper we examine how theories of sustainable and ethical consumption help us to understand a new, rapidly expanding type of consumer product designed to mitigate climate change: carbon offsets. The voluntary carbon offset market grew by 200% between 2005 and 2006, and there are now over 150 retailers of voluntary carbon offsets worldwide. Our analysis concentrates on the production and consumption of carbon offsets, drawing on ideas from governmentality and political ecology about how narratives and technologies are used to create particular types of consumer subjectivities and shape consumer choice. We critically examine three narratives that offset producers are using to position carbon offsets and examine how these narratives are shaping circuits of carbon offset production and consumption. We assess the implications for the future governance of voluntary carbon offset markets and for the study of alternative consumption.

1 Introduction

In this paper we assess how the production and consumption of voluntary carbon offsets are inextricably linked through the practices of offset organisations.⁽¹⁾ The growth of the voluntary carbon offset sector has been remarkable over the past three years as a range of actors seek to compensate for their greenhouse gas emissions by paying for carbon reductions elsewhere. While academic attention is starting to be directed towards the conditions through which this new commodity is being produced (Backstrand and Lovbrand, 2006; Bumpus and Liverman, 2008), less attention has been focused on the processes through which it has been made possible to consume carbon offsets. The voluntary carbon market allows companies, public bodies, and individuals the opportunity to purchase credits generated from projects that either prevent or reduce greenhouse gases entering the atmosphere, or that capture greenhouse gases from the atmosphere (House of Commons Environmental Audit Committee, 2007). The voluntary market has grown rapidly in recent years: in 2007 a record 65 million tonnes of carbon was traded on the voluntary markets, worth US\$330 million (Hamilton et al, 2008). The rapid expansion of a novel product designed to mitigate climate change—a carbon offset—offers some challenges to existing scholarship on

⁽¹⁾ The paper is based on twenty in-depth interviews with carbon offset organisations and other key actors involved in the production of carbon offsets, plus detailed analysis of organisations' websites and promotional material. The research was funded by the UK Tyndall Centre for Climate Change Research and forms part of a wider project examining the role of non-nation-state actors in post-Kyoto international climate policy. We would like to thank the offset organisations who agreed to collaborate with the Tyndall research for their time and openness.

sustainable and ethical consumption. Such research has focused on particular types of product, principally fair trade goods (coffee, tea, etc) and local organic foods (see, for example, Barnett et al, 2005; Bryant and Goodman, 2004; Guthman, 2007; Raynolds, 2002; Seyfang, 2007). Voluntary carbon offsets differ from these traditional types of sustainable product in a number of ways. First, a carbon offset is not a tangible product—the purchase is greenhouse gas reductions in the atmosphere—so the consumer does not directly receive something in return (other than a certificate perhaps). Second, and related, purchasing carbon offsets offers no direct material benefit to the consumer, unlike, for example, organic food products which have been shown to have taste and health benefits (Seyfang, 2007), although firms purchasing offsets may see them as contributing to competitive ‘green’ advantage in the marketplace. Third, the voluntary carbon offset market is currently relatively unregulated; there are as yet no accepted international standards for voluntary carbon offsets, or widely recognised ‘ecolabels’. Carbon offsets therefore differ in this respect from fair trade and organic products that have established regulatory and labelling schemes (Guthman, 2007).

In this paper we suggest that the unusual, novel characteristics of voluntary carbon offsets mean that narratives about them and associated technologies have come to play a particularly important role in their production and consumption. It is through stories about particular carbon offset projects that these products have meaning and value. It is through images, brochures, website devices, and offset packaged products that the consumption of offsets is made easy and habitual for consumers. The offset narratives and technologies also act to reassure consumers about what it is they are buying, given the absence of both a tangible product and regulatory standards. The commodification and consequent consumption of carbon offsets offer rich terrain for a variety of academic perspectives, including those on commodity fetishism (Castree, 2001), commodification of nature (Bakker and Bridge, 2006), and modes of political economic governance (see Jessop, 2003), but here we focus on the value of a commodity culture approach and a reading of commodity circuits as a means through which governmental rationalities and practices are mobilised. The significance of the “negotiated interface between consumers and the ‘social life’ of the commodity” together with the need to pay critical attention to “the relations of power in the material and discursive production of commodities and their regimes of exploitation” suggest that a ‘commodity cultures’ approach, informed by political ecology, offers a useful framework for analysis (Bryant and Goodman, 2004, page 348). Such an approach “attempts to capture the interplay between production and consumption as well as the meanings and materialities of commodities” (page 348). This entails the acknowledgement that production and consumption are not opposite ends of a singular chain but, rather, that circuits of production and consumption are deeply implicated in one another. We, therefore, draw on a wider tradition of consumption studies spanning both the production and consumption of commodities (Fine and Leopold, 1993; Gereffi and Korzeniewicz, 1994; Leslie and Reimer, 1999). Such an approach makes space for the observation by Barnett et al (2005, page 23) that “ethical consumption ... involves both a governing of consumption and a governing of the consuming self.” Offset organisations—who establish offset schemes, purchase offsets for onward sale, and, through various technologies, create offset markets—are a critical node in these circuits of production and consumption.

In undertaking an analysis of the commodity cultures of carbon offsetting, we first turn to consider the insights which can be derived from existing debates on sustainable and ethical consumption. We then concentrate on two key issues. First, we look at how carbon is made consumable. Here, we examine the emergence and dynamics of the carbon offset markets. Second, we focus on how consumer subjectivities are created through multiple narratives of carbon offset consumption. We explore these

processes through examining what we assess as three dominant narratives in the carbon consumption marketplace: ‘quick fix for the planet’; ‘global–local connections’; and ‘avoiding the unavoidable’. If ethical consumption involves “a set of practices which mobilise a diverse range of motivations, incentives and desires” (Barnett et al, 2005, page 27), we provide initial evidence of the sorts of practices which are being used to mobilise consumers to consume carbon offsets. In turn, we assess how the techniques and the practices they engender are coming under sustained critique, and the ways in which the circuits of offset production and consumption have responded. In conclusion, we reflect upon the differences and similarities between carbon offsets and other forms of sustainable and ethical production/consumption.

2 Understanding the consumption of carbon offsets

The analysis of carbon offsets speaks to an existing body of work on sustainable and ethical consumption. There is significant variation in how ‘sustainable’ or ‘ethical’ consumption is defined, with a critical issue being the “extent to which the different positions imply consuming more efficiently, consuming more responsibly, or quite simply consuming less” (Jackson, 2006b, page 4). The majority of work in this field has focused on policy agendas for (ecologically modern forms of) sustainable consumption (2006a), on radical alternatives to market-based production/consumption (North, 2005; Seyfang, 2001), and on practices of sustainable or ethical consumption (Hobson, 2003; 2006; Seyfang, 2005; 2007). In the latter approach, “cultural, psychological, and sociological models of consumption behaviour” have been adopted in preference to economic explanations of the drivers and patterns of consumption (Seyfang, 2007, page 106). While the focus is on the consumer, as a subject, participant, or political citizen, Seyfang (2007, page 106) observes that the ways in which theoretical perspectives “relate to practical sustainable consumption initiatives is under researched”. Although some scholars have looked at how everyday consumption practices, such as showering (Southerton et al, 2004), have altered in response to environmental problems, this remains relatively isolated from approaches which continue to configure consumption as an individualised activity so that “the drivers and mechanisms involved are seen to boil down to a matter of individual choice” (page 3). Despite the growth in research on ‘sustainable consumption’, we suggest that there are two key problems with mainstream literature which limit its relevance to the analysis of carbon offsetting. First, consumers are generally considered as individuals rather than institutions and organisations; our research highlights the importance of corporations as consumers of carbon offsets, suggesting that how we think about the practice of consumption needs to reflect a broader sense of ‘who’ and ‘what’ consumption involves. Second, the ways in which “processes of consuming are configured by many aspects of production which have a structuring effect on what goods and services are provisioned, how those goods and services shape the consumption of related products, and how objects are used” are neglected (Southerton et al, 2004, page 7).

