

SPECIAL REPORT

Environmental Finance

OCTOBER 2011

PUBLISHED IN ASSOCIATION WITH

CARBON DISCLOSURE PROJECT

Confronting climate risk

Business, investment and
the Carbon Disclosure Project



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Confronting climate risk

Business, investment and the Carbon Disclosure Project



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This special report first appeared with the October 2011 issues of *Environmental Finance* and *Carbon Finance*

This special report was produced in association with, and with the kind assistance of, the Carbon Disclosure Project Secretariat. *Environmental Finance* would also like to thank PricewaterhouseCoopers for its help and input.

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Annual subscription: £350/\$595/€455
(Reduced rates available for academic institutions and subscribers in developing countries – £175/\$295/€225)

Environmental Finance (ISSN 1468-8573) is published monthly by Fulton Publishing, registered office One Duchess Street, London W1N 3DE.

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Paul Simpson
CEO, The Carbon Disclosure Project

Last year, global energy-related carbon dioxide emissions reached a record high. The International Energy Agency's estimates made for bleak reading but reinforced the need to take bold and decisive action if we are to have any chance of limiting average temperature increases to the 2°C level agreed by world leaders as necessary to protect against catastrophic climate change.

What's more, rising energy demands are competing for a limited supply of fossil fuels. The competition for increasingly scarce natural resources is putting pressure on commodity prices and having a growing impact both socially and economically. Corporations, investors and governments today are faced with a choice: to compete aggressively for finite resources, or to advance towards a low-carbon economy that enables sustainable, profitable growth, whilst reducing reliance on increasingly scarce materials.

Managing carbon emissions and protecting the business from climate change impacts are fundamental to achieving sustainable and strong shareholder returns. Earlier this year, the investment consultancy Mercer released a report concluding that the best way for institutional investors to manage portfolio risk associated with climate change may be to shift 40% of their portfolios into climate-sensitive assets with an emphasis on those that can adapt to a low-carbon environment.

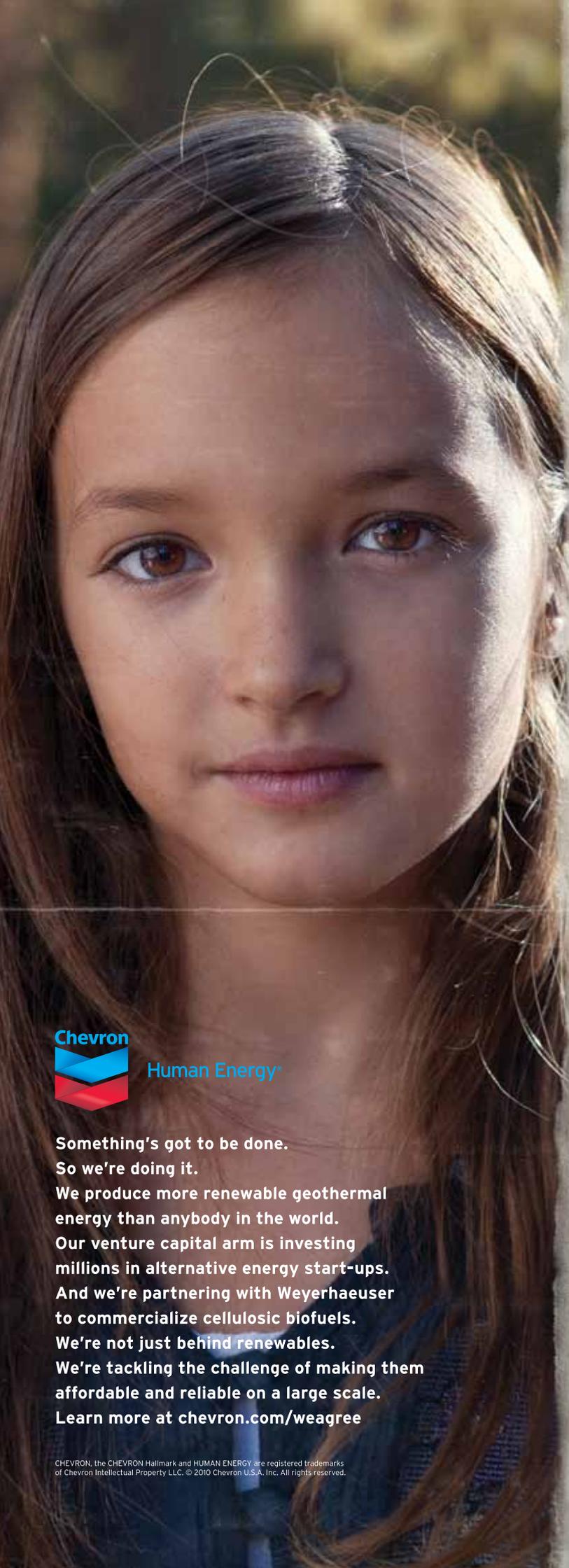
Managing carbon emissions and protecting the business from climate change impacts are fundamental to achieving sustainable and strong shareholder returns

An important part of an investor's strategy should be to engage with the companies in which they invest to encourage performance improvement. Carbon Action is a new initiative launched by the CDP this year (see pages S8–S9). It is driven by a leading group of investors to encourage their portfolio companies to reduce emissions by investing in emissions-reducing activities with a satisfactory payback period. Carbon Action reflects a growing recognition that there is a huge range of carbon-reducing activities that companies can undertake that are underpinned by a very clear business case. It is therefore in the interests of all investors – and not just the more active owners – to ensure these actions are taken.

As the management of carbon continues to move into companies' core business strategies and mainstream investment thinking, demand for primary corporate climate change information grows around the world. As well as working on behalf of 551 institutional investors to gather relevant information from large corporations around the world, the CDP is also working with global businesses and governments to strengthen the resilience and sustainability of their supply chains through the CDP Supply Chain programme. CDP Cities has been launched to help the world's major cities reduce climate change risk and bolster economic growth, while CDP Water Disclosure is now in its second year of working with major global companies to improve water management. A key part of the CDP's strategy is to ensure the effective use of data collected. To assist with this, companies are able to obtain tools that help them to measure, report and manage carbon more effectively, through CDP Reporter Services.

It is clear that today, more than ever, we must build momentum to decouple economic growth from emissions. To achieve the transformational change required, businesses need visibility across their departments and supply chains; they need to improve their capabilities for assessing risks and capitalising on opportunity and they need to be transparent and open up a dialogue with their investors, suppliers and customers. Measurement and information leads to greater awareness, which is a catalyst for change.

While we wait patiently for much-needed global regulation, business must continue to forge ahead, innovate and seek out opportunities by doing more with less. The decisions that bring about a legitimate, low-carbon and high-growth economy will bring considerable value to those that have the foresight to make them. **EF**



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Introduction

Picking up on performance

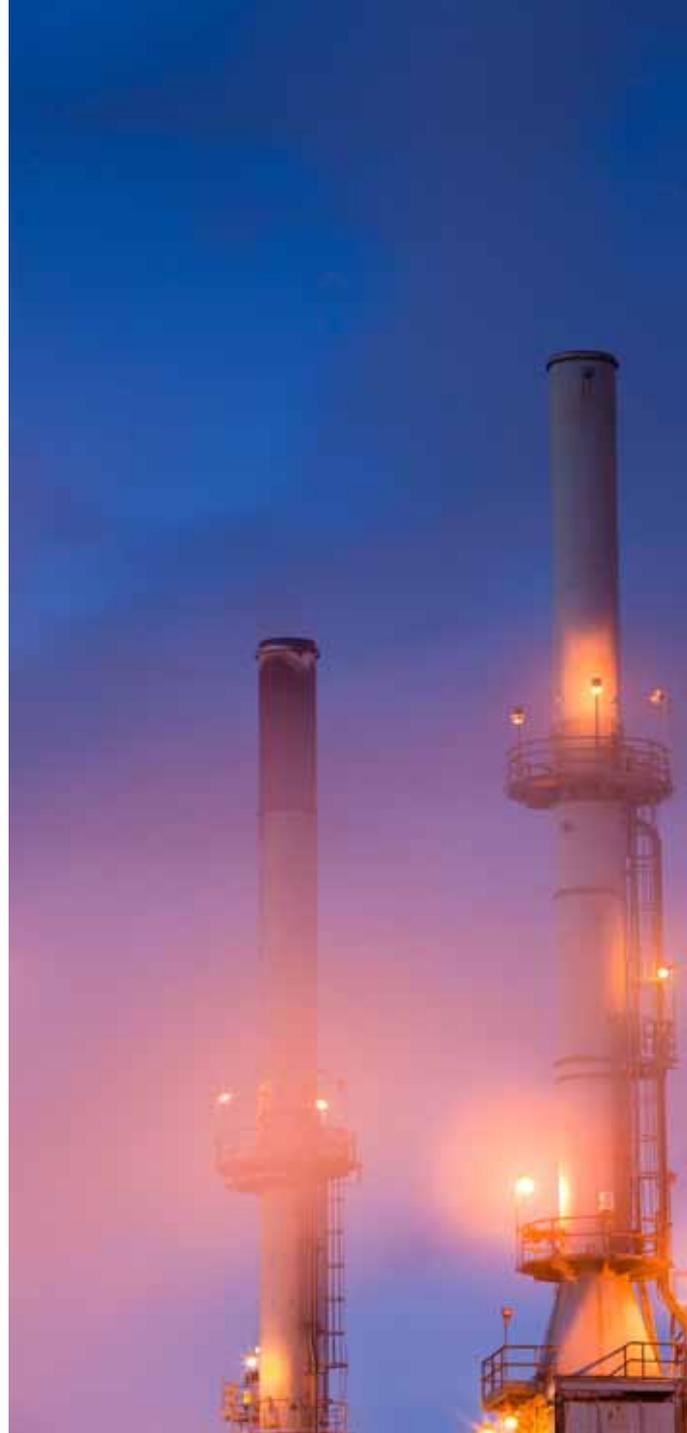
Pressure is building on the world's largest companies to up their game when it comes to addressing climate change, amid growing evidence of a correlation with share price performance. Alan McGill examines how the constituents of the Global 500 have responded to the Carbon Disclosure Project

