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THE MARKET FOR VOLUNTARY CARBON OFFSETS: A NEW TOOL FOR SUSTAINABLE DEVELOPMENT?

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EXECUTIVE SUMMARY

Heightened public awareness of climate change and its impacts has led to rapid growth in the market for voluntary carbon offsets over the past two years. By buying into a carbon offset project, organisations and individuals can negate their CO2 emissions by helping to prevent a similar amount of CO2 from being emitted elsewhere. Carbon offset projects may include hydro-energy, conversion of methane from landfills to energy, hydro-fluorocarbon destruction, tree plantations, wind farms, solar powered lamps in rural communities, fuel efficient cooking stoves and small agro-forestry schemes. The voluntary market has potentially more scope to invest in small-scale projects with high sustainable development benefits to local communities in low income countries, as project developers can avoid the bureaucratic procedures and high transaction costs of the Kyoto Protocol's highly-regulated Clean Development Mechanism.

Drawing on interviews with offset retailers and buyers from the private, government and non-profit sectors, the author explores the potential for carbon markets to provide a new source of funding for sustainable development activities in the South. Buyers expressed two main concerns about voluntary offsets:

- Credibility: without a central verification and registration body and a set of enforceable standards it is difficult for companies to assess the reliability, additionality and permanence of offsets being provided. Firms and governments, in particular, fear criticism by civil society for investing in poor quality projects.
- Availability of information: there is little information about the available options in the voluntary market, especially who the sellers are and the quality of their projects. Projects may offer few benefits to local communities, or involve communities as key participants and address biodiversity, but without detailed information potential buyers find it hard to know which to choose.

The author makes several recommendations for further developing the voluntary market as a tool for sustainable development:

- Create a consumer report on existing offset retailers
- Create a new set of simpler standards specifically for the voluntary market which strikes a balance between being stringent enough to provide credibility, whilst being simple enough to be implemented cheaply and effectively
- Increase transparency
- Raise awareness about climate change and the existence of offsets as a viable tool for individuals to reduce emissions, and endorse these messages by opinion formers
- Develop a guide to best practice in incorporating sustainable development into small-scale carbon offset projects

THE MARKET FOR VOLUNTARY CARBON OFFSETS: A NEW TOOL FOR SUSTAINABLE DEVELOPMENT?

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INTRODUCTION

Can carbon markets provide a new source of funding for sustainable development activities in the South? The Kyoto Protocol's Clean Development Mechanism (CDM) was originally seen as the mechanism that would link carbon markets and sustainable development objectives in developing countries. Through the CDM, countries with greenhouse gas (GHG) reduction targets under Kyoto can buy emissions credits from carbon offset projects in developing countries, provided that those projects also contribute to the sustainable development priorities of their host countries. Unfortunately, the CDM has come under great criticism for not adequately delivering on these sustainable development benefits. The CDM tends to lead to low-cost, high-volume projects, such as HFC (hydro fluorocarbon) destruction or landfill-to-energy projects, which have few benefits for local livelihoods. Many small community-based projects are often not economically viable under the CDM because of high transaction costs and lengthy bureaucratic procedures. Furthermore, most projects are concentrated in larger economies, such as India and Brazil, and have virtually bypassed the least developed countries (Cosbey et al., 2005; CDM Watch, 2004).

However, parallel to the CDM market, a voluntary market for carbon offsets has emerged. The voluntary market consists of companies, governments, organisations, organisers of international events, and individuals, buying or selling carbon credits for reasons other than regulatory compliance. These voluntary offsets are often bought from retailers: organisations that invest in a portfolio of offset projects and sell slices of the resulting emissions reductions to customers in relatively small quantities at a mark-up. As retailers generally sell to the voluntary market, these do not

necessarily have to follow the CDM process. Free of the stringent guidelines, lengthy paperwork and high transaction costs associated with the CDM, project developers have more scope to invest in small-scale community-based projects. The co-benefits of these projects, in terms of, for example, local economic development or biodiversity, are often as important to the buyer as the carbon emission reduction.

In this paper I outline the potential for financing these small-scale high-benefit projects through the voluntary and retail sector of the carbon market. I set out to explore:

- how the voluntary and retail sectors fit into the overall carbon market
- the types of projects offered through the voluntary market
- the demand for voluntary offsets
- buyers' main concerns and considerations and
- how the market for voluntary/retail offsets can be further developed as a tool for sustainable development

My research consisted of interviewing offset retailers and buyers from the private sector, government and non-profit sector (listed in Annex A) as well as reviewing existing literature.