Those analyses which have focused on the consumption of particular products have gone some way to counter these critiques. To date, this analysis of the consumption practices relating to purportedly sustainable or ethical products has largely been restricted to the fair trade products of coffee, bananas, cocoa, and tea (Raynolds, 2002), and organic food (Seyfang, 2007). A study of carbon offsets therefore fits with the overall emphasis of sustainable consumption research on specific commodities. However, we suggest that offsets differ in important ways from fair trade and organic products because of their nontangible nature, the lack of direct material benefits, and the current paucity of regulation or certification. In order to understand this process, a key focus is the process of commoditization itself. Bumpus and Liverman (2008) show

that there are significant parallels between carbon trading and previous accounts which have analysed the production and commodification of nature in which parts of nature (water, biodiversity, forests, wetlands) are enclosed, measured, and given market value (Bakker and Bridge, 2006; Castree, 2003; McAfee, 1999). In particular, this literature illustrates the ways in which neoliberalism promotes markets in environmental services through structures that abstract nature from local contexts and turn it into a commodity that can be sold elsewhere, often through unequal relationships between North and South, privatisation of what were previously commons, and discourses that focus on conservation values, sustainable development, and efficiency. To date, however, less attention has been paid in the literature on the commoditisation of nature to the implications for consumption. We suggest that a 'commodity culture' approach is useful here, because it can capture the complex interfaces between economy, cultural practices, and specific sets of knowledge, circuits of production and consumption, and the "meanings and materialities of commodities" (Bryant and Goodman, 2004, page 348; see also Crang et al, 2003). This approach draws attention to the "negotiated interface between consumers and the 'social life' of the commodity" as well as to "the relations of power in the material and discursive production of commodities and their regimes of exploitation" (Bryant and Goodman, 2004, page 348). In their analysis of fair trade and sustainable rainforest products, Bryant and Goodman (2004, page 361) suggest that:

"starting from processes of commoditization and associated narratives of development allows the researcher to go 'forward' into the processes and meanings of consumption as well as 'backwards' along the powerful socio-economic and ecological networks of production and development."

In order to go "forward into the processes and meanings of consumption", we suggest that it is imperative to examine the processes by which carbon offsets are commoditised, and the narratives and practices through which this is accomplished. Focusing on these processes can illuminate the ways in which "individual dispositions to choose ... are worked up, governed, and regulated by an array of actors who make possible certain forms of individualised conduct" (Barnett et al, 2005, page 29). To draw on the notion of governmentality, the emphasis here is on the multiple actors and the practical material means through which the 'conduct' of ethical or sustainable consumption is governed and particular subjectivities invoked (Barnett et al, 2005; Hughes, 2001). To this end, Barnett et al (2005, page 30) suggest that "the power relations constitutive of ethical consumption practices rely upon deploying distinctively cultural forms of 'government', such as practice aimed at the cultivation of moral consciousness, of self-control, and of self-display". At the same time, given the unusual, relatively complex characteristics of the product and the current lack of international regulation and labelling schemes for voluntary carbon offsets, it is imperative for offset producers and retailers to package knowledge in a credible, simple, and coherent way for consumers. Governmental narratives and techniques therefore also serve to disseminate information and to create 'knowledgeable' consumers (Guthman, 2007, page 472). For example, in relation to fair trade, Bryant and Goodman (2004, page 358) suggest that "the relative novelty of ideas underpinning fair trade requires detailed dissemination of information to Northern consumers saying what fair trade is and why it is needed. Indeed, such knowledge can be quite place specific—for example, including information on what cooperative and community is producing the coffee being consumed." There are some parallels here with ideas about commodity fetishism.⁽²⁾

⁽²⁾Commodity fetishism focuses on how relationships between people become seen as relationships between things, and how value is given to things through practices other than labour, particularly by the creation of property rights and scarcity, or by advertising and the association of certain commodities with social status (see Castree, 2001; Hudson and Hudson, 2003).

From this perspective fair trade sets out to unveil social relationships by highlighting the conditions under which commodities are produced by people in the developing world. Using a governmentality approach to understand commodity cultures, this ‘unveiling’ involves paying close attention to “the role of many less prominent and more mundane or backgrounded things and organisations which are entailed in translating rationalities of government into practical programmes” (Merriman, 2005, page 239). The commoditisation of carbon offsets is orchestrated through such mundane or backgrounded things in two respects. First, a range of taken-for-granted technologies and practices is used to enable their consumption—including websites, catalogues, images, scientific analyses, producer biographies, and so on. Second, creating a market for carbon offsetting involves making ordinary practices—driving, flying, heating homes, and offices—the subject of ethical consideration through the deployment of new narratives, or rationalities, about what such practices *should* involve.

This is not to say that the governing of carbon offsetting is conducted through narratives which are transplanted wholesale through governmental technologies employed by those seeking to govern practice at a distance from the consumer. Rather, such narratives intersect with everyday practices which are already “*ordinarily ethical*”, for “the very basics of routine consumption—a concern for value for money, quality and so on—can be seen to presuppose a set of specific learned ethical competencies”. (Barnett et al, 2005, page 28, emphasis in the original). Ethical or sustainable consumption practices therefore involve both the “governing of consumption”, conducted by a multitude of actors through governmental rationalities and techniques, and the “governing of the consuming self ... making one’s own life⁽³⁾ a project of self-cultivation” (Barnett et al, 2005, page 31; see also Guthman, 2007, pages 472–473). It is through such narratives and practices that particular forms of political ecology are produced. Bryant and Goodman (2004, page 349) argue that the embedding of commodities in alternative consumption practices through specific narratives “imprints and circulates specific political ecological understandings of the biophysical environments and peoples to be ‘saved’”. The emphasis on the ‘political ecology’ of commodity cultures in Bryant and Goodman’s work is important for the analysis of carbon offsets. A political ecology perspective points to the significant impacts that consuming practices in the North have for people and environments in the Global South. In relation to carbon offsets, this is particularly important because many voluntary offset projects are located in the Global South, and the credits are sold to consumers in the North (see Bumpus and Liverman, 2008). The work of carbon offset narratives is not only to enable their consumption to take place, but also to create different forms of commodity culture which have implications for people and environments in the North and South, and for the potential for addressing global environmental change. The implications for a critique of carbon offsetting are considered in more detail below. First, we turn to consider how processes of carbon commoditisation have occurred to make the consumption of carbon offsets possible.