Paul Polman caused quite a stir when he announced his company's Sustainable Living Plan late last year. The Unilever chief executive said he wanted investors to buy into the long-term value model the company had created with its plan; a model that is equitable, shared and sustainable. "If you don't buy into this," he explained, "I respect you as a human being, but don't put your money in our company."

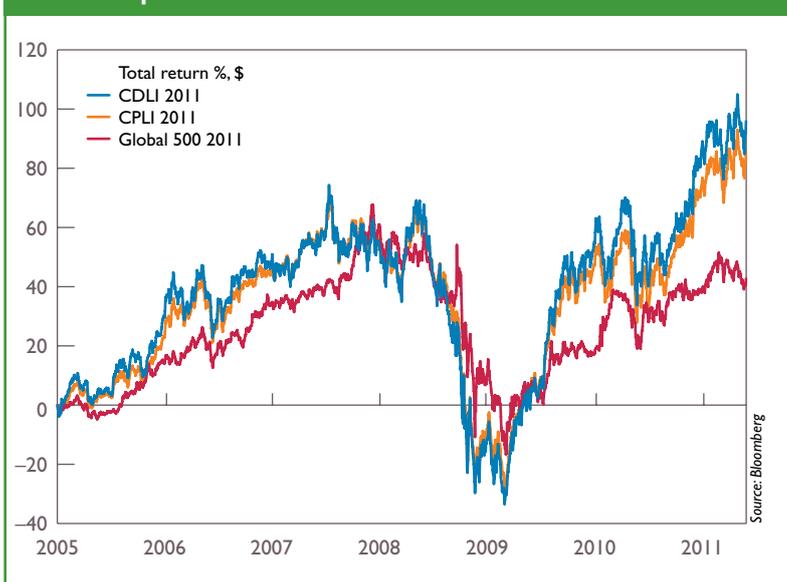
Turning away potential investors is a risky approach, but Polman is no stranger to controversy: he has strong views on how his business is run and those views filter through every part of it. Indeed, by 2020 the aim is to halve the environmental impact of the company's vast range of consumer products, while at the same time to have doubled growth.

Only time will tell if this delivers financial value for those shareholders that 'buy into the plan', but while Unilever is certainly ahead of the pack, the concept of sustainable, profitable growth is entering the mainstream. What's more, we are beginning to see that reflected in share prices.

It would be a stretch to suggest that carbon disclosure causes a stronger share price, but what is reflected in a new analysis of companies disclosing to the Carbon Dis-



I. Stock performance vs CDLI and CDPI



closure Project (CDP) this year is the strong correlation between good climate change disclosure and performance, and strong financial performance. It provides a fascinating analysis from an investor's point of view, with companies in both the Carbon Disclosure Leadership Index (CDLI) and the Carbon Performance Leadership Index (CPLI) generating approximately double the average total return of the Global 500 between January 2005 and May 2011.

The CDP is the world's largest database of primary corporate climate change information. Every year for the past 11, the CDP has requested investment-relevant information from the world's 500 largest companies – the Global 500 – regarding their greenhouse gas emissions (GHGs) and climate change strategies. This request is made on behalf of a growing cohort of shareholders; 551 this year, managing assets of \$71 trillion.

Companies' responses are analysed and those who distinguish themselves in how they are responding to the risks and opportunities of climate change are identified within the CDLI and the CPLI.

Those in the CDLI are the leaders in identifying the links between carbon measurement, reporting and disclosure, risk management, emissions reductions, stakeholder en-

agement and sustainable business growth opportunities – in short, the investment implications of the risks and opportunities in relation to climate change.

The CPLI, an index introduced last year, is comprised of the higher-scoring companies in the CDLI, ranked in terms of their performance in actually taking action on climate change. Companies in both indexes are clearly outperforming their peers.

Twenty-three companies are on both the CDLI and the CPLI. One of them is German chemicals firm Bayer, which

Our correlation between share price and carbon disclosure requires more study, but the relationship it suggests is compelling

has focused on reducing its production and energy costs. The company has made climate change a “core element” of its strategy and is now going beyond energy savings by focusing on growth in climate-related products to satisfy consumer demand.

While the relationship between carbon disclosure, performance and share price requires more analysis, the likes of Bayer, Dutch electronics giant Philips and US logistics firm UPS are demonstrating how a focus on climate change is not only about identifying the risks to business security, but also the opportunities. Of the 404 constituents of the Global 500 that responded to this year’s CDP survey, 279 (70%) have products designed to cut emissions. A majority of respondents (84%) also show a continued awareness of the opportunities that sustainability can bring, while 84% also recognise the potential risks if they do not move to deliver sustainable, low-carbon products and services.

Accelerating this kind of low-carbon growth is a central theme to our report this year analysing the Global 500 responses (which will be published on www.cdproject.net after the global launch of the 2011 results on 14 September). While investors won’t be expecting every company to replicate Unilever’s approach, they are expecting that more will begin to follow its lead. It’s not rocket science: companies that are reporting and disclosing information are able to make better use of resources to maintain, or even improve, margins; they are also using it to influence research and development, not only in terms of new products but in some cases new markets too. Companies that can better explain what they are doing will be better understood by investors. Our correlation between share price and carbon disclosure requires more study, but the relationship it suggests is compelling.

Already, companies are developing methodologies to quantify and then apply values to account for their environmental impacts. Sportswear firm Puma, for instance, recently published an ‘environmental profit and loss account’, which reported a GHG emissions value of €47 million (\$65 million) for 2010.

We are not at the stage where an environmental profit and loss account can stand alongside traditional financial results, but the move by Puma was a tangible attempt to create a more comprehensive corporate reporting approach. It’s an emerging field for reporting, and one where progress is likely to accelerate quickly, particularly given the interest already expressed from other companies.

Investors are also taking note, given that there is currency in the bottom line figures rather than an environmental metric. Investors want more information but, critically, the information has to be in a format they understand and that can be used to make decisions. It also needs to be accurate, which is why the CDP this year raised the bar in terms of its requirements on how

The CDP in 2011 – a snapshot

- 404 of Global 500 responded (81%), down from 410 last year
- 73% disclose absolute or intensity emission reduction targets, up from 65% last year
- 93% have board or senior executive oversight for climate change programme (85% in 2010)
- 70% of companies have developed products and services in response to climate change*
- 65% incentivise staff financially to manage climate change issues (compared with 49% last year)
- 1,780 emission reduction activities reported*
- 44% have made emission reductions*
- tighter verification criteria
- companies in Australia, Germany, Italy, Switzerland and the UK perform strongest

* Information in 2011 is not comparable with that from 2010

companies verified their data on climate change. A verification statement is now required to cover the current reporting year, related to the relevant emissions scope, detail the verification standard being used and be verified by a third party. While 69% of respondents stated that they had gained or were in the process of gaining verification, only 37% met all the criteria, meaning the overall number of respondents verifying data fell. However, over the long term, the quality and reliability of the data will be enhanced as more companies come into line. This is a critical area for investors and the CDP will be consulting on a verification roadmap for 2013–18 to encourage more companies to verify their climate data.