The mechanics of carbon markets and carbon offsets

The term 'carbon markets' refers to the buying and selling of carbon credits and allowances. Regulatory carbon markets are created through cap-and-trade schemes, in which the regulatory authority caps the quantity of CO2e (carbon dioxide equivalent) that each participant is permitted to emit and issues tradable allowance units equivalent to the size of the individual caps. Participants can reduce their greenhouse gas (GHG) emissions internally and trade unused allowances with other participants unable to meet their emission quotas. Emissions reductions/carbon credits can also be bought and then sold on to a secondary market. The price of a carbon credit depends on a number of factors, including current market prices, project risk and project quality.

New carbon credits can be generated through carbon offset projects. A carbon offset project negates or 'neutralises' a tonne of CO2e emitted in one place by avoiding the release of a tonne of CO2e elsewhere or absorbing/sequestering a tonne of CO2e that would have otherwise remained in the atmosphere (Box 1). Offset projects can include, for example, renewable energy, energy efficiency, destruction of various industrial gases, and carbon sequestration underground or in soils and forests.

To qualify as an offset, a project must prove that emissions will be lower than under a business-as-usual scenario. This 'additionality' is extremely important to the environmental integrity of the mechanism, as loose additionality requirements could result in a host of projects receiving carbon financing without actual reducing greenhouse gas (GHG) emissions. Establishing a credible baseline—the estimated greenhouse gases emitted in the absence of the project—is critical to calculating the volume of emissions avoided by the project. During and after implementation, an accredited independent third party verifies the project to check whether emissions have been reduced as promised.

Some other credibility concerns include the degree to which emission reductions will be maintained in the long-term, and leakage. Leakage occurs when events outside the project boundary, but related to the project, reduce the project's carbon benefit. For example, protecting an area that would have otherwise been deforested may simply shift deforestation activities to another area (IPCC 2001).[1]

Box 1: An example of how a company becomes 'carbon neutral'

A company emits 40,000 tCO2e per year. The company reduces 10,000 tCO2e per year internally through increasing energy efficiency and purchasing renewable energy at an incremental cost of $8 per tCO2e. The remaining 30,000 tCO2e per year are 'cancelled out' by purchasing carbon credits from three different carbon offset projects. The firm pays Retailer A $10 per tCO2e to plant enough trees to absorb 10,000 tCO2e. Retailer B sells 15,000 tCO2e at $12 per tCO2e to the company from a wind power project. The project as a whole absorbs a total of 200,000 tCO2e per year, but the company buys just a portion of these credits. The remaining 5,000 tCO2e is purchased at $14 per tCO2e from Retailer C, who holds a portfolio of small community-based projects. The projects funded by Retailer C include providing energy efficient stoves and light-bulbs to poor communities and funding biogas digesters, which allow householders to use cow dung as fuel instead of wood. The total cost to the company of becoming carbon neutral is $450,000.

(See also: www.carbonneutral.com and www.climateneutral.com)

1. For more definitions see *A Common Glossary of Carbon Offset Terms,* The Climate Trust. Available at: http://www.climatetrust.org/pdfs/RFPs/Offset%20Glossary.pdf.

CARBON MARKETS

Since the signing of the Kyoto Protocol in 1997, several carbon markets have emerged to meet both Kyoto and voluntary emissions targets. Under Kyoto, industrialised nations and economies in transition (Annex 1 countries) are committed to cutting GHG emissions between 2008 and 2012 by an average of 5% of their 1990 baseline emissions. Annex 1 countries can meet targets through a combination of internal reductions, trading emissions allocations, buying Emission Reduction Units (ERUs) from carbon offset projects in Annex 1 countries (Joint Implementation—JI), and buying Certified Emissions Reductions (CERs) from offset projects in developing countries (Clean Development Mechanism) (Lecocq and Kapoor, 2005; Haites and Aslam, 2004).

The European Union Emissions Trading Scheme (EU ETS) is an EU-wide carbon market designed to help EU member states meet their Kyoto targets. Under the pilot scheme, 12,000 installations (factories, power plants, etc.) must meet emissions targets between 2005 and 2008 and are permitted to trade their allocations. Through the Linking Directive, credits from JI and CDM projects may be imported into the trading scheme and used to help companies meet their targets.[2]

Although Australia is not a Party to Kyoto, the state of New South Wales has created the New South Wales GHG Abatement Scheme, which imposes mandatory GHG benchmarks on electricity retailers. Carbon offset projects are permitted as a way of generating additional credits, but must be carried out within Australia. The Chicago Climate Exchange is a cap-and-trade programme that US, Canadian and Mexican companies and organisations can join voluntarily. Eligible offset projects may be implemented in either the US or Brazil. Seven north-eastern and mid-Atlantic states in the US have formed the Regional Greenhouse Gas Initiative (RGGI), a cap-and-trade program which caps power plant emissions. Offset projects under RGGI can be implemented anywhere in the US outside the power sector.[3]

Carbon credits from offset projects used to meet emissions targets under these regulatory schemes are subject to a host of rules governing project design and location, verification and registration requirements.