3 Making voluntary carbon offsets

A carbon offset is a novel and complex product, and critical attention therefore needs to be paid to how such a product is created. In its simplest form, offsetting involves the purchase of credits from greenhouse gas emission reduction projects in one place to counter the emissions of greenhouse gases in another place (POST, 2007). However, there are different types of carbon offset: compliance credits are produced under strict

⁽³⁾ We note here again the tendency of ethical consumption literature to position consumers as individuals rather than institutions, but suggest that the internal governing of organisations, through terms such as ‘corporate social responsibility’, bears comparison (see Hughes, 2005).

international regulations and consumed principally by nation-states, whilst voluntary credits can be certified to one of several nongovernmental standards, and consumed by corporations and individuals (Bumpus and Liverman, 2008). The compliance market was established as a so-called 'flexible mechanism' of the Kyoto Protocol—the Clean Development Mechanism (CDM)—through which industrial countries can meet greenhouse gas targets by purchasing carbon credits from emission reduction projects in developing countries. In comparison, voluntary offset projects tend to be smaller, have a greater sustainable development focus (often described as social or community 'side benefits'), have lower transaction costs, involve a wider range of methods or techniques, and are typically located in countries not active in the CDM (eg the non-Kyoto signatory USA and African countries) (House of Commons Environmental Audit Committee, 2007). Further, the voluntary offset market has developed independently of the international climate regulatory regime, and anybody—nongovernmental organisations (NGOs), businesses, individuals—can produce and consume voluntary offsets however they choose: there are no widely used international standards or regulations. Voluntary offsets differ in this way not only from compliance credits, but also from the majority of sustainable and fair trade products, which have well-established accreditation and labelling procedures (Guthman, 2007). So although voluntary and compliance carbon offsets are similar in terms of their ultimate purpose—taking carbon out of the atmosphere—they differ significantly in their process of production and their governance. It is for this reason that compliance credits and voluntary credits—known respectively as certified emission reductions (CERs) and verified emission reductions (VERs)—are treated distinctly by producers and consumers, despite an emerging trend for offset organisations to deal with both types of offset. A common feature, however, is the location of offset projects predominately in the Global South (Boyd et al, 2007; Bumpus and Liverman, 2008). As such, making carbon offsets is about not just climate change but also development and poverty issues, particularly for voluntary offsets where these carbon 'side benefits' are actively sought and promoted.

To date, offset organisations themselves have been the main actors involved in the governance of voluntary offsets, as well as their production and retail. There are a number of different types of offset organisation: some span the whole production and consumption process from sourcing greenhouse gas reduction projects and managing their assessment and verification, to marketing and selling the resulting credits to consumers. Other offset organisations have a more restricted remit, simply buying and selling credits, more akin to a broker. The governance of the voluntary offset market has been fluid and loosely structured. The offset organisations active in the early formative stages of the voluntary market in the late 1990s (such as Climate Care and the CarbonNeutral Company) see themselves as influential, based on their knowledge, experience, and extensive portfolio of offset projects (Climate Care, 2006a; Taiyab, 2006). For example, Climate Care and the CarbonNeutral Company have plans to establish a UK independent voluntary offset industry association (interview, Climate Care, October 2007). These long-established offset organisations also promote their role in developing the first carbon offset projects in advance of the Kyoto Protocol (Climate Care, 2006a). Our research identified 154 international voluntary offset organisations, of which 55 (36%) are based in the UK, 36 (23%) in the USA, and 17 (11%) in Australia, with the remaining 30% located mostly in continental Europe.⁽⁴⁾ Of these international voluntary offset organisations, 45% have been established since 2005, indicating the rapid growth of the market, and its youth. In 2007, 65 million tonnes

⁽⁴⁾This is from a Tyndall database of voluntary offset organisations based on Internet and grey literature reviews (accurate at the time of writing, October 2007).

of carbon was traded on the voluntary markets, and predictions are for the market to grow up to 400 million tonnes by 2010 (Hamilton et al, 2008; ICF, 2006).

Partly because of the exponential growth of the voluntary market, and as a result of criticisms from activists and the media, attention has focused on formalising the governance and regulation of voluntary offsets, with a number of proposals forthcoming in 2007 from government and nonstate actors (DEFRA, 2007a; Hamilton et al, 2007). The UK government has sought to address concerns about lax standards in the voluntary market by implementing a controversial Code of Best Practice, which will only accredit use of compliance credits (CERs) in the voluntary market and will therefore exclude many voluntary providers and projects (DEFRA, 2008). There is growing recognition amongst offset organisations that the process of making carbon offsets needs to be made more open and accountable (Climate Care, 2006a; Harvey, 2007). The industry response has been to push through a number of new international voluntary offset codes and accreditation schemes; three were launched in late 2007 (Kollmuss et al, 2008). As one manager at an offset provider described it “we have gone from the sublime to the ridiculous” (interview, project developer, UK voluntary offset organisation, October 2007), hinting at the dangers of having too many standards competing against one another, as well as too few. The international standard seen as most likely to become the market leader is the Voluntary Carbon Standard, developed in close consultation with several voluntary offsets organisations and led by The Climate Group, the International Emissions Trading Association (IETA), and the World Business Council for Sustainable Development (WBCSD) (The Climate Group, 2007). For the foreseeable future, however, voluntary offsets are likely to remain a nonfungible type of carbon credit, unlike CERs, which are fully tradeable and interchangeable. Through the narratives used by offset organisations, particularly the ‘global–local connections’ narrative, voluntary credits remain linked to the places and communities where they were produced. In contrast, CERs have been designed specifically to be disassociated from their place and method of production—an essential step in enabling them to become fungible. As one interviewee explained:

“traditional commodities are a 2-D financial instrument, whereby you have the name of it—it is carbon—and you have a unit price, and everything else is a factor of that. So if you have a CER priced on the market ... you know you can buy 10 CERs at market price and it doesn’t matter where they have come from. But as soon as you start bringing in VERs it is like a 3-D or 4-D element because a VER has all these non-tangible marketing-related pieces of colour. So that is great in one way but actually it raises a lot of issues” (interview, CEO, UK voluntary offset organisation, October 2007).

The process of commoditising carbon offsets has therefore been one which has involved both international institutions and national governments in establishing the basis for carbon markets, offset organisations in the development and retail of offsets, and a range of other organisations—the media, think tanks, NGOs—in shaping the emerging regulatory landscape. Critical, too, has been the role of offset consumers, especially large corporate consumers. In terms of total carbon volumes purchased in the global voluntary offset market, 80% of customers are corporations and only 12% of customers are government, 5% individuals, and 2% NGOs (Hamilton et al, 2007). Examples of major corporate clients of offset organisations include Sky News, BHP Billiton, and The Body Shop.