To take a step back from Puma and the future of reporting, there are positive signs that other companies see carbon reporting in a different light – that environmental reporting is not a risk they have to manage, but an oppor-

Top companies

The top 23 companies in both the Carbon Disclosure Leadership Index and the Carbon Disclosure Performance Index

Consumer discretionary	Fiat
	BMW
	Honda Motor Company
	Phillips Electronics
Consumer staples	British American Tobacco
	Tesco
Financials	AXA Group
	Bank of America
	National Australia Bank
	Swiss Re
	UBS
Healthcare	Westpac Banking
	Bayer
	GlaxoSmithKline
	Novartis
Industrials	Lockheed Martin
	Schneider Electric
Information technology	Cisco Systems
	Samsung Electronics
	SAP
Materials	Sony Corporation
	Air Products and Chemicals
	BASF

Climate change a “core concern” for leading chemicals firm

Introduction



Paul Polman, Unilever: looking to long-term value

tunity to identify cost savings, new markets and innovative products, and to engage staff. The good news for investors is that this means environmental information is more readily available, easier to understand and of a higher quality than ever before.

You only have to look at the CDP 2011 survey to see evidence of this. The number of respondents may have dropped slightly – from 410 in 2010 to 404 – but more companies disclosed details of GHG emissions (379 compared to 367) and information on emissions reduction targets (294, up from 250). What's more, 355 companies are now making this publicly available, compared to 338 last year.

Quality is also rising – despite, at first glance, appearances to the contrary. This year, a lower percentage of companies have achieved a performance score of 50 or more (37%, compared with 49% last year). However, this is because the qualifying criteria have been made more stringent. Nevertheless, the number of companies that scored highly enough in the disclosure index to be assessed on performance was up (from 314 to 337).

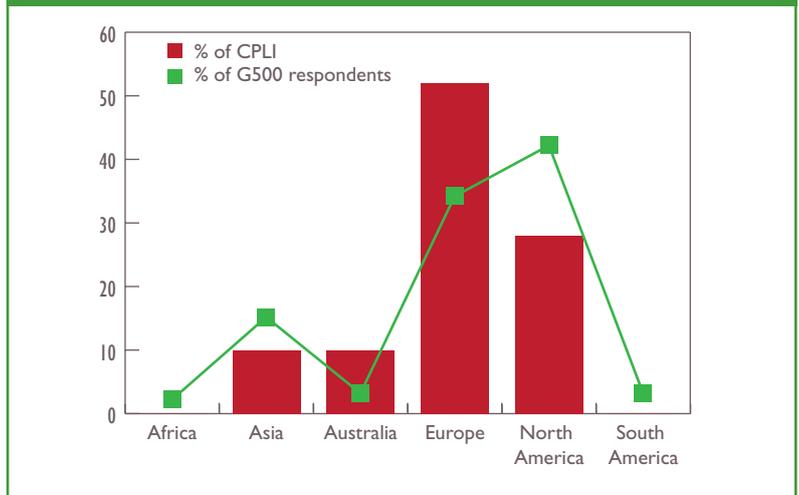
Still, this means there is scope for improvements in performance. Some sectors are not responding as quickly as others in terms of improving performance. For example, no energy, telecoms or utilities companies appear in both the CPLI and CDLI this year.

When you are dealing in the detail of emissions and reporting, you can risk losing sight of the bigger picture. The performance of these companies is a piece in a much bigger jigsaw. If we are going to meet the target to cut emissions by 80% by 2050 – as per the Intergovernmental Panel on Climate Change's recommendations to avoid 'dangerous climate change' – then the bar needs to be raised across the board.

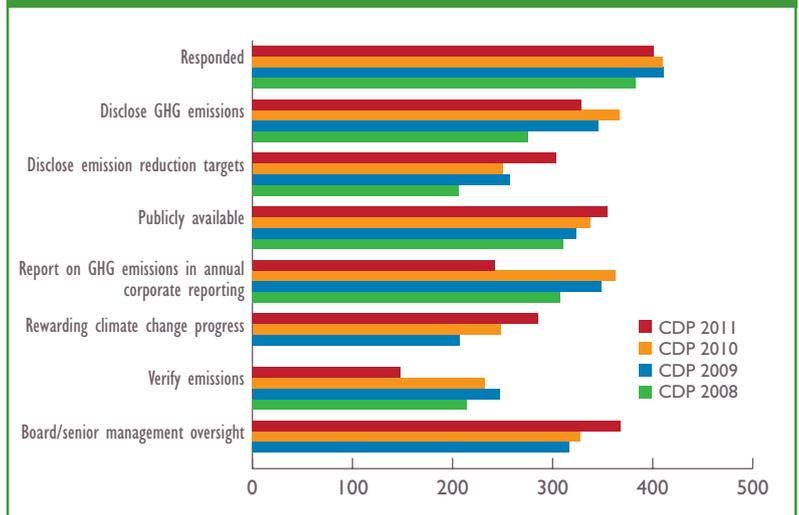
To meet such a target, emissions have to be cut globally by 2.65% a year, every year, across the global economy as a whole. In this year's responses to the CDP, the Global 500 achieved a median 4.4% reduction in absolute emissions – but much of this is linked to the effects of recession. Without a fundamental decoupling of economic growth from emissions, it is unlikely that anything like that magnitude of annual reduction that can be maintained until 2050.

What is clear is that, as the deadlines for emissions re-

2. Responding companies by region



3. Respondents and disclosure summary, 2008–11



ductions loom closer, regulation will become tighter and the cost of doing little will rise – and investors will become increasingly reliant on the kind of information the CDP demands. There is evidence already of an appreciation of this at board level.

Indeed, Paul Polman is not the only CEO to be pushing sustainability throughout his workforce. Some 93% (368) of companies are reporting board-level or other executive-level responsibility for climate change; that's 40 more companies than in 2010. Almost two thirds of respondents (68%) have integrated climate change into their business strategy. This has also led to incentives being linked to progress in sustainability: some 286 companies tie executive compensation in part to progress on climate change targets.

Quarterly earnings have been the dominant measure of success in our financial system, but it seems that they may not be enough to satisfy the demands of an investment community increasingly keen to assess the long-term outlook for the businesses in which they invest. We're not quite at the stage where everyone will buy into the Unilever way of thinking, but the 2011 CDP survey shows we are on our way. **EF**

Alan McGill is a London-based partner in PwC's sustainability and climate change practice. E-mail: alan.d.mcgill@uk.pwc.com

Fortum's zero-carbon challenge

Anne Brunila,
Executive Vice-
President for
Corporate Relations
and Sustainability at
Fortum Corporation,
explains the energy
company's climate
change strategy



How has Fortum's approach to climate change evolved over recent years?

As with the energy industry in general, Fortum has recognised climate change and global growth in energy consumption as the biggest challenges for our generation and for generations to come. In our view, carbon-free or low-carbon energy sources and energy efficiency provide the key solutions to these. For decades, our research and business development have been much focused on climate issue: identifying both the risks and opportunities and taking actions accordingly. Over recent years, climate change mitigation has been in the core of company strategy and more and more closely integrated into daily business operations. As European emissions trading has established a price for carbon, this has become a new component in the production cost.

Our long-term aspiration is to be a carbon dioxide (CO₂)-free power and heat company. An ambitious goal, but one we believe is necessary.

Could you explain how your generation mix is evolving?

We aim to continuously improve our competitiveness in climate issues and to keep our greenhouse gas emissions among the lowest in the European energy industry. In line with our strategy, future growth is based mainly on targets aligned with sustainable development: market-driven growth in CO₂-free hydro and nuclear power and energy efficient CHP production. In 2010, 86% of Fortum's power generation in Europe was CO₂-free.

Fortum's ongoing investment programme in Europe aims to increase emissions-free and energy-efficient production and is almost 100% CO₂-free. The investment programme in Russia is based mainly on the use of natural gas. To reduce specific emissions, we target best available technologies and resource-efficient CHP. We believe that, in the long term, the global energy system will be based on CO₂-free electricity production and energy efficiency. It will be necessary gradually to shift from traditional power plant technologies based on limited energy sources and fuel combustion to production forms based on inexhaustible and emissions-free solar energy. In addition to direct solar electricity and heat, the solar economy also includes all other solar-based energy forms, such as hydro, wave and wind energy as well as geothermal heat and carbon-neutral bioenergy. Realisation of the future

energy system requires the development of smart grids. We believe that tomorrow's eco-cities will be based on smart grid solutions, eco-efficient construction, electric transportation and sustainable heating solutions, and we are participating in the development of these technologies and systems.

How do you plan to address growing emissions associated with your Russian operations?

Due to our extensive investment programme, our absolute and specific emissions in Russia are projected to increase in the medium term. Energy-efficiency improvements as such can contribute to emissions reduction, but major reductions require introduction of alternative fuels or carbon capture and storage (CCS) technology. However, these solutions will not be feasible in the near future. CO₂ emissions in Russia do not currently have a real economic value and no carbon market is expected during the next decade. Russia is anyhow utilising the Joint Implementation mechanism included in the Kyoto Protocol. The resulting emission reduction units (ERU) can be transferred from Russia to be used, for example, in the EU emissions trading system. Fortum has for years been developing projects applicable for Joint Implementation and one project in OAO Fortum was approved late in 2010. Also a project in TGC-1 co-owned by Fortum is among the projects approved by the Russian government.