2. For more information see: http://www.defra.gov.uk/environment/climatechange/trading/eu/
3. For more information on regulatory carbon markets see: http://www.pewclimate.org/what_s_being_done/

The voluntary market

In contrast, the 'voluntary market' for carbon credits is wholly unregulated, as the credits are not being used to meet any legally binding target. These credits are commonly referred to as Verified Emissions Reductions (VERs). Project developers may choose to follow CDM standards and verification methods or may develop their own methods (see Box 3). Although retailers can sell credits from CDM, JI, or any other regulated offset project, most retailers sell VERs to the voluntary market.

Carbon offset retailers

The retail market for carbon offsets is quite small and fragmented, but growing rapidly. There are about 30-40 providers worldwide, most of them based in Europe, the USA and Australia (Braun and Stute, 2004 and see Annex B for some examples). In 2004, 16 retail offset providers, representing approximately 60% of the total market, reported having offset a total of 9 million tCO2e (Butzengeiger, 2005). Prices vary enormously, from US$5 – $35 or more per tCO2e, depending on the quality and location of the project and the mark-up imposed by the provider. Some retailers are brand new organisations created to capitalise on this new market, whereas others are existing conservation organisations that have also begun selling carbon offsets from their projects.

Retailers tend to target a wide variety of customers, including individuals, businesses, government departments, whole cities and even international events. Some are for-profit and others are non-profit. Their websites will generally have a carbon calculator where individuals can calculate emissions from flying, driving their cars, or their total yearly emissions. Offsets for air travel seem to be the most popular marketing tool for targeting individuals. People might receive a certificate in return for their purchase. Businesses are often given the option to use some sort of labelling scheme or logo to demonstrate that they have bought offsets or become carbon neutral from that retailer. Some retailers also offer carbon management consulting services for businesses, including carbon emission measurement or carbon neutral marketing strategies.

However, the lack of mandatory standards means that the quality and sustainable development benefits of the projects offered by retail providers vary tremendously. Projects may offer few benefits to local communities, or involve communities as key participants and address biodiversity. Energy-based projects vary from large renewable energy projects to energy efficient cooking stoves in very poor commu-

nities. Although some providers specialise in energy-based projects, most retailers appear to be focused on forestry projects. It is argued that trees are easier to sell to the general public, as trees are a more tangible and understandable counter to global warming.

Aside from varying levels of quality, another problem with the retail market is the size of the mark-up added on to the VERs and the percentage of revenue that is spent on marketing and administrative costs rather than the project itself. One retailer only spends 25% of revenue on projects, while spending 25%-30% on marketing and advertising. On the other hand, non-profit offset retailers in Germany, for example, must, by law, spend 70% of revenues on project activities, with no more than 30% left for administrative costs. Several offset providers have chosen to set themselves up as non-profit rather than private companies, on the grounds that their primary aim is to mitigate climate change rather than maximise profits.

Buyer motivations

The buyers of voluntary carbon offsets include businesses, non-governmental organisations, government agencies, international conferences and individuals.

An increasing number of companies have made a voluntary commitment to reduce their carbon emissions or become carbon neutral. A typical carbon management strategy includes measures such as reducing energy consumption, enhancing energy efficiency and purchasing renewable energy. Investments in carbon offsets tend to be the last 'piece of the puzzle' in either meeting emissions targets or becoming fully carbon neutral.[4]

Firms often use voluntary offsets to demonstrate corporate social responsibility to consumers. For example, SwissRe, one of the largest global re-insurance companies, has voluntarily declared a 10-year commitment to becoming fully greenhouse gas neutral and expects to offset approximately 37,000 tCO2e per year. HSBC is offsetting 170,000 tCO2e annually through four projects in New Zealand, Australia, Germany and India.[5] Purchasing offsets with 'development benefits' can be particularly important in this context as they can be marketed as charitable,

4. See The ClimateGroup (www.theclimategroup.org) for more information on voluntary private sector response to climate change.

5. http://www.hsbc.com:80/hsbc/csr/environment/the-challenge-of-climate-change/hsbc-carbon-neutral-pilot-project

poverty alleviating instruments as well. Carbon offsets are also used as a marketing tool. For example, Interface Carpets markets a 'Cool Carpet' which allows customers to buy carbon offsets equivalent to the full life cycle of the carpet. The Cooperative Bank in the UK offsets 1 tonne of carbon each year for every customer's household mortgage. A recent report by the Climate Trust argues that companies that do not take action on climate change will be risking their 'brand value' as climate change becomes an increasingly important issue for consumers (Carbon Trust, 2005).