The need to tailor the production and consumption of offsets to the corporate consumer is clearly visible in the narratives and technologies of offset commodity cultures that we examine in detail below. As noted, this figure of the ‘corporate consumer’ challenges the conventional economic assumption of a consumer as a

rational individual, and also the dominant emphasis in analysis of ethical and sustainable consumption on individual consumers, albeit enmeshed in various networks and circuits of production, commodification, and practice. Consumption, as practised by corporate entities, is a practice not so much of ‘governing the self’ but, rather, of governing a collective, in relation to internal corporate cultures and practices as well as the performance of competitor organisations and social expectations. The consumption of carbon offsets by corporations needs to be understood therefore in relation to wider debates about corporate social responsibility and corporate ethical and fair trade strategies (Hughes, 2001; 2005; Welford, 1994). In a recent analysis, Hughes (2006, page 1010) suggests that “with the advent of corporate responsibility programmes, firms and managers increasingly are asked to engage in knowledge creation and learning in order to rise to a new set of challenges concerned with stakeholder engagement and ethical business practice.” A recognition of the variety of offset consumers—corporations, government, NGOs, individuals—also reinforces the need to move away from the “grossly oversimplified” notion of “placeless” consumers (Malpass et al, 2007, page 642). As Malpass et al (2007, page 642) argue, “fair trade consumers, for example, will often belong to particular networks, often associated with particular sites.” In the case of voluntary carbon offsets, these networks and sites are predominantly corporate, and practices of self-governing are conducted under various forms of public gaze. In the next section, we seek to analyse the commodity cultures and narratives through which the consumption of carbon offsets is facilitated and governed and the consumer subjectivities invoked.

4 Voluntary offset narratives

In their analysis of the political ecology of alternative consumption, Bryant and Goodman (2004, page 344) identify two distinct ‘commodity cultures’: ‘conservation-seeking’, associated with practices of ‘Edenic mythmaking’ through which forms of ‘green’ consumerism are invoked; and ‘solidarity-seeking’, forming the basis of fair trade consumption narratives and practices. In our analysis of the emerging voluntary carbon offset market we find a more complex, tangled picture in which three embryonic commodity cultures are simultaneously being created and critiqued. Here, we focus our analysis on the governmental narratives and techniques being deployed by offset organisations in the attempt to establish carbon offsetting as a commodity and the ways in which particular consumer subjectivities or ‘ethical dispositions’ are being invoked through these governmental tactics. The three narratives which we have identified based on our transcription and subsequent coding and discourse analysis of over twenty interviews with offset organisations and other key actors, plus evaluation of offset organisations’ websites, are: ‘quick fix for the planet’; ‘global–local connections’; and ‘avoiding the unavoidable’. We demonstrate that these narratives and techniques are a crucial component of the network of production and consumption of voluntary offsets: it is through these practices that voluntary offsets have been actively marketed, packaged, and communicated to corporations and the public. Voluntary offsets have had to be made easily understandable to potential consumers because they are a novel, complex product and because they are not a necessary purchase designed to satisfy a material need. Voluntary offsets hence differ significantly from compliance credits, or CERs, which are required under the international Kyoto Protocol, and are typically consumed only by already knowledgeable actors (such as nation-states; offset organisations; carbon brokers). We demonstrate how the production and consumption of offsets is intricately linked: the production process has shaped the narratives that have emerged to enable and facilitate the consumption of carbon offsets, and in turn the narratives have influenced a number of aspects of production. In particular, in the last

part of this section, we examine how the narratives of voluntary offsets have led to a set of critiques which are, in turn, significantly reshaping circuits of carbon offset production and consumption through the emergence of several new codes and standards.

4.1 Quick fix for the planet

The basis of the first carbon offset narrative which we identify is in the science of climate change. Here, the argument is made that climate change is an urgent problem of planetary proportions and that action is needed straight away. Emphasis is placed on the severity and imminence of the risks of dangerous climate change. Offset organisations such as the CarbonNeutral Company use quotes on their website from scientific assessments such as the Stern Review and the Intergovernmental Panel on Climate Change to emphasise the risks of climate change and the need for urgent response (CarbonNeutral Company, 2007a). Undertaking voluntary carbon offsetting is portrayed as a legitimate solution because of its immediacy—any consumer can purchase offsets now, rather than undertaking perhaps more fundamental and (so the argument goes) slower changes to corporate practices or individual behaviour. Equally, voluntary carbon offsetting can be undertaken without the need to wait for the machinations of international negotiations to reach their conclusions. In a sense, international, legally sanctioned action through the Kyoto Protocol is portrayed as ‘fiddling while the planet burns’. The UK voluntary offset retailer ClimateCare epitomises this narrative in its 2006 annual report, stating that:

“Making changes in our lifestyles and the way societies and economies operate will take a long time, and the reduction will come only slowly. On the other hand *offsets let us make 100% emissions reductions cost effectively and quickly*. If you have limited money, and even less time to act, then we cannot responsibly ignore the huge impact they could have on providing a short term solution—in effect giving us the time to make the other changes we need” (2006a, page 6, emphasis added).

Voluntary offsetting is seen to offer a means of response that is more efficient and one that can do more in terms of overall carbon reductions in the atmosphere. The efficiency of offsetting, in terms of the speed of response, the low transaction costs involved, and its economic efficiency (‘bang for buck’), are all stressed. In short, voluntary offsetting is an effective response to an emergency situation:

“Offsets are an essential part of an effective climate policy precisely because they can be implemented quickly and at a relatively low cost. Given the level of emissions reductions that must be achieved to stabilize the climate, the growing sense of urgency for immediate action, and the societal cost savings that offsets represent, offsets are an indispensable component to real climate change solutions” (Climate Trust, 2007).

The possibilities of the ‘quick fix’ narrative are influenced and structured by the production process of voluntary offsets. There is a pervasive underlying reference and comparison with compliance offsets: compliance offsets are slow and bureaucratic, whilst voluntary offsets are dynamic and have more of an entrepreneurial dimension, as the managing director of a UK voluntary offset organisation describes:

“we’ve always felt it was our role to go beyond the compliance market. What we are here to do is to give people the chance to do more than is being done through the compliance market ... so that is what [we’ve] focused on, identifying opportunities where we can fill holes that are not being filled by Kyoto” (interview, UK voluntary offset organisation, July 2007).

However, the ‘quick fix’ narrative relies for this dynamism on a peculiar ability of the voluntary offset market to sell carbon credits in advance of them actually being

generated, so-called ‘future accounting’ practices (House of Commons Environmental Audit Committee, 2007). This ‘advance selling’—where there is a (temporal) mismatch between the consumer’s emission and the offset organisation’s emission reduction—is not permitted in the compliance market, where credits can be generated and transacted only once projects are in operation, and once the carbon benefit to the atmosphere can be quantified and proved. In part, ‘quick fix’ carbon offsets are made possible by the loosely governed, unstandardised practices of the voluntary market, where offset organisations themselves have individually reached a decision about what is deemed to be a reasonable period between selling an offset and producing it (typically around six to twelve months). In this regulatory context, offset retailers increasingly favour greenhouse gas reduction technologies that yield relatively quick carbon returns, such as energy efficiency and renewable energy (see Climate Care, 2006a, page 6). For example, a project replacing conventional lightbulbs with energy-efficient compact fluorescent bulbs will start yielding carbon reductions immediately, in comparison with a sequestration project such as tree planting, where actual carbon benefits to the atmosphere are up to seventy years in the future. In effect, the sale of the offset is quick for producers and for consumers, but not necessarily quick for the atmosphere (see critique below). The ability to consume ‘quick fix’ carbon offsets is therefore dependent on a certain set of production practices, inexorably linking consumption and production in a commodity circuit (Bryant and Goodman, 2004).