What advantages have you found from engaging with the CDP?

First of all, CDP provides us information on which issues the investors consider most important in evaluating companies and their carbon risk and performance. Second, CDP as an extensive global scoring system and database enables us to annually benchmark ourselves among our peers in climate disclosure and performance. It also helps us in further development and continuous improvement of our disclosure and performance. The CDP has established itself as a recognised carbon database that other rankings and surveys utilise as well. Third, CDP provides also our stakeholders an independent, annual assessment on our climate change mitigation activities.

How are you finding that investor interest in and knowledge about carbon is evolving?

Climate issues are increasingly more important in investor relations: more frequent and more sophisticated inquiries and questionnaires on carbon performance and disclosure.

What challenges are emerging – either from your carbon disclosure efforts, or your carbon performance?

Requirements for reporting are increasing: for example, the extended scope of greenhouse gas accounting is challenging – especially regarding Scope 2 and Scope 3 emissions. Our huge performance challenge is to bring down our emissions from the current annual 25 million tonnes towards our long-term aspiration to be CO₂-free.

Fortum's activities cover the generation, distribution and sales of electricity and heat as well as related expert services. The company's operations focus on the Nordic countries, Russia and Baltic Rim area. In 2010, Fortum's sales totalled €6.3 billion and comparable operating profit was €1.8 billion. The company employs approximately 10,500 people and its shares are quoted on NASDAQ OMX Helsinki.

Taking action on carbon

Disclosure is a vital first step, but companies must ultimately reduce emissions if climate change is to be tackled. **Paul Dickinson** sets out the thinking behind CDP Carbon Action – and four investors explain why they are backing it

The need to decouple economic growth from greenhouse gas emissions is growing. As the world uses up its natural resources at an alarming rate, the prices of these finite resources continue to move upwards. At the same time, the impacts of extreme weather conditions, which scientists predict will increase because of the human influence on the climate, are affecting commodity prices. The floods and droughts in Pakistan last year helped to push cotton prices to record levels.

With rising energy and other commodity prices as well as increasing resource scarcity, the efficient management of greenhouse gas emissions is critical. It is no surprise that shareholders are turning a spotlight on carbon reduction in order to mitigate financial risk.

There is a growing awareness among the investment community that there are significant business benefits for companies in reducing their emissions and subsequently their costs. This is the driving force behind the Carbon Disclosure Project's (CDP's) Carbon Action initiative. This year, a group of 35 investors holding \$7.6 trillion in assets (see box) issued a request to the largest 500 public companies in the world to take concrete action to reduce their emissions.

Carbon Action investors include:

- Aviva Investors
- AXA Group
- Bank Sarasin & Co
- Boston Common Asset Management
- Calvert Asset Management Company
- CCLA Investment Management
- Comité syndical national de retraite Bâtirente
- Connecticut Retirement Plans and Trust Funds
- The Co-operative Asset Management
- F&C Management
- First Affirmative Financial Network
- Hermes
- Insight Investment Management (Global)
- KLP Insurance
- PhiTrust Active Investors
- Robeco
- Rockefeller Financial
- SRI Group
- SAM Group
- Scottish Widows Investment Partnership
- Strathclyde Pension Fund
- Zevin Asset Management



Clean energy – one path to emissions reductions

As investors increasingly focus on how emissions reduction activities can help protect their investments, they have for the first time asked constituents of the Global 500 index of the world's largest companies to do three things:

- Set emissions reduction targets – while target reduction setting is on the rise across the Global 500, investors are asking those that are still not setting targets to take action in this area.
- Make year-on-year reductions – these may be absolute or intensity-based.

Jeanett Bergan

head of responsible investments, KLP

“We believe that greenhouse gas emissions will have an economic impact for corporations. Measuring the emissions is a first step for corporations to identify their emissions and evaluate this impact. By joining the Carbon Action initiative, we further stress the need for reduction efforts. We believe there is a huge potential for improvements in, for instance, energy and/or process efficiency. We also hope that the Carbon Action Initiative could contribute to making good ideas and examples of reduction projects known to a broader audience and be an inspiration for other corporations.”





James Bevan

chief investment officer, CCLA

“From 2013, CCLA’s charity clients intend to divest from developed-world energy, utility, industrial and materials companies in the Global 500 that have not yet disclosed reduction targets to the Carbon Disclosure Project. We believe that management of the carbon challenge is a key part of achieving sustainable and strong shareholder returns. Being part of Carbon Action allows us to cost-effectively encourage investee companies to play a full part in the transition to a low-carbon economy. Mitigation initiatives which pay back rapidly are a sensible place for energy-intensive companies to start. Efficient use of key resources is an important value driver.”



■ Identify and implement emissions reduction activities with a satisfactory return on investment.

But there are benefits to companies in taking action, beyond complying with their shareholders’ request. Some companies must protect themselves from material financial risk from carbon prices or from issues in their supply chains; but all companies gain by managing their operations more efficiently and reducing energy costs. This is not a choice between reducing emissions or higher financial returns.

There is a growing recognition of a large range of carbon reducing activities that companies can undertake with a very clear business case. Research by consultancy McKinsey & Co finds that most companies have options to reduce carbon emissions at negative cost – across the overall economy there is the potential to save as much as 12 gigatonnes of carbon dioxide equivalent, 25% of the global total annual emissions, in this way by 2030.

Some companies are already seeing tangible commercial benefits from implementing quantifiable, sustainable pro-

Paul Abberley

CEO, Aviva Investors London

“Almost two years ago, Aviva chairman Lord Sharman called for the CDP to go beyond disclosure and challenge companies to take action that mitigates their climate change emissions. We warmly welcome the response of the CDP and are proud to be founding signatories to and provide funding for the Carbon Action initiative.

We believe that the external costs of greenhouse gas emissions will become internalised into company cash flows and profitability. Managing greenhouse gas emissions is therefore essential to delivering sustainable shareholder returns. There remains huge potential in companies for achieving cost-effective emissions reductions and we believe that this initiative will help companies and their shareholders identify and realise this potential.”



cesses and practices to manage carbon. A crucial part of this new Carbon Action initiative will involve highlighting effective approaches to emissions reducing activities that have been successfully implemented and help to advance peer-to-peer learning.

Carbon Action is a natural evolution of the disclosure process established through the CDP over the past 10 years. The CDP has been working with investors for more than a decade to request carbon disclosure, which has helped encourage companies to set emissions reduc-

Carbon Action is a natural evolution of the disclosure process established through the CDP over the past 10 years.

tion targets. By 2011, 551 institutional investors, holding \$71 trillion in assets, have made carbon disclosure a mainstream business issue in the 21st century. But it also represents a new era in investor focus on the benefits of carbon reductions and represents a clear message from investors to companies that undertaking emissions reduction activities is now expected. Investors are also showing a strong appetite to ensure that companies do comply with their request. As a result, this initiative has the potential to be transformational on a global scale in highlighting the business benefits of emissions reductions and accelerating these reductions.

This year, more than 30 new companies targeted by the CDP’s Carbon Action request have now set reduction targets, demonstrating increasing recognition by companies in the business value of emissions target setting.

An economic revolution is needed to decouple financial growth from growth in emissions. By taking action, businesses are making a large contribution in reducing the long-term threat to the global economy which climate change represents.

EF

Paul Dickinson is executive chairman of the Carbon Disclosure Project. E-mail: paul@cdproject.net

Sonia Kowal

director of socially responsible investing, Zevin Asset Management

“At Zevin Asset Management, we were pleased to build on the work undertaken by the CDP by supporting the Carbon Action initiative. While transparency is an important first step to focus company management and shareholder attention, the next step to separate the corporate ‘doers’ from the ‘talkers’ is action. As responsible investors interested in investing in responsible companies, we evaluate the progress that companies have taken towards limiting their risk exposure. This includes reducing associated greenhouse gas emissions in absolute terms as well as the implementation of clear public greenhouse gas emission abatement goals.”



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Carbon risk, performance and returns

Investors have been slow to take action over the carbon exposures embedded in their investment portfolios – but the case for action is building, says **Will Oulton**

There is now near-universal consensus among governments, corporations, the public and many in the investment community that climate change, if left unchecked, represents one of the greatest environmental challenges facing the world today. Climate change carries serious ramifications for the availability of many natural resources and our continued ability to provide for future generations.

The impacts of a changing climate are likely to manifest themselves in numerous ways, ranging from extreme weather patterns, effects on food yields and human health to species extinction. It is also highly likely that these kinds of impacts will have negative and possibly irreversible consequences for the global economy, capital markets and the natural capital within our global ecosystem.

Despite the awareness of some institutional investors of the risks and the implications for the performance of assets, this has not yet translated into widespread action over and above the exercise of 'carbon footprinting'.