According to industry insiders, some industries and companies might wish to demonstrate their willingness to voluntarily reduce carbon emissions to mitigate the impact and severity of future regulations. This could have been the motivation for several energy companies in the US, such as Cinergy and American Electric, to invest several million dollars in tree planting projects domestically and internationally.

Non-profit and charitable organisations are a natural market for voluntary offsets with sustainable development benefits. Buying into voluntary offsets is essentially about taking 'personal responsibility' for the impact of one's actions on the climate. It makes sense for environmental organisations to offset their carbon use to show that they are 'walking their talk.' Purchasing offsets is also a way for non-profit organisations to demonstrate their integrity. For example, international non-profit organisations that claim to alleviate poverty and suffering, yet which have large travel budgets, could be accused of contributing to poverty indirectly through the climate impact of their air travel.

Various governments, eager to demonstrate their personal responsibility, have also been developing plans to purchase carbon offsets, particularly for air travel. In the UK, the Department for Environment, Food and Rural Affairs (DEFRA), the Foreign and Commonwealth Office (FCO), and the Department for International Development (DFID) have all announced plans to offset their air travel emissions. Various cities around the world, such as Rotterdam and the Hague (The Netherlands), Vancouver (Canada), Portland (USA), Sapporo (Japan) and Gwangju (Korea), have pledged to reduce CO2 emissions or become CO2 neutral.

It is also increasingly popular for international conferences and events to declare themselves carbon neutral by offsetting international travel emissions and energy use during the conference or event itself. The G8 conference, the Association of

British Travel Agents, the Earth Summit in Johannesburg in 2002 and even the Australian Grand Prix are just a few examples of events that have voluntarily purchased offsets to neutralise carbon emissions.

An increasing number of individuals are buying offsets to neutralise their holidays, cars and/or homes. For individuals, the main motivation for offsetting carbon emissions is a sense of personal responsibility. As a modern lifestyle is unavoidably 'high carbon,' unless one is willing to endure significant personal inconvenience, offsets are a way to feel as if one is 'doing something.' Pop bands and rock stars are also showing enthusiasm for carbon offsetting. The Rolling Stones, Cold Play, Pink Floyd and Leonardo Di Caprio have all voluntarily purchased offsets.

Buyer concerns and considerations

What do buyers look for in voluntary offsets? Some common considerations include:

- Price: cost-effectiveness is clearly important for firms and organisations planning to buy large amounts of offsets. Nevertheless, buyers and potential buyers are willing to pay more for higher quality offsets. It is fair to say that buyers who value sustainable development benefits are willing to pay more for them, within reason of course.

- Sustainable development: although some are content with simple tree planting, many voluntary offset buyers are extremely concerned with sustainable development benefits. The degree of importance attached to the co-benefits of the offset projects depends on the circumstances and objectives of the particular firm, organisation or individual. For example, an international development organisation might seek projects in developing countries only and be extremely concerned with the associated community benefits. A company interested in its CSR (corporate social responsibility) image could use community benefits to 'put a human face' on their offset investment, thereby offering a more interesting story to their customers and shareholders. The Australian Formula 1 Grand Prix, on the other hand, might only be interested in the climate mitigation aspect of its offset investment. Ideally, organisations and firms would like offset projects to bear some relation to their mission and/or operations.

- Does it meet my mission? A special concern for charities is being able to justify the expense of offsets in view of their overall mission. For example, a develop-

ment or humanitarian organisation aiming to 'alleviate poverty and suffering' would have to demonstrate to their trustees and donors that paying money into offset projects directly or indirectly meets that objective. One could argue that the impacts of climate change will be on the poorest and most vulnerable groups in the poorest countries; therefore, an organisation aiming to help the poor would want to take personal responsibility for mitigating its own carbon footprint. Furthermore, offset projects in low-income countries with tangible benefits to the local community would have the double benefit of meeting development objectives and mitigating climate change.

Buyers express two main concerns about voluntary offsets:

- Credibility: this is probably the main concern firms, organisations and governments have about voluntary offsets. Without a central verification and registration body and a set of enforceable standards it is difficult for companies to assess the quality of the offsets being provided in terms of their reliability, additionality and permanence. Firms and governments, in particular, fear criticism by civil society for investing in poor quality projects.

- Availability of information: many potential buyers have expressed frustration over the lack of information about the available options in the voluntary market, especially who the sellers are and the quality of their projects. Some have suggested that there should be some type of consumer report describing and analysing the existing retail providers (Braun and Stute, 2004).