At the same time, the narrative’s emphasis on a fast and efficient response to climate change is mirrored in the techniques and practices through which carbon offsets are sold. As Merriman (2005, page 239) suggests, “many less prominent and more mundane or backgrounded things” are important in the processes of “translating rationalities of government into practical programmes”. In relation to ‘quick fix’ offsets, a range of everyday artefacts and practices is drawn into an arena of ethical consumption. Website devices and techniques that allow easy, rapid purchase of offsets by consumers also facilitate and reinforce the ‘quick fix’ narrative. Many retailers’ websites have a ‘one click to save the planet’ simplified purchasing arrangement for buying offsets, or the ability for customers to send a text to offset their emissions (see figures 1 and 2). Similarly, the UK retailer ClimateCare has offset package deals, where customers can quickly purchase carbon offsets for a year’s air travel

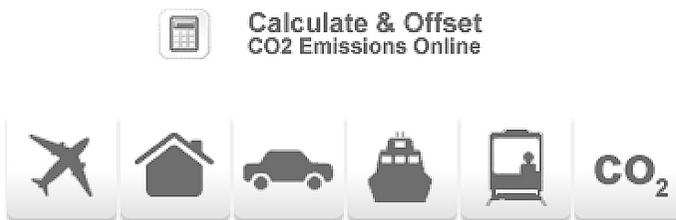


Figure 1. Website devices/‘buttons’ to allow quick purchase of offsets for a range of different activities (source: <http://www.co2balance.uk.com/>).

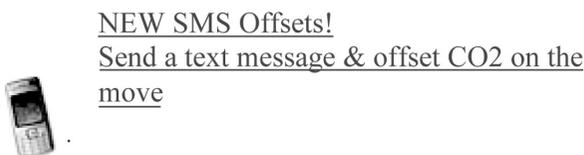


Figure 2. Website advert for a text message service to purchase offsets (source: <http://www.carbonbalanced.org/>).

or a wedding (Climate Care, 2007). The carbon offsets required for a ‘carbon neutral baby’ have also been precalculated in this way—making it simple and easy for consumers to make a purchase (CarbonNeutral Company, 2007b). These techniques and practices are aimed at individual consumers and small businesses. For large corporate clients, offset organisations sell offsets via face-to-face meetings and discussion, rather than via websites.

There are parallels here with the ‘conservation-seeking’ commodity culture identified by Bryant and Goodman (2004). The consumption of ‘quick fix’ carbon offsets is framed within a narrative which puts planetary survival at its heart. However, rather than seeking to connect to some other, ‘Edenic’, world, the emphasis is on connecting climate change to the here and now. Through the enrolment of everyday activities (purchasing a flight, travelling to a meeting) and significant life events for individual consumers (weddings, babies, funerals), this narrative seeks to make addressing climate change part of the ‘ordinarily ethical’ world of consumer choices (Barnett et al, 2005) without it raising significant ethical dilemmas or requiring consideration or deliberation. The assumptions behind some of these ‘package deals’ reveal just how far offsetting can be integrated into a ‘normal’ or ‘aspirational’ mode of consuming. For instance, the assumptions behind the retailer ClimateCare’s offset package deals are that holidays include one long-distance and three short-distance flights per year while a wedding includes 150 guests and honeymoon flights. ‘Quick fix’ carbon offsets both raise the ethical dilemmas of everyday life to the fore and provide a quick fix to consumer dilemmas (whether or not to take a holiday abroad) and for businesses seeking to fulfil some notion of corporate environmental responsibility. For example, the UK House of Commons Environmental Audit Committee, in its report on the voluntary carbon offset market, notes how: “Claiming ‘carbon neutrality’ is clearly a growing draw for businesses and will consequently change the behaviour of some companies and bring them into the voluntary carbon offset market” (2007, page 15). The ‘quick fix’ narrative appeals in this regard because it allows corporate consumers to immediately claim to be carbon neutral because carbon offsets can be purchased to make up for any shortfall in internal carbon accounts (see also discussion of carbon neutrality in section 4.3).

4.2 Global – local connections

While the first narrative focuses on the science of climate change and the urgency of the problem, a second narrative takes a different perspective, stressing the ‘global village’ within which addressing climate change takes place. Here, the spatiality of climate change and carbon offsetting is at the fore. First, the argument is made that there are no physical geographical barriers when it comes to offsetting: the atmosphere does not mind where emission reductions are made because atmospheric gases mix globally. For example, one offset organisation argues that “greenhouse gases spread throughout the atmosphere. So releasing pollution anywhere will increase CO₂ levels everywhere. And clearing pollution anywhere will slow net emissions growth everywhere.” To reinforce this point, images of global earth systems science (graphs, models, planets) litter the retailing of carbon offsets (figure 3). Emission reductions, the message suggests, can take place globally.

The second step in the argument is that there may in fact be specific advantages to be gained by reducing emissions in certain places—particularly the Global South. As emission reductions are cheaper in the Global South (because of lower costs of land and labour), and also because of the possibility of technology transfer or ‘leapfrogging’ through innovation, reducing emissions there may be positively beneficial, rather than simply a move to shift responsibilities for action. The economic argument surfacing



Figure 3. [In colour online, see <http://dx.doi.org/10.1068/a40345>] Image of the Earth and global atmosphere on an offset organisation's website (source: <http://www.atmosclear.org/>).

here echoes long-standing narratives about comparative advantage:

“just as businesses often open manufacturing facilities in developing countries to lower costs and increase margins, developed countries and private companies will look to the comparative advantage of developing countries for investments in carbon offsets ... The current inefficiency of many developing countries in terms of GHG [greenhouse gas] emissions per unit of economic output means that investments there could potentially achieve a greater environmental effect than the same investment in a more GHG efficient developed country” (DiNicola et al, 1997, page 2).

“In comparison to industrialized countries, the same amount of funding can avoid much more greenhouse gases if spent in developing countries, where technology is often still basic” (Atmosfair, 2007).

A narrative which therefore appears to stress the global opportunities for offsetting in fact lends itself to arguments in support of specific places for emissions reductions. This global–local connection is reinforced through attempts to provide a ‘human face’ to offsetting and realise sustainable ‘side benefits’, such as conservation, poverty reduction, or meeting other corporate social responsibility goals. There is a perceived consumer desire for known projects and personal links. This is especially important to corporate consumers who are anxious to have a ‘story’ attached to the offsets

because of their ultimate focus on how their climate strategy will be interpreted by their clients and customers. For example, a media officer at a UK voluntary offset organisation explains how:

“it is very important to be able to make it real to people, especially as carbon is so abstract ... community-based projects are colourful and personable and they involve real people and things that people can engage with, so you don’t have to talk to them about hydrofluorocarbons ... you can talk about cooking your evening meal without having a smoke-filled kitchen” (interview, UK voluntary offset organisation, October 2007).