A carbon footprint is essentially a measure of the carbon intensity of an organisation, product, service or process. Some investors have also used this concept to measure and disclose the carbon intensity as it applies to their equity investment portfolios – for example, in terms of the volume of greenhouse gas emitted per million dollars of revenue. At present, the relative infancy of the market for carbon measurement services means that carbon footprinting is currently the main tool available to investors attempting to quantify equity portfolio carbon exposure.

For those investors that have engaged in the process of commissioning a carbon footprinting exercise on their funds, the main motives and drivers have been:

■ **Risk management:** To assess and monitor risks associated with policy and regulatory developments linked to a carbon price. In addition, carbon performance is often viewed as a proxy for management quality. A company's carbon footprint can be a leading indicator of weaknesses in a company's management of its exposure to carbon risk. The view is that those investors that have measured and are attempting to manage carbon emissions are better prepared to manage these risks.

The investment industry still faces challenges before the integration of climate issues becomes common practice

¹ www.cdproject.net



Yet to be convinced about carbon optimisation

■ **Reputational risk:** Based on the assumption that regulators and the public are increasingly interested in the carbon exposures of institutional investors. Failing to take carbon exposure into account in the investment process could constitute a potential future reputational risk. Certain investment managers are of the view that their clients will start to seek greater transparency and disclosure of the carbon and broader environmental risks associated with their investments.

■ **Returns:** A view that carbon-efficient companies will outperform their less efficient peers over time and that such companies have better risk management systems and financial disciplines in place. A key premise here is that reducing emissions is beneficial financially as well as environmentally.

Why is there limited adoption of carbon assessments by investors?

The interest in assessing and the practice of measuring carbon emissions initially evolved in the corporate sector. However, to date, this has not been matched by an increase in the widespread use of carbon data in the investment industry. Why might this be the case?

Mercer is currently conducting research with the asset management working group of the UN Environment Programme Finance Initiative (UNEP FI) and this work has revealed several issues raised by investors which provide a useful insight, including:

■ **Comparability and quality of data:** There is a lack of confidence in the quality of data. Many investors have a perception that carbon data cannot be relied upon to a level with which they are comfortable to incorporate into their investment models. In particular, data on Scope 1 emissions (emissions directly produced by an organisation) is now available for carbon-intensive sectors in some jurisdictions (eg, the EU), but there are still significant gaps in data for less carbon-intensive sectors – across all scopes – in most countries.

■ **Lack of external auditing of data:** Some investors highlighted that without a rigorous process for auditing carbon emissions data, it cannot be relied upon and is therefore not suitable for use in financial models. In addition, there is a view that carbon footprint data must be standardised and audited in the same way as other financial indicators. To date, auditing has received relatively

Investment

little attention. The Carbon Disclosure Project (CDP) notes that fewer than half of all Global 500 companies verify their emissions, with performance varying according to sector. Utilities, for instance, have a relatively good verification record (66%).¹

■ **Interpretation of data:** Today, many providers of carbon footprint services only distribute pure emissions data to investors and there appears to be limited availability of products that also offer analysis and interpretation. Data interpretation is increasingly important to investors seeking to understand the carbon risk exposure for each stock.

■ **Link to investment returns:** There is still very limited empirical evidence that specifically links carbon management performance to financial performance.

To date, the debate about the impact and influence on risk and returns has centred on the limited range of academic literature that supports the argument that the integration of environmental issues, of which carbon is a subset, into investment portfolios can enhance investment value and/or mitigate risk. Literature that questions whether the integration of environmental, social and corporate governance (ESG) issues detracts from or enhances investment performance includes the work published jointly by Mercer and the asset management working group of UNEP FI. The 2007 paper *Demystifying Responsible Investment Performance*² was followed in 2009 by the Mercer report *Shedding Light on Responsible Investment: Approaches, Returns and Impacts*.³ Of the 17 studies that were focused either exclusively on environmental issues or that considered environmental issues alongside social and corporate governance issues, not one incidence of a negative relationship was determined.

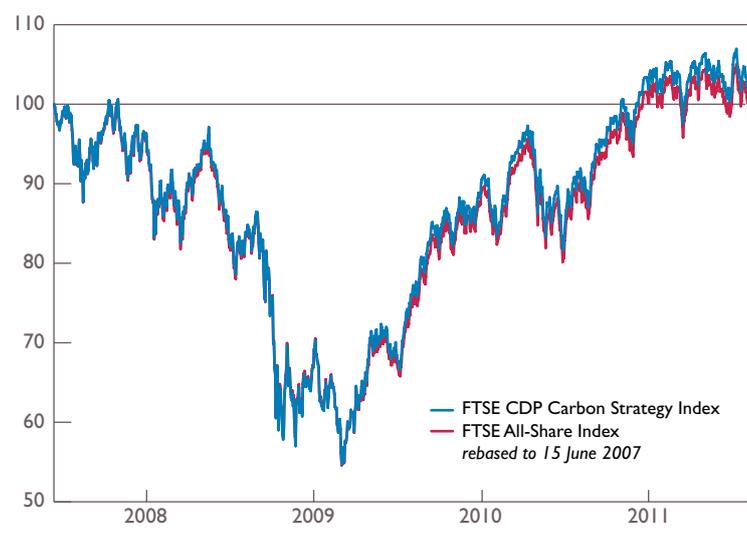
In addition, analysis of sustainability performance versus financial performance has concentrated on academic literature due to a lack of quantitative data and history. However, a recently released report published by investment manager RCM⁴ has provided a useful quantitative analysis of whether 'sustainable' investments perform well financially. The research found that, over the longer term, funds that consider sustainability issues have the potential to outperform the market. Indeed, the research states that investors could have increased their investment returns by 1.2% per annum over the five years to 2011 by investing in companies with above-average ESG ratings.

Emergence of carbon products

One area of financial product development which makes use of carbon data has been the emergence of a range of low-carbon or climate-themed funds and carbon indexes. A number of the main index vendors including FTSE and S&P have partnered with carbon data service providers to produce carbon-themed equity indexes. The most popular approaches have been to develop carbon-tilted or optimised versions of mainstream benchmarks, aimed at exchange-traded fund issuers and passive index funds. The attraction of such approaches is that they provide investors with a vehicle around which they can develop an investment strategy that favours the more carbon-efficient companies within each sector, while maintaining a close correlation to standard market returns.

These approaches mimic 'best-in-class' investing, common in many sustainability-themed strategies, which provide investors with a way of reducing carbon risk while maintaining benchmark sector allocations, diversifica-

Performance of carbon-efficient index versus mainstream index



tion and benchmark returns. The index contains the same constituents as the benchmark, but with individual stocks over- or underweighted, depending on their exposure to a carbon price, for example.

One example of such an index is the FTSE CDP Carbon Strategy Index, a carbon risk-tilted version of the established FTSE All-Share Index. The index has been produced in partnership with the CDP and ENDS Carbon, a carbon performance and risk analysis agency.

As demonstrated in the figure, the performance of FTSE's 'carbon-optimised' index has tracked the FTSE All-Share Index (which it is designed to do) during a period of extreme volatility. Only briefly during the four-year time horizon did the carbon-optimised index underperform the FTSE All-Share.

It should be stressed that the research on the performance of low-carbon investments is based on relatively short histories and further quantitative research is needed.

These challenges can be overcome and are likely to be addressed as regulation around disclosure and its standardisation evolve. It seems that the greatest barrier to integrating carbon risk into investment processes is its relative infancy, with many investors hesitant to pursue an investment thesis that is primarily based upon academic literature or back-tested data.

In conclusion, the evidence suggests investing in a carbon efficient portfolio does not impede financial returns. However, the investment industry still faces challenges before the integration of climate issues becomes common practice. Recent figures are encouraging as there has been a shift over the last decade, from climate change being viewed as an ethical consideration for a few 'niche' investors to a material investment issue.

Moreover, research conducted by Mercer⁵ suggests that climate change-related policy changes could increase the cost of carbon emissions by as much as \$8 trillion by 2030, contributing as much as 10% of portfolio risk. In order to help manage this risk, prudent investors should adopt a process that includes understanding, measuring and monitoring the carbon exposures across their investment portfolios and factoring this information into their strategic asset allocation process.

EF

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² *Demystifying Responsible Investment Performance*, www.unepfi.org/fileadmin/documents/Demystifying_Responsible_Investment_Performance_01.pdf. Mercer and AMWG UNEP FI. October 2007.

³ *Shedding Light on Responsible Investment: Approaches, Returns, Impacts*. Mercer. November 2009.

⁴ *Sustainability: opportunity or opportunity cost?*, www.rcm.com/london/pdf/RCMSustainability-WhitePaper2011.pdf. RCM. July 2011.

⁵ *Climate Change Scenarios: Implications for strategic asset allocation*. Mercer, 2011.