CARBON OFFSET PROJECTS AND SUSTAINABLE DEVELOPMENT

Carbon offset projects include hydro-energy, conversion of methane from landfills to energy, hydro-fluorocarbon destruction, tree plantations, wind farms, solar powered lamps in rural communities, fuel efficient cooking stoves and small agro-forestry schemes (see Box 2 for an example). These projects can either benefit or, in some cases, harm, communities, the environment and local economies in a variety of ways. For example, larger industrial projects such as methane capture or HFC destruction may be low-cost or efficient ways of reducing carbon emissions, but do not necessarily benefit local communities directly. Smaller projects that directly involve poor communities (such as agro-forestry schemes that allow farmers to sell carbon credits from growing trees on part of their land) can enhance and diversify rural incomes and provide other benefits, such as habitat and biodiversity conservation. Fuel efficient or solar-powered

cooking stoves reduce pressure on nearby woodlands, can improve health by reducing indoor air pollution, and free up time, previously spent gathering fuel wood, for more productive activities.

Box 2. Voluntary carbon offsets and sustainable livelihoods: Plan Vivo

Plan Vivo is an agro-forestry system through which smallholder farmers in developing countries can plant trees on their land and sell the emissions reductions. Once the trees mature, a certain portion may be harvested sustainably and sold as timber. A very small amount of the revenue is used for administration and marketing, while most of the money goes directly to the beneficiaries. The carbon credits from the planted trees and the revenue from the harvested timber raise and diversify income for participating farmers. The farmers also benefit from improved use of marginal land and other 'by-products' such as firewood, timber for construction, berries, fence posts, herbs and berries, etc. Agro-forestry also benefits local biodiversity. The methodology was developed in Mexico and has since been implemented in Mozambique and Uganda by various local NGOs. The Edinburgh Centre for Carbon Management (ECCM) provides some technical assistance to the projects. Emission reductions are bought directly from the programme via the ECCM or through retailers who resell the credits with a mark-up. Plan Vivo emissions reductions cost approximately £3.50-6.00/tCO2e, depending on the project.

Further information: http://www.planvivo.org/projects/projects.html#scolel

Unfortunately, there can often be a trade-off between community benefits and robust carbon benefits. Small-scale projects with significant direct benefits to communities, such as agro-forestry or energy efficient stoves in rural villages, are also often the riskiest in terms of achieving the projected carbon reductions and the most difficult and expensive to monitor. In contrast, large projects, such as HFC capture and landfill-to-energy projects have fewer benefits to local communities, but their carbon benefits are relatively certain and predictable and they are much easier to monitor. Some providers use a portfolio approach to mitigate against this risk; they invest in both community-based and large-scale projects and sell emissions credits generated by the portfolio as a whole rather than individual projects. In contrast, certified emissions reductions (CERs) must be generated from a specific project.

The CDM does not provide fixed standards for 'sustainable development' criteria (Box 3). Each host government is responsible for deciding whether a CDM project

6. DTZ Pieda Consulting. *An Evaluation Study of FRP's Carbon Sequestration Project in Southern Mexico.* Edinburgh, Scotland, June 2000. Available at: http://www.eccm.uk.com/scolelte/documents/DTZ_report.pdf

meets its own sustainable development objectives according to its own standards. The CDM Executive Board, which approves CDM projects and issues the CERs, is only concerned with assessing the robustness of the carbon benefits that the project is providing. CDM projects must undergo an expensive and lengthy registration and verification process. Consequently, the CDM market tends to favour projects that are large-scale, low-cost, simple to run, easy to monitor, and where additionality is easy to prove. Project developers also prefer to operate in more advanced developing countries such as China, India, Brazil and Costa Rica, generally bypassing the Least Developed Countries (LDCs). Not surprisingly, there are few small-scale community based projects or projects in Africa in the CDM project pipeline.

The voluntary market has potentially more scope to invest in small-scale projects with high sustainable development benefits as project developers can avoid the bureaucratic procedures and high transaction costs of the CDM registration process. However, this flexibility may come at the cost of reduced credibility and inconsistent quality. While some of the existing retail providers adhere to even higher standards of additionality and sustainable development than demanded by the CDM, others employ less rigorous project standards and verification methods. As a result, buyers often find it difficult to decide on a provider.