Compared with the compliance or CDM offset market, voluntary offset producers are seen to be particularly adept at sourcing projects in the Global South that meet both carbon and sustainable development criteria:

“The strength of the voluntary carbon offsets markets is its ability to support a diversity of projects: including those that are small; those that bring additional sustainable development benefits; and those found in countries which are currently under-represented in compliance market projects” (House of Commons Environmental Audit Committee, 2007, page 27).

The global–local connections narrative tries to make carbon offsets understandable and appealing to consumers through a focus on defined projects in the Global South (see, for example, *Envirotrade*, 2007; *Plan Vivo*, 2007). This is achieved in two related ways. First, offset organisations have borrowed already familiar narratives about sustainable development and poverty alleviation in the Global South from the fair trade movement (Bryant and Goodman, 2004). These narratives reassure consumers that carbon offsets are a type of sustainable and ethical product, albeit a rather unusual one. In other words, the narrative demonstrates that the ‘social life’ of carbon offsets (Bryant and Goodman, 2004) has parallels with other more familiar sustainable and ethical products. There is a strong association here with political ecology debates linking consumption in the North to people and environments in the Global South (Blaikie, 1999; Bryant and Goodman, 2004). The global–local narrative embraces the core idea of political ecology that it is possible for Northern consumers to have a real connection to producers to the Global South—a ‘short’ commodity chain, where distance is not a barrier (Guthman, 2007; Reynolds, 2002)—as Goodman explains, “the commoditization of fair trade facilitates a material and discursive ‘scale jump’ (Glassman, 2002) that, in effect, stitches consumers to the very places and livelihood struggles of production via embedded ethical, political and discursive networks” (Goodman, 2004, page 893). Images of beneficiaries—pictures and stories of places, individuals, and projects who are benefiting from the purchase of offsets—are a critical means through which the performance of this narrative takes place (figure 4). As with Bryant and Goodman’s (2004) analysis of the commodity culture of fair trade, here a consuming disposition of solidarity is invoked.

However, the narrative goes beyond merely seeking to invoke a sense of personal connection and obligation. In endeavouring to make carbon offsets understandable and appealing to consumers, the ‘side benefits’ of carbon offsets are stressed. Many offset organisations emphasise the additional benefits to carbon reductions such as poverty alleviation, reduced indoor pollution, and preserving rainforests. These, unlike carbon reduction, are tangible and visible and serve to remove doubt as to whether offsetting is a ‘good thing’. As the website for offset provider Carbon Clear notes:

“We emphasise the use of VERs because their lower transaction costs allow us to support many worthwhile, community-level projects that would be too small to qualify under more bureaucratic systems. VERs allow us to link the sale of carbon credits to tangible benefits at the community level” (2007).



Figure 4. [In colour online.] Image of a beneficiary of carbon offset projects (source: photograph provided by Carbon Clear, <http://www.carbonclear.com/>).

In effect, actively linking carbon reduction to projects and people allows carbon to have a tangible or material presence. Expert endorsement of particular projects is used to provide additional legitimacy, particularly for the social and development aspects of projects (see, for example, Bill Oddie's endorsement of tree planting projects for Carbon Footprint, 2007). Further meaning is added if the carbon reduction is associated with a project that has special resonance for the consumer—for example, if the project is located in a place a consumer is travelling to, or if it has links with corporate geographies of production. As a manager at ClimateCare explained, "or corporate customers ... they will run projects that relate to their customers. Perhaps they sell a lot of cars in Russia, so they want projects in Russia. Or they're a travel company, and their customers are visiting certain destinations" (interview, October 2007).

In some cases, however, there is a discourse that runs counter to Global South initiatives, which emphasises instead the need for developed world local offsetting. The CarbonNeutral Newcastle initiative, for example, provides offsetting in the North East region of the UK (CarbonNeutral Newcastle, 2007). There are strong parallels between this narrative and some of the complex geographies of environmental consumption around food—where narratives of fair trade and local consumption are jointly articulated (Bryant and Goodman, 2004; Raynolds, 2002; Seyfang, 2007). Rather than seeking to determine whether one particular project or location represents a 'better' form of offsetting, many retailers offer consumers project choice on their websites to capture the range of 'side benefits' in which consumers may be interested. This is particularly significant in relation to corporate clients, where both protection of brand (through the selection of carefully vetted projects) and the need for distinction

(‘our brand is greener than your brand’) mean that large corporate actors create their own bespoke selection of offsets in close consultation with offset organisations.

As with the ‘quick fix’ narrative, the global–local narrative highlights the circuits within which the production and consumption of voluntary carbon offsets take place. The narrative is producer driven—voluntary projects are presented as a corrective, or a counterpoint, to compliance market projects which have tended to neglect sustainable development issues and do not incorporate ‘side benefits’ because it impairs the fungibility of credits. Simultaneously, however, the narrative is consumer orientated: it strives to make carbon offsets meaningful and real for consumers by linking carbon reductions with other visible actions and familiar issues such as poverty alleviation and sustainable development.

4.3 Avoiding the unavoidable

The third narrative moves away from discourses of global science and the global village to focus specifically on the drivers of increasing greenhouse gases in the atmosphere. The appeal is made to rationality and reason—once you have reduced emissions of greenhouse gases through the reduction of demand for energy and switching energy supply, offsetting is the only option available to negate the negative environmental consequences of the ‘unavoidable’ remaining emissions.

The narrative appeals to, and fosters, knowledgeable and responsible consumers who use offsets as part of a package of other carbon reduction practices. In this way, ‘avoiding the unavoidable’ narrative is about self-control and “governing of the consuming self” (Barnett et al, 2005, page 31). In contrast to the ‘global–local’ narrative, the production of the offsets is not emphasised—the focus is squarely on the consumer. It differs too in this respect to conventional notions of ethical and sustainable consumption because the narrative is not about typical political ecology issues such as poverty alleviation, the Global South, and ‘shortening’ the production–consumption chain. It is instead focused on Northern consumers holistically assessing and modifying their actions and purchases in response to climate change. As such, the narrative actively embraces a whole range of carbon practices, habits, and behaviours which these Northern consumers—whether individuals or businesses—are engaged in. The offset purchase is positioned at the end point, or culmination of, other consumption activities, and, through an extensive process of calculation, measurement, and audit of carbon, it becomes possible to quantify this purchase. Two technologies or devices are an integral part of the narrative, allowing consumers to undertake this audit of their climate change impact *before* purchasing offsets. First, there is the notion of an ‘energy hierarchy’ as a basis for decision making and planning—reduce, renew/replace, then offset—modelled on the waste hierarchy. There is energy hierarchy information on most offset organisations’ websites about other measures that consumers should be taking to reduce energy use and use renewables (see figure 5). Advice on carbon offsetting in the *Financial Times*, for example, advocates that:

“Offsetting should never be the first step in any carbon-neutral strategy. Instead, companies should seek to reduce their impact on the climate by wasting less energy ... Companies should only offset what emissions they cannot eliminate” (Harvey, 2007, page 5).