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The rising tide

Smart companies are saving millions from water management while others are losing out. Investors should take note, warns **Chris Hedemann**

Extrêmes of weather, growing urbanisation and growing population are continuing to put pressure on local water resources globally: a fact which may not yet have much traction in dinner party conversation, but which increasingly does in the board room. One year on from the launch of the inaugural CDP Water Disclosure report from the Carbon Disclosure Project (CDP), water is catching the attention of those at the helm of global businesses.

The impact that water has for business is illustrated by the fact that 39% of companies responding to CDP's 2010 water questionnaire had already experienced detrimental impacts from water. These companies paid as much as \$75 million in fines and penalties or in investment to adapt existing assets to flooding or more water-stressed conditions. It is therefore unsurprising that water is rising up the corporate agenda: more than two thirds of responding companies reported that responsibility for water issues lies at the board or executive committee level and 89% have a water policy, strategy or plan.

Encouraging findings, perhaps, but having a plan is only the beginning of developing good water management practices: action to reduce risk or increase efficiency is driven by specific targets or goals. When we view the number of respondents that had set a specific water-related target as part of their plan, the numbers – especially in some sectors – are less encouraging. For example, only one respondent from the oil and gas sector had set a specific target as part of its water plan – a surprising result from a sector which has come under criticism in recent months for the environmental impact of natural gas fracking techniques, not to mention multiple spills at sea and on land over the past year.

39% of companies responding to CDP's 2010 water questionnaire had already experienced detrimental impacts from water

Smart corporations and investors are moving ahead on water not only because it is what customers want or because of regulatory pressure; they are taking action because it makes good business sense. And it makes sense not just for long-term value creation. It makes sense right now.

The sceptical might argue that investing in water management can wait for bigger economic storms to blow over. They should ask international clothing companies how heavy rain in India, China and Pakistan is affecting cotton yields and pushing cotton prices to record highs. H&M, which in the face of this challenge is determined to keep its prices low, reported a 30% drop in profits in the first quarter of this year. Next, a UK-based clothing company, was forced to raise its prices for the first time in 20 years and suffered a drop in sales.

They might consider the costs faced by businesses in Australia recovering from record flooding earlier this year; or ask the Australian government about the total cost to the economy of the floods (the Australian Reserve Bank estimate it to be as much as US\$13.5 billion).

They might examine how China's power industry fared under the worst regional drought in half a century, or how the Chinese government plans to meet growing energy needs of industry across the country with further hydro-power expansion.

Or, in terms of water pollution events, they might look at how BP's business has been hit by the \$40.9 billion compensation and clean-up package (thus far) for the Deepwater Horizon spill in the Gulf of Mexico, or ask Shell about the costs of its recent 1,300 barrel oil spill off the coast of Scotland.

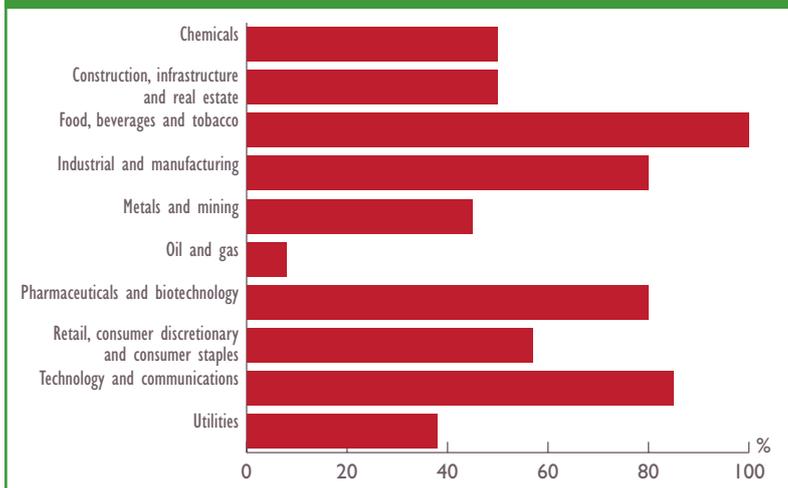
If you ask any of these questions, you will understand how water risk can translate into substantial implications for businesses' costs and revenues. Indeed, the rockier the economic climate is for business, the less it can afford to compound losses with disruption to operations or supply chains from flood, drought or poor water quality.

However, focusing on risk alone would mean missing an important part of the picture. New opportunities in water can have just as much impact on the bottom line as risk – assuming that businesses have the insight to exploit them.

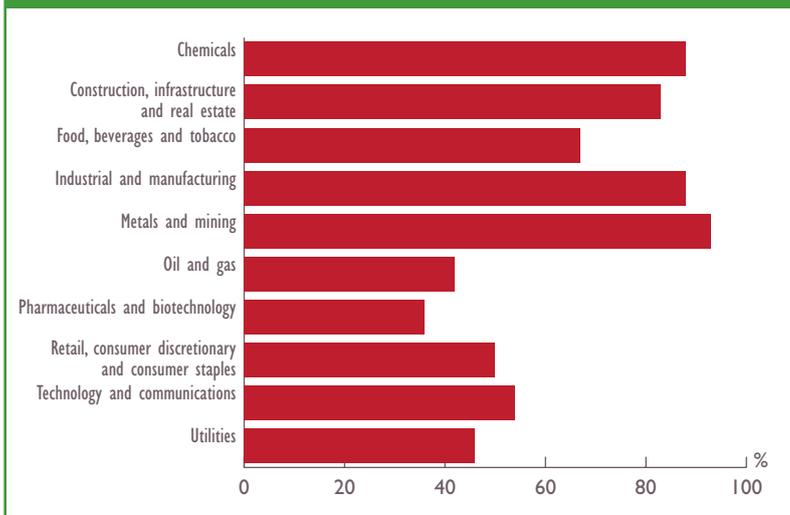
Many of the companies that responded to CDP Water Disclosure last year know a good thing when they see it: 62% recognised significant opportunities in the water space. South Korean steel-maker Posco, one of the 93% of respondents from the metals and mining sector that recognised significant opportunity, expects \$3.3 million savings per year from a wastewater reuse programme. BASF's effluent treatment and water management products portfolio brought the German chemicals giant \$220 million in 2009, a figure that is expected to grow. Anglo-Dutch consumer goods company Unilever is creating value from developing products that allow end users to reduce greatly the amount of water they use in washing clothes or in the shower.

Investors too would do well to keep their eyes on oppor-

I. CDP Water Disclosure 2010 respondents that had set a specific water-related target



2. CDP Water Disclosure 2010 respondents that identified water as an opportunity



tunities in water infrastructure and services markets. Closing the gap between water supply and demand is projected by consultancy McKinsey to require as much as \$50 billion to \$60 billion per year for the next 20 years. Many of the investments in water productivity improvements, it says, can yield positive returns in just three years.

CDP Water Disclosure is aiming to help investors ask questions of their portfolio companies on business opportunities from water and how their strategies are keeping pace with the growing severity of water challenges. We are increasing the number and reach of corporations that disclose water management information publicly so that investors and companies can keep track of emerging risks, opportunities and corporate strategies to manage or exploit these water-related impacts to business.

This year, 354 institutional investors with \$43 trillion in assets have again requested water management information from their portfolio companies through the CDP – this is more than double the number who requested this information in 2010. The questionnaire was sent on behalf of these investors to companies in water-intensive or water-sensitive sectors within the Global 500. These include consumer discretionary, consumer staples, energy, health-care, industrials, information technology and utilities.

Australian and South African companies from water-intensive or water-sensitive sectors were also invited to respond this year on behalf of our signatory investors. Expansion into these regions will give further unique insight into how companies manage water in specific geographies that suffer from severe water stress. Our request to specify the geographical location of risks and opportunities will also provide valuable data to investors because, although water issues affect business globally, water is fundamentally a local issue.

The CDP Water Disclosure 2011 global report will analyse how individual companies are experiencing water risk locally and globally, how different sectors are affected and how they react to water risk, how companies are responding to trade-offs between energy and water and what water-related opportunities companies are exploiting.

Witnessing the rise of water up the corporate agenda, investors would be wise to evaluate how businesses are responding to the challenge. The CDP Water Disclosure 2011 global report will be available at our forum on 16 November at Bloomberg in London and on our website at www.cdproject.net. **EF**

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NBIM: casting a cold eye over water

WHEN IT COMES to water risk, few investors have developed their thinking quite as far as Norges Bank Investment Management (NBIM), which manages the giant Norwegian Government Pension Fund.

Earlier this year, NBIM published its first report on its Investor Expectations on Water Management initiative. This examined in aggregate how 432 companies in six water-exposed sectors had responded to a list of “investor expectations” on how to manage water-related risks.

These require that companies have “a clear strategy regarding water management”, systems and technologies in place to ensure that their use of water is as sustainable as possible, and have an appropriate governance structure.