As previously noted, many retailers sell carbon offsets from forestry projects. A great controversy exists about the credibility of land-based sinks (forestry) projects as carbon offsets. Proponents argue that since 20%-25% of manmade emissions released into the atmosphere are caused by land-use change, climate change mitigation must address land-use change and deforestation. Furthermore, forestry projects can also have additional socio-economic and environmental benefits, such as biodiversity conservation. It is also argued that LULUCF (land-use, land-use change, forestry) projects provide the only means for the very poor, particularly in Africa, to access the carbon markets. On the other hand, the permanence of forests as carbon sinks is impossible to guarantee, as the trees might be burned or otherwise destroyed at some point in the future, thus releasing the CO2 back into the atmosphere. Carbon sequestration can also be difficult to measure accurately. In addition, large monoculture plantation projects in the past have had negative environmental effects and displaced local populations (Sterk and Bunse, 2004). Finally, some environmentalists argue that forestry projects deflect attention from the real problem, which is the world's fossil-fuel based energy system.

In light of these controversies, some providers and buyers only consider energy-

based projects to be credible offsets. Other retailers, such as Climate Care, are aiming to build an overall portfolio comprised of 20-25% land-use and 75%-80% energy-based projects to reflect the contribution of land-use changes and fossil fuel use to climate change as a whole. The portfolio approach also reduces the risk of carbon benefits of some projects not being realised in full.

Box 3. Project standards and verification

CDM (http://cdm.unfccc.int/)

- Host countries must approve proposed projects and assess whether they meet internally-defined sustainable development objectives
- Methodologies for project types must be approved by the CDM Executive Board
- Projects must prove additionality and calculate a credible baseline
- Verification conducted by Designated Operational Entity, accredited by the CDM Executive Board

The Gold Standard (http://www.cdmgoldstandard.org/index.php)

- Created by consortium of NGOs for CDM energy projects
- Sets out criteria for sustainable development benefits that project developers can voluntarily adopt

The Climate, Community and Biodiversity (CCB) Standards (http://www.climate-standards.org)

- Created by consortium of NGOs and private sector for land-based sink projects
- Set out criteria for sustainable development benefits to communities and for biodiversity protection

Self-developed standards (See websites of individual retailers)

- Created by individual providers of VERs
- Often verified by a third party, chosen by the VER provider

What is driving the market?

Although carbon offset providers have been operating since the 1990s, the market for voluntary carbon offsets has experienced its most rapid growth in the past two years. Several factors have contributed to this explosion of interest. Firstly, there has been a rise in environmental reporting, which has raised awareness of both issues and offenders amongst the general public and business community. The increasing prominence of the corporate social responsibility (CSR) agenda has made more firms concerned about sustainability and projecting a responsible image to the public. Many large firms will include an analysis of their climate impact and mitigation strategies in their annual sustainability reports or in the CSR portion of their websites. National and international policy developments, such as Kyoto and the EU ETS, have also been important for raising awareness about climate change. NGOs and governments appear to also be concerned with their image as environmentally and socially responsible and are eager to show a good example to the public. Overall, heightened public awareness of climate change and its impacts, as well as awareness of offsets as a viable mitigation strategy, appear to be key factors driving the market.

LOOKING AHEAD

The following are several recommendations for further developing the voluntary market as a tool for sustainable development.

- Industry research: the number of retailers has been growing very rapidly in response to the increasing demand for voluntary carbon offsets. However, there is no comprehensive and easy-to-find listing of retailers or analysis comparing prices and project quality. According to many organisations, this lack of information is an important barrier to purchasing offsets. The creation of a website to provide some form of consumer report on existing offset retailers could be very useful for buyers and could help grow the market.

- Further work on developing standards: buyers are also very concerned with the credibility of the retailer and the offset projects on offer, especially in the absence of internationally accepted standards for voluntary offsets. The CDM Gold Standard can be used for voluntary offsets, but it is a fairly expensive and lengthy process. The Climate, Community and Biodiversity standards (Box 3) are useful for voluntary offset projects, but still fairly complex. In order to enhance credibility, more retailers could consider using existing standards. Alternatively, retailers and other interested parties could collaborate to create a new set of simpler standards specifically for the voluntary market that could become widely accepted. Any standard would have to strike a delicate balance between being stringent enough to provide credibility, whilst being simple enough to be implemented cheaply and effectively.

- Increase transparency: many retailers provide very little financial information about their operations. As discussed, the percentage of revenues actually spent on projects rather than overheads is highly variable. Increased transparency over how revenues are being allocated would help buyers feel more comfortable about how their contribution is being spent.

- Endorsement by opinion formers: greater awareness is needed about climate change and the existence of offsets as a viable tool for individuals to reduce emissions. Industry insiders suggest that endorsement of voluntary offsets by 'opinion formers' and, in particular, endorsement by the government, would help to build confidence. Interestingly, DEFRA recently published a press release urging holidaymakers to 'go green' by offsetting their flight emissions. Others have noted the importance of endorsement by NGOs, because some have been very critical of the concept of offsetting emissions.