The hierarchy approach is particularly aimed at corporate customers, where offsetting is organised and shaped through companies’ carbon management strategies. For businesses, offsetting is sold as a cornerstone of becoming ‘carbon neutral’, with the kudos that it is implied to bring (see CarbonNeutral Company, 2007c). Indeed, the term ‘carbon neutral’ has come to be intimately associated with the idea of a hierarchy, where responsible corporations make internal carbon reductions first. So popular has

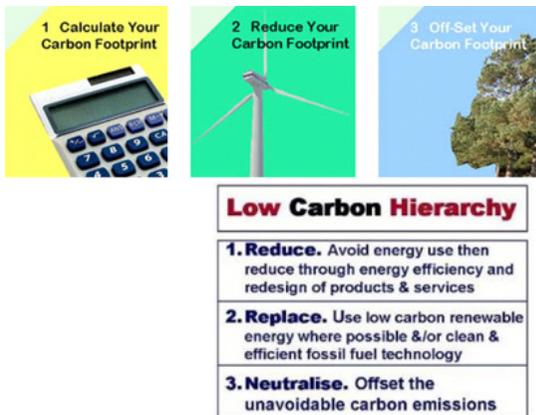


Figure 5. [In colour online.] Examples of the offset energy hierarchy (sources: <http://www.carbonfootprint.com/index.htm>; <http://www.oursouthwest.com/lowcarbon/>).

this term become that ‘carbon neutral’ has been named the *New Oxford American Dictionary’s* Word of the Year for 2006 (Treehugger, 2007).

The carbon calculators on retailers’ websites are the second device or technology that embodies and facilitates the narrative. The calculators allow consumers to quantify and evaluate their carbon impact, and hence identify those emissions that are deemed to be unavoidable. The calculators are particularly aimed at individual consumers visiting the offset organisations’ websites, allowing them to assess their carbon informally on a personal basis. Although there is limited evidence about how and why individual members of the public purchase carbon offsets (see House of Commons Environmental Audit Committee, 2007), a survey by a leading UK offset organisation indicated that 70% of their consumers had taken action to make their own homes more energy efficient (Climate Care, 2006b), suggesting this type of offset consumer does engage with the ‘avoiding the unavoidable’ narrative. With corporate consumers, the carbon audit process is usually carried out in a more formal and extensive manner, often in conjunction with the offset organisation as part of an overall carbon management strategy (CarbonNeutral Company, 2007c). There are parallels here with social auditing procedures and internal corporate reviews instigated by the adoption of corporate ethical and fair trade strategies (Hughes, 2005). More widely, under this narrative, offsetting is seen as part of the mix of methods needed in order to achieve radical cuts in emissions—the 60% and 90% carbon reduction targets that have been discussed in the UK, for example (DEFRA, 2007b).

4.4 Critiques of the narratives

Our analysis of the alternative narratives of carbon offsetting has highlighted a number of underlying tensions in the process of making carbon offsets: scientific, technical, political, economic, and ethical. These tensions have been voiced in several recent negative reports and in media coverage about offsetting which include many direct criticisms of the three offset narratives (Davies, 2007; FERN, 2005; Harvey and Fidler, 2007; Smith, 2007). In this section we consider the two principal types of criticism directed at carbon offsets: ethical and technical. We then evaluate the effect of these critiques on voluntary offset production through an assessment of recent proposals to regulate the voluntary offset market. The impact which the critiques have had in shaping offset production clearly demonstrates the existence of well-defined interconnected circuits of offset production and consumption, in which offsets organisations themselves play a crucial role.

Criticisms from an ethical perspective echo long-standing academic debates in political ecology, as well as environmental and development activist groups, about development projects, especially those that highlight neocolonial attitudes and practices, and about the downsides of neoliberalism and market environmentalism (Bond and Dada, 2004; Lohmann, 2005; Sinks Watch, 2007). In particular, political ecology approaches offer a strong critique of sustainable consumption as a solution to global environmental and development problems, suggesting that ethical or sustainable consumption can obscure other pathways of sustainability not based on commodification and markets (Guthman, 2007). Ethical consumption is seen as part of a wider trend of ‘roll out’ neoliberalism whereby the market enters areas it should not, there is a retreat of the state, and there is increasing reliance on nonstate actors to carry out vital governance functions (Guthman, 2007). These debates have most relevance to the ‘global–local connections’ narrative discussed above. The chief concern is that the Global South is being used as a means of cleaning up the waste produced by the developed countries in the North (FERN, 2005; Lohmann, 2006). This includes questions of unfair terms of trade (whether the prices paid for carbon reductions are too low), the unequal distribution of the benefits of carbon reduction projects, the lack of local participation in decisions about carbon reduction projects, and the bias towards large centralised forms of energy generation rather than local renewable energy (Bond and Dada, 2004; Boyd et al, 2007). The focus of this critique, particularly in the media, has tended to be voluntary offset projects (see, for example, Kennedy and O’Connor, 2007). This perhaps stems from the fact that it is voluntary offsets that the general public are most engaged with, because in reality voluntary offsets are more focused on delivering sustainable development benefits to the Global South than compliance offsets, as discussed above. A second critique made on ethical grounds, which applies most strongly to the ‘avoiding the unavoidable’ narrative and individual consumers, is that emissions are not, in fact, unavoidable, but rather can be considered as luxuries with the effect that offsets are seen as paying for your ‘indulgences’ (Smith, 2007); flying is where the debate rages here (see, for example, Davies, 2007). Similar criticisms are levelled at corporate consumers and the ‘quick fix’ offset narrative as seeking a relatively painless means through which to claim green credentials without undertaking any significant internal action.

A second key strand of criticisms of offsets stems from technical and scientific (often field-based) evaluations (Harvey, 2007; Minns, 2007; Taiyab, 2006). The main issue in this set of more detailed debates is the additionality of carbon offsets: that is, whether offset projects are more than ‘business-as-usual’ and the saving of additional carbon over other policies—and hence whether offsets provide the sort of ‘intensive care’ the planet is seen to need (Harvey and Fidler, 2007; House of Commons Environmental Audit Committee, 2007). The additionality criticism has been addressed in several media programmes including a UK television documentary (*Dispatches: The Great Green Smokescreen*) which quoted local participants as saying that projects would have occurred even without carbon finance (*Channel Four* 2007). The compliance market has strict methods for assessing additionality in which projects must show that carbon finance is allowing for additional reductions compared with a baseline or with alternative projects, and several of the voluntary offset standards recently launched concentrate on bringing voluntary credits closer to the CDM standard (see Kollmuss et al, 2008; The Climate Group, 2007).

The timing of greenhouse gas reductions is a second area of technical critique. The extent to which offsets can provide a fast response or ‘quick fix’ has been contested, especially in slow-growing forests, and in many instances in the voluntary market credits are sold before emissions reductions are achieved (House of Commons

Environmental Audit Committee, 2007). The timing of greenhouse gas reductions has, for example, been a critical issue in the consultation about establishing a UK Code of Practice for voluntary offsets, with the government stipulating a time lag of six months between customer purchase of an offset and an equivalent carbon credit being purchased by the offset organisation (DEFRA, 2008). There is a related third critique about the accuracy of carbon measurement: issues around whether scientists have the tools and expertise to account for the emissions reductions being made through individual projects (and hence their overall contribution to the global atmosphere) (FERN, 2005; House of Commons Environmental Audit Committee, 2007). A final technical critique is that offsetting can only ever be a ‘drop in the ocean’ in relation to the radical shifts in the production and consumption of energy that are required because the total amount of greenhouse gases removed from the atmosphere is modest compared with growing overall emissions (FERN, 2005).