NBIM carries out an assessment, using publicly available information, on how the companies it selected are approaching the issue – and uses the results for dialogue with those companies where there are concerns.

“Companies have responded very well,” says Magdalena Kettis, head of social and environmental corporate governance at NBIM in Oslo, adding that “a number of dialogues are progressing well.” She declines to identify any individual companies that the investment manager is engaging with on water, but notes that, across the all social and environmental issues that NBIM focuses on, there are around 80 formal dialogues ongoing with investee companies, in addition to less formal contacts.

“We contact companies when we feel there is a need to talk about their results, or their lack of results,” says Kettis.

The report found “great variation among sectors on the level of compliance” with the investor expectations. Of the six sectors – forestry and paper, mining and industrial metals, electricity and multi-utilities, water, pharmaceuticals and food and beverage – the water sector had, perhaps unsurprisingly, the greatest degree of compliance. It also found “a relatively high level of reporting on clear strategy for water management and on water footprint and risk analysis across sectors”.

Of course, NBIM wouldn’t be undertaking the work if water risk wasn’t an issue of concern. Kettis notes that the “overall quality of information today is not good enough”, with more work particularly required on water risk issues in company supply chains. “The results show that companies are not focusing very much on their supply chains.”

“It’s why we’re a lead partner in the CDP Water Disclosure Project, and why we publish these compliance reports – to try and improve metrics.”

NBIM is now carrying out a review of the indicators to examine whether they need updating, and will shortly start the assessment process again. Kettis says that NBIM expects to go back to “more or less” the same universe of companies, and expects to publish the second compliance report next March.

What NBIM would like to see in corporate water management is performance reporting, Kettis says. “It’s important that they measure their progress, and use key performance indicators and metrics – we want to be able to compare companies in this area.” **EF**

Mark Nicholls



Magdalena Kettis, NBIM: “Companies are not focusing very much on their supply chains”

Many investments in water productivity improvements can yield positive returns in just three years

Moving up the corporate value chain

For many companies, the bulk of their climate impact is to be found outside their operations – making the launch of the Scope 3 reporting and accounting standard a vital step in helping them take a broader view of emissions reduction. **Cynthia Cummis** explains

As the disruptive impacts of climate change become increasingly apparent, leading businesses are recognising the urgency of managing their greenhouse gas (GHG) emissions. Companies that comprehensively measure and assess their greenhouse gas impacts are best positioned to reduce their emissions. Fortunately, corporate action in this area also makes good business sense.

Controlling GHGs can help businesses reduce risks and take advantage of new opportunities. Such business risks from GHG emissions include those that arise from volatile energy prices, future resource scarcity, environmental and carbon regulations, changing consumer preferences, and scrutiny from investors and shareholders. Managing emissions also brings opportunities to bolster bottom lines and discover competitive advantages.

At the same time, governments are expected to set new policies and provide additional market-based incentives to reduce emissions. To prepare for tomorrow's low-carbon future, businesses need to start planning today, as they make decisions that will lock in their investments for years to come.

An effective corporate climate change strategy does not materialise out of thin air. It requires a full understanding of a company's GHG emissions impact – up and down its supply chain.

GHG Protocol Corporate Value Chain Standard: by numbers

- Five key principles of measuring and reporting underpin all GHG Protocol Standards: relevance, completeness, consistency, transparency and accuracy.
- Thirty-one companies road-tested the new standard during a three-year development process, including Amcor, Baoshan Iron & Steel, Coca-Cola, Deutsche Post, Ford Motor Company, IKEA, Kraft Food, Levi Strauss and SC Johnson.
- Two technical working groups with more than 60 members developed the first draft of the standard.
- 1,600 participants in a stakeholder advisory group of company, NGO, academic, and government representatives provided feedback throughout the standard's development process.



Up in flames – 20% of IKEA's emissions are from product use

Until recently, companies have largely focused attention on emissions from their own operations, known as 'Scope 1' emissions, and those associated with the electricity they purchase ('Scope 2'). Increasingly, however, many leading businesses are seeking to account for GHG emissions along their corporate value chain – known as 'Scope 3' emissions. Indeed, since emissions for many companies come more from *outside* their own operations than within them, it could be argued that such an approach is essential to build a foundation for sustained business growth.

A major stumbling block for action in this arena has been the absence of an internationally accepted method for companies to manage emissions across their value chains. The GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard, to be published in October, is designed to fill this gap and meet the demand from companies worldwide.

The latest in a series of benchmark standards developed by the Greenhouse Gas Protocol, a global collaboration led by the World Resources Institute and the World Business Council for Sustainable Development, the Corporate Value Chain Standard was informed by an extensive and rigorous stakeholder process. Business leaders, NGOs, academics and policy-makers all provided insights into the process, and the step-by-step guide was road-tested by 31 leading companies ranging from producers of food, paper and beer to aircraft, steel and software firms (see box left and *Environmental Finance*, March 2011, pages 21–24).

The aim was to develop a comprehensive yet user-friendly roadmap for companies to account for the emissions generated from corporate value chain activities. All six main GHGs are included: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF₆).

Completing a Scope 3 inventory makes hidden physical, operational and regulatory climate risks in the value chain visible, helping companies to take effective action to reduce

emissions. Adopting the Corporate Value Chain Standard can also help organisations make more sustainable, efficient, and cost-effective decisions about their activities and the products they produce, buy and sell.

The global chemical company BASF, one of the new standard's road-test companies, is a case in point. In 2009, BASF's emissions from goods and services purchased from its suppliers accounted for 20% of its total emissions. Further investigation revealed that a staggering 93% of emissions in this category came from the raw materials purchased. (The remaining 7% came from purchased packaging, services and equipment.) Armed with this information, BASF can work with its suppliers to improve their GHG performance, which in turn can help BASF reduce its vulnerability in this area over time. The company's results could also lead to broader benefits by informing the development of sector-specific guidance for the chemical industry that focuses on raw materials.

To account for its value chain emissions effectively, a company needs to document a broad array of activities, ranging from upstream purchases of goods and services, transportation and waste generation to downstream processing, use and disposal of products. Since the end goal is to drive decisions that create more efficient, resilient and profitable businesses, the Corporate Value Chain Standard's nine-step process (see box below) begins with defining the company's business goals.

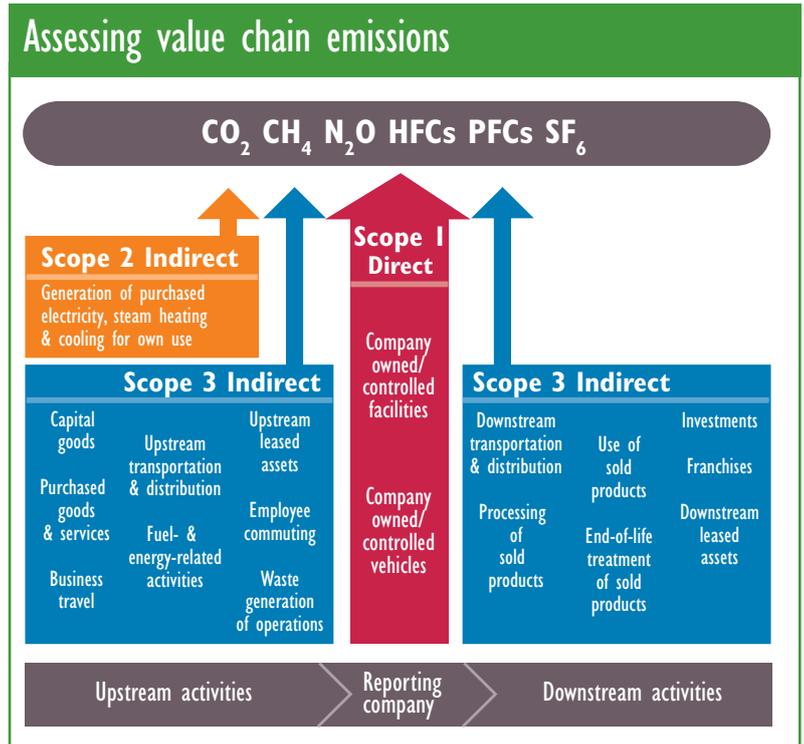
Companies typically provide several key motivations for embarking on value-chain emissions inventories:

- identifying risks and new market opportunities in order to inform investment and procurement decisions;
- identifying GHG hotspots and associated priorities for action;
- forming partnerships with suppliers, customers and other companies to achieve GHG reductions;
- cutting costs by identifying and then reducing material, resource and energy use; and
- improving corporate reputation.

Another driver for many companies is to encourage suppliers to measure and reduce their emissions, and to report on their performance.

Once business goals are identified, they can help inform the next inventory steps, which include identifying Scope 3 activities and boundaries, data collection, emissions tracking, target-setting for emissions reductions and reporting. Often companies will find their emissions concentrated in a few areas or hotspots where they can then focus emission reduction and efficiency efforts.