- Guide to best practice in sustainable development: a guide to best practice in incorporating sustainable development into small-scale carbon offset projects would also be useful for buyers and project developers.

To conclude, it is clear that although the voluntary market is small and fragmented, it is growing rapidly. Policy developments in the regulatory sector, such as the ratification of Kyoto and the EU ETS, appear to have boosted rather than dampened the voluntary markets. Policy developments have raised the profile of climate change in the media and helped fuel the sentiment that individuals and organisations need to take more responsibility for their impact on the climate. As current regulatory regimes in Europe and Australia (and the ones planned elsewhere) only cover large emitters, there is plenty of scope for companies, organisations and individuals to be active in the voluntary market. However, the extent to which purchasing offsets becomes, for example, an integral part of a company's carbon management strategy or standard practice for holidaymakers, is yet to be seen.

Regarding sustainable development, there is certainly a demand from buyers for offset projects that provide co-benefits to poor communities and to biodiversity. The challenge for those wishing to use the voluntary market as a tool for sustainable development is to increase market demand as a whole, primarily through enhancing credibility and availability of information, and to develop increasingly better methodologies for incorporating sustainable development benefits into carbon offset projects through research on best practice and by sharing information.

ANNEX A: ORGANISATIONS INTERVIEWED

Organisation	Location	Category	Offset Policy
AEA Technologies / Future Energy Solutions	UK	Private Sector	Energy consulting company
AfricaPractice	UK	Private Sector	Communication firm that promotes investment in Africa. Currently developing a CDM guide to Africa.
BG-Group	UK	Private Sector	Natural gas provider
Business For Climate / Face Foundation	Netherlands	Non-profit	Provider of voluntary offsets, focus on forestry projects
Climate Care	UK	Private Sector	Voluntary offset provider. Focuses on energy projects in developing countries that have sustainable development benefits
Center for Environmental Leadership in Business / Conservation International	USA	Non-profit	Conservation organisation, develops offset projects with strong emphasis on biodiversity protection
Department for Environment, Food and Rural Affairs	UK	UK Government	Plans to offset employee travel
E3G	UK	Private Sector	Environmental and energy consulting
Ecosystem Marketplace	USA	Non-profit	Source of information on environmental markets
Edinburgh Centre for Carbon Management	UK		Carbon management consulting company. Carbon offset project development (Planvivo)
Future Forests	UK	Private Sector	Voluntary offset provider
Greenpeace	UK	Non-profit	Environmental NGO
Hamburg Institute	Germany	Non-profit	Economics research institute, has published policy paper on voluntary offsets
HSBC	UK	Private Sector	Large multinational bank that has committed to becoming carbon neutral
Key Travel	UK	Private Sector	Travel agency for NGOs, religious organisations, universities. Provides online carbon calculator and link to offset provider for clients
New Economics Foundation	UK	Non-profit	Alternative economic policy think-tank
Oxfam	UK	Non-profit	Non-profit committed to humanitarian relief and development in developing countries

ANNEX A continued

Organisation	Location	Category	Offset Policy
The Climate Movement	UK	Non-profit	Coalition of NGOs to create public campaign on climate change
World Bank / Carbon Market Research	USA	International Organisation	Publishes yearly report on "State and Trends of the Carbon Markets" and maintains database on CDM transactions
World Business Council on Sustainable Development	Switzerland	Non-profit	International coalition of companies committed to sustainable development. Developed protocol for GHG accounting and reporting for companies. Also developing accounting protocol for offset projects.

ANNEX B: EXAMPLES OF RETAIL OFFSET PROVIDERS

Name (Location)	Type of Project	Project Location	Verification	Price / Tonne
500ppm (Germany)	Energy (+SD benefits); CDM and non-CDM	Developing countries	CDM Gold Standard; DOE verification	Unclear
Atmosfair (Germany)	Energy - renewables, energy efficiency (+SD); CDM projects	Developing countries	CDM Gold Standard; DOE verification	EUR 15/ tCO2e (US$18)
Bonneville Environmental Foundation (USA)	Renewable energy	USA	Unclear	Unclear
Climate Care (UK)	Energy (small scale, community-based); some forestry	Developing countries; very small amount in UK	Independent third party	£6.50 / tCO2e (US$11.70)
Conservation International (USA)	Forestry - reforestation and avoided deforestation (+biodiversity and SD)	Developing countries	Unclear	US$5 / tCO2e avoided deforestation; US$8-12 / tCO2e for restoration or compliance based carbon
EAD Environmental (USA)	Energy (esp. renewable energy); some underground sequestration	Mostly USA	Unclear	US$5-$7.50 / 500kWh of electricity use
Face Foundation / Business For Climate (Netherlands)	Forestry (SD + biodiversity)	Developing countries	CDM standards; FSC standards; DOE verification	EUR 13 / tCO2e (US$15.60) individuals, EUR 10 / tCO2e (US$12) companies