The consumption of offsets is, as our analysis of the offset narratives and the critiques has shown, subject to increasing political contestation. In direct response to the media commentary, celebrity endorsement, and degrees of public confusion, both state and nonstate actors are stepping into the arena with attempts to recommend particular forms of offsetting through various new standards and codes of best practice (Kollmuss et al, 2008). In this way, critiques of offsetting are significantly reshaping the production process, thereby demonstrating the interconnectedness of offset production and consumption and the existence of closely linked *circuits* of production and consumption.

There has been a tension in debates about voluntary offset regulation between whether to focus just on carbon, or whether to incorporate sustainable development and other ‘side benefits’ into codes and standards. The UK government’s approach through its Code of Practice on voluntary offsetting makes the ‘carbon-only’ argument, suggesting the voluntary market should be restricted to CERs (DEFRA, 2008). However, other attempts to regulate the market through partnerships between nonstate actors—offset organisations, corporations, and NGOs—have tried to account for other factors aside from carbon in developing criteria for the offset production process. There are several different standards which have recently been launched (Kollmuss et al, 2008). For example, the Voluntary Carbon Standard (VCS), developed by an industry consortium led by The Climate Group, IETA, and the WBCSD, was launched in November 2007 (The Climate Group, 2007). Mark Kenber, policy director of The Climate Group and cochair of the VCS Steering Committee, outlined the strong regulatory rationale for the VCS—and its corporate focus—at its launch at the London Stock Exchange:

“The Voluntary Carbon Standard means business and consumer buyers can now trust the offsets they buy. Its robust quality assurance will trigger a new global confidence in the voluntary market from corporate buyers, consumers, and policy-makers” (The Climate Group, 2007).

Similar regulatory and quality justifications are put forward by developers of other voluntary market standards. For instance the Gold Standard, developed by a nonstate consortium led by WWF and operational since 2003, is marketed using the strap line “Premium quality carbon credits” (The Gold Standard, 2007). The investment bank Morgan Stanley itself launched a Voluntary Offset Standard in July 2007 in direct response to criticisms of the voluntary market and the concern that these critiques will ultimately negatively impact upon the compliance market. As Olivia Hartridge, head of carbon origination at Morgan Stanley, explains:

“It would be a real shame for any doubts to be cast on the regulated carbon market because of activities happening in the non-regulated [voluntary] market. That is

part of the reason that we stepped in to raise standards” (quoted in Murphy, 2007, page 12).

These examples demonstrate that the main industry response to critiques of off-setting has been to undertake a process of self-regulation in an attempt to restore credibility and assure governments that voluntary offsets are credible products. There are parallels with other industries here in terms of self-regulation being developed in an attempt to ward off state initiatives. What is particularly interesting about the case of voluntary offsets is how strongly the offset narratives and their critiques are shaping the production process through the development of new codes and regulations. The debates about regulating the voluntary market illustrate how closely the circuits of offset production and consumption are linked. Further, we suggest that offset organisations occupy a critical position within these circuits. Not only are they in many instances leading the development of new regulatory standards, but they are also responding in a direct way to feedback from consumers (most notably large corporate consumers) about the types of offset projects they wish to buy credits from. Certain large corporations and celebrities have been exposed by high-profile media coverage of offset projects that have not delivered credits or that have had questionable sustainable development ‘side benefits’ (*Channel Four* 2007; Kennedy and O’Connor, 2007). Offset organisations are now highly sensitive to consumers’ preferences about offset projects, and certain types of high-risk projects are avoided because, as a manager at a UK offset organisation explained with reference to community-based fuel stove projects, “these projects are more rounded and embedded in culture and trying to explain that to people ... is challenging ... people want to know where their money is going” (interview, October 2007). In this way, voluntary offset organisations have acted as key intermediaries between consumers and offset production. They are positioned at a critical node in circuits of production and consumption, influencing the practices, narratives, governance, and regulation of voluntary offsets.

5 Summary and conclusions

Purchasing voluntary carbon offsets is emerging as a new type of consumption practice within complex carbon economies, which have multiple pathways. In this paper we have suggested that analyses of the new carbon economy, in which offsetting is playing an increasingly pivotal role, need to direct attention not only at how such commodities are produced but also at how they are consumed. Voluntary offset organisations have historically played a key role in not only the production and consumption of offsets, but also their governance. However, with the 2008 UK Code of Best Practice for voluntary offsetting, signs are now emerging that the state is stepping in to play a more pivotal role (DEFRA, 2008). Moreover, with voluntary carbon offsets, it is corporate consumers who are most active in the market. The ‘top-down’ creation of forms of ethical consumption and the role of large corporate players in the practice of consumption is one unusual dimension of carbon offsets in comparison with more typical sustainable and ethical products such as coffee and fair trade goods. A second unusual feature of carbon offsets is their intangibility and novelty—customers do not actually purchase a material good for which they have a required need—and this is a key reason why offset narratives have played such a critical role in shaping how this product is consumed and made understandable by consumers.

Despite these distinct differences, carbon offsets have similar complex geographies to other areas of environmental and ethical consumption (Bryant and Goodman, 2004; Reynolds, 2002; Seyfang, 2007). These complex geographies include multiple narratives and practices, and combine public and private forms of regulation. Narratives and their associated technologies are critical here in connecting offset consumption and production,

and in so doing create new consumption arenas and spaces, as Goodman explains in the context of fair trade:

“The production of meanings in the consumption of fair trade foods is both material and semiotic in the imaginary of fair trade commodities, that, while involved in connecting the places of consumption and production, *also makes place* through morally-tinged markets, premiums and standards” (2004, page 896, emphasis added).

We have demonstrated how offset narratives have been important not just in semiotic but also in material terms, in ultimately influencing the effectiveness of voluntary carbon markets in taking greenhouse gases out of the atmosphere. But there is a critical difference between our analysis and others in the field of sustainable and ethical consumption. Goodman, for example, talks of the development of ‘discursive fields’ around fair trade products as the “second moment of production” (2004, page 898): narratives are produced and then consumed. We find this approach too linear and static to be applied to voluntary carbon offsets. In their roles as creators, buyers, and sellers, offset organisations are alert to how consumption practices ‘produce’ narratives (or want to), which in turn feeds back to influence production. The process is reflexive rather than linear; there is a delicate interplay between offset narratives, consumption, and production, with offset organisations positioned at a critical juncture between them. Rather than the production of carbon offsets driving consumption, what we are witnessing in the making of carbon markets is a more complex process in which the practices of consumption, orchestrated through offset organisations, are having a material effect on the ways in which carbon offsets are produced. At the same time, this is not being driven by individualised consumers. Rather, making carbon offset consumption possible is in many ways taking place from the top down, as offset organisations, corporations, NGOs, and the state compete to define and provide ‘ethical’ consumption in relation to climate change. The result is a complex, uncertain, and unstable market, yet one which draws into ethical view many aspects of day-to-day life in the North and South, and which has the potential to shape trajectories of sustainable development and global environmental change.

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