For example, IKEA's road-test of its value-chain emissions revealed that its most energy-consuming products sold to consumers (such as refrigerators, freezers, stoves, ovens, etc) together accounted for around 20% of the company's total (Scope 1, 2 and 3) GHG emissions, or



approximately 6 million tonnes. The inventory triggered an efficiency target for sold products that IKEA expects will help cut several million tonnes of GHG emissions by 2015.

Since the information needed to complete a comprehensive value-chain inventory may not be readily available, the standard offers companies flexibility in choosing which data is appropriate given their business goals. For instance, Ocean Spray, a leading producer of bottled juice drinks and dried fruit in North America, decided that the best way of informing the company's GHG-reduction strategy was to develop a Scope 3 inventory that focused on completeness over precision of data. Where primary data was not available, the company calculated estimates based on assumptions, especially for downstream activities such as consumer disposal. By pursuing this course, Ocean Spray discovered that its value chain accounted for most of its total corporate emissions, driven by the high volume of raw materials, such as fruit, that the company purchases from its suppliers.

The Corporate Value Chain Standard completes the Greenhouse Gas Protocol suite of corporate carbon accounting and reporting tools. It provides a robust and business-tested methodology to identify risks and prioritise emissions-reduction opportunities. Companies that use this tool will be able to look strategically at their GHG emissions across the entire value chain, finding opportunities to cut costs and strengthen their businesses, and enabling them to focus limited resources where they will have the biggest impact.

Ultimately, widespread adoption of the new value chain standards will help businesses move toward a consistent, unified international approach for corporate emissions accounting and reporting. This, in turn, will support business in the global shift to a more energy efficient and lower-carbon future. **EF**

A Scope 3 inventory makes hidden physical, operational and regulatory climate risks in the value chain visible

Nine steps to corporate value chain emissions accounting

- Define business goals
- Review accounting and reporting principles
- Identify Scope 3 activities
- Set the Scope 3 boundary
- Collect data
- Allocate emissions
- Set a target (optional) and track emissions over time
- Assure emissions (optional)
- Report emissions

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The Greenhouse Gas Protocol, led by the World Resources Institute and the World Business Council for Sustainable Development, will be introducing the new Corporate Value Chain (Scope 3) and Product Life Cycle Standards at a global launch on 4 October 2011. See www.ghgprotocol.org

Creating confidence

Many companies already have their GHG emissions data independently verified. The resulting increase in data quality brings significant internal as well as external benefits, say [Marieke Beckmann](#) and [Michelle Cox](#)

Corporate climate data collected by the Carbon Disclosure Project (CDP) allows data users, such as investors or large purchasing companies, to make informed investment and procurement decisions. Measurement and disclosure are the key first steps for a company to take on the path from data collection to carbon management and reduction – if you don't measure, you can't manage. Third-party verification and assurance of climate data are key next steps along this path.

The CDP is committed to increasing the number of verified data submissions in its database. Due to its importance to data users and to increase the number of companies verifying their climate data, the organisation rewards verification in its scoring methodology for both disclosure and performance. In 2011, companies were required to have verified their Scope 1 and Scope 2 emissions data to be accepted into the Carbon Performance Leadership Index.

For 2012, the CDP is providing further clarity for companies on what constitutes an acceptable verification process, to ensure that companies are being rewarded consistently for their efforts in achieving higher data quality. Looking further ahead, the CDP is launching a consultation¹ on a verification roadmap for the period 2013–18.

What is verification and assurance?

The terms verification and assurance are both used to describe the process of checking climate data as well as related data collection and management systems. Verification is defined as a systematic, independent and documented process for the evaluation of climate data against a set of predefined criteria. Assurance describes the result – ie, the degree of confidence that is provided in the data through the process and the provision of an assurance opinion.

The verification or assurance process is undertaken by an independent third party and examines:

- the system or model that forms the basis of a greenhouse gas (GHG) assertion – for example, set boundaries or equipment calibration; and
- the data and information included in an assertion – a factual and objective declaration made by a company.

The verification process begins with the definition of goals, including the scope of the verification work and a set of criteria that will be verified against. The outcome of the verification of both the system and data contained in an assertion is a verification statement, a formal written declaration. This statement reports on the findings of the process and includes an assurance opinion. This opinion offers interested parties a degree of confidence in the data, indicating its reliability. Different levels of assurance exist which often indicate the level of detail that the verification has covered.

Meeting market demand

Management boards within companies are becoming aware of the materiality of GHG emissions and that robust, complete and comparable GHG data is crucial. Demand for information is growing among employees, shareholders, regulators and customers to allow them to understand a company's

strategy, risks and growth opportunities in a carbon-restricted economy. Miscalculation or misjudgment in these areas has the potential to have serious repercussions on the long-term viability of an organisation and how it is judged and valued by its multiple stakeholders.

Compliance with current and future regulation is a key benefit of verification. Market mechanisms such as the EU Emissions Trading System (EU ETS), California's AB 32 regulations, Tokyo's metropolitan trading scheme or Australia's recently announced carbon pricing programme are growing in number. These regulatory schemes depend on the integrity, robustness and quality of the reported GHG data and require companies to be accountable for it. Verification enables an organisation to submit and register independently verified annual GHG emissions and trade any surplus within trading schemes. It also demonstrates compliance against regulatory obligations, helping to avoid penalties and, where regulation is yet to be enacted, prepare organisations for future requirements.

Climate change issues are increasingly incorporated into day-to-day business decisions, driving the need for transparency in this area. The growing market demand for robust, complete and comparable data stems from the integration of climate and sustainability issues into organisational supply chain considerations and in the investment decisions of the finance sector (as the quotes from PepsiCo and Bank Sarasin show).

As global prospective buyers and institutional investors increasingly want proof of performance claims, verification is becoming a market access issue. Through an independent verification, companies can manage this potential risk inherent in the investment and procurement process.

The climate change debate has moved past the stage of simply stating claims. External stakeholders, including customers, are wary of 'greenwash' and want proof of the claims made. Third-party assurance of publicly reported declarations can boost credibility with external stakeholders and this is recognised through the CDP scoring methodology, and CDP indexes, as well as the Dow Jones Sustainability Indexes.

Internal benefits and competitive advantage

■ **Increasing reliability** In addition to these external benefits, verification improves companies' internal processes. An independent verification process involves the evaluation of underlying systems that generate, monitor, collate and manage sustainability data, and thus provides an opportunity for an independent view of the effectiveness of such methods.

■ **Identifying risks and opportunities** The evaluation can give reassurance on whether these systems are fit for purpose by helping to identify GHG-related risks and opportunities, inefficiencies, data errors or gaps, facilitating the continual improvement or optimisation of the processes used.

■ **Competitive advantage** Reliable GHG emissions and reduction data can be benchmarked both internally and externally to inform an effective emissions reduction strategy, allowing a company to differentiate itself from its competitors.

Preparing for verification

The time and resources required for verification vary from company to company and will depend on the scope and level of assurance. Despite this, there are general guiding principles that will help companies in the preparation for verification.

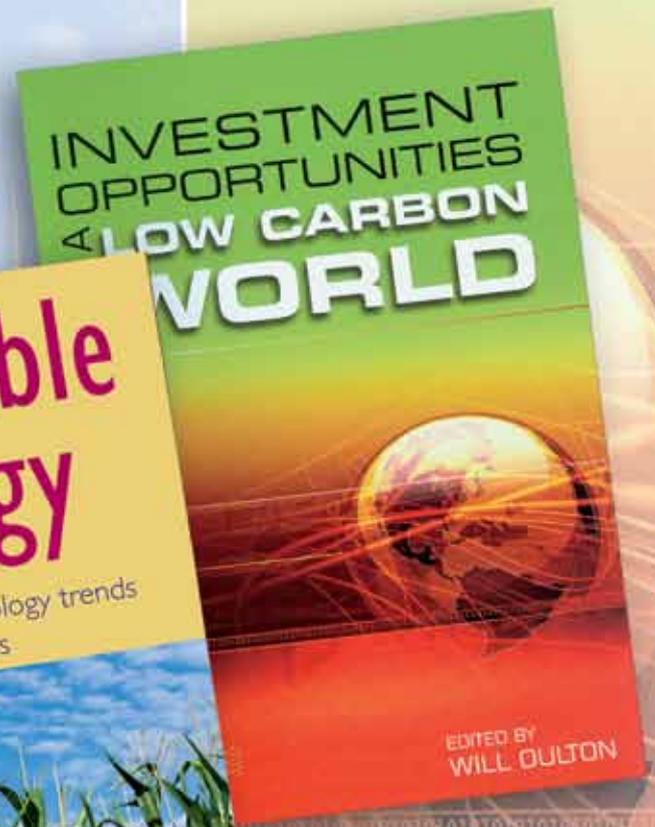