ANNEX B continued

Name (Location)	Type of Project	Project Location	Verification	Price / Tonne
The Carbon Neutral Company (UK)	Forestry; some energy	Mainly UK; some developing countries	Independent third party verification; audit by KPMG on sample basis	£13-£16 / tCO2e (US$23.40-$28.80) individuals; £100,000 + (US$180,000) for large company with offices around Europe
Green Fleet (Australia)	Forestry	Australia	Unclear	app. AU$9.30/ tCO2e (US$7.00)
MyClimate (Switzerland)	Energy (+SD)	Developing countries	CDM Gold Standard; verified by team of experts from Swiss Federal Institute of Technology	app. EUR 30 / tCO2e (US$36)
Native Energy (USA)	Energy + SD	USA – Native Americans	Unclear	US$15 / tCO2e
Plan Vivo / ECCM (UK)	Community agro-forestry	Developing countries	ECCM verifies; also sometimes use SGS	£3.50 - £6.00 / tCO2e (US$6.30-$10.80)
Primaklima (Germany)	Forestry	2/3 Germany, 1/3 developed and developing countries	Unclear	App. EUR 1.50 / tCO2e (US$1.80)

Note: Price information is based on website quotes, interviews and estimations and may be incorrect or outdated.

DOE Designated Operational Entity: auditing agency accredited by CDM Executive Board (eg. SGS)
ECCM Edinburgh Centre for Carbon Management
SD Sustainable Development
FSC Forest Stewardship Council

For more lists, please see:
http://www.davidsuzuki.org/Climate_Change/What_You_Can_Do/carbon_neutral.asp
http://www.ecobusinesslinks.com/carbon_offset_wind_credits_carbon_reduction.htm

REFERENCES

Braun, M. and Stute, E. 2004. *Anbieter von Dienstleistungen fur den Ausgleich von Treibhausgasemissionen.* Germanwatch-Hintergrundpapier, Bonn/Berlin, January 2004. Available at www.germanwatch.org/rio/thg-ad03.htm.

Butzengeiger, S. 2005. *Voluntary Compensation of GHG-Emissions: Selection criteria and implications for the international climate policy system.* HWWI Policy Paper, Hamburg Institute of International Economics, Hamburg, Germany. Available at: http://www.hwwa.de/Forschung/E_Climate/Publications/2005.htm

Carbon Trust. 2005. *Brand Value at Risk from Climate Change.* Summary of research done by Lippincott Mercer. Carbon Trust. London, UK. Available at http://www.wupperinst.org/download/1078-compensation.pdf.

CDM Watch. 2004. *Market Failure: Why the Clean Development Mechanism won't promote clean development.* November 2004. Bali, Indonesia. Available at www.cdmwatch.org.

Cosbey, A., Parry, J-E., Browne, J., Dinesh Babu, Y., Bhandari, P., Drexhage, J. and Murphy, D. 2005. *Realizing the Development Dividend: Making the CDM Work for Developing Countries*. Phase 1 Report – prepublication version, International Institute for Sustainable Development, May 2005. Winnipeg, Manitoba, Canada. Available at www.iisd.org/climate/global/dividend.asp.

Haites, E. and Aslam, MA. 2000. *The Kyoto Mechanisms and Global Climate Change: Coordination Issues and Domestic Policy.* Pew Center on Global Climate Change, September 2000. Arlingkton, Virginia, USA. Available at http://www.pewclimate.org/docUploads/kyoto%5Fmechanisms%2Epdf

Lecocq, F. and Capoor, K. 2005. *State and Trends of the Carbon Market 2005*. The World Bank Carbon Fund and the International Emissions Trading Association, Washington DC. Available at carbonfinance.org/docs/CarbonMarket Study2005.pdf.

Reid, H. Huq, S., Inkinen, A., MacGregor, J., Macqueen, D., Mayers, J., Murray, L. and Tipper, R. 2004. *Using Wood Products to Mitigate Climate Change: A review of evidence and key issues for sustainable development,* International Institute for Environment and Development, London. Available at www.iied.org/forestry/research/projects/climate.html

Sterk, W. and Bunse, M. 2004. *Voluntary Compensation of Greenhouse Gas Emissions.* Policy Paper No. 3/2004, Wuppertal Institute for Climate, Environment, and Energy, October 2004. Wuppertal, Germany. Available at www.wupperinst.org/download/1078-compensation.pdf

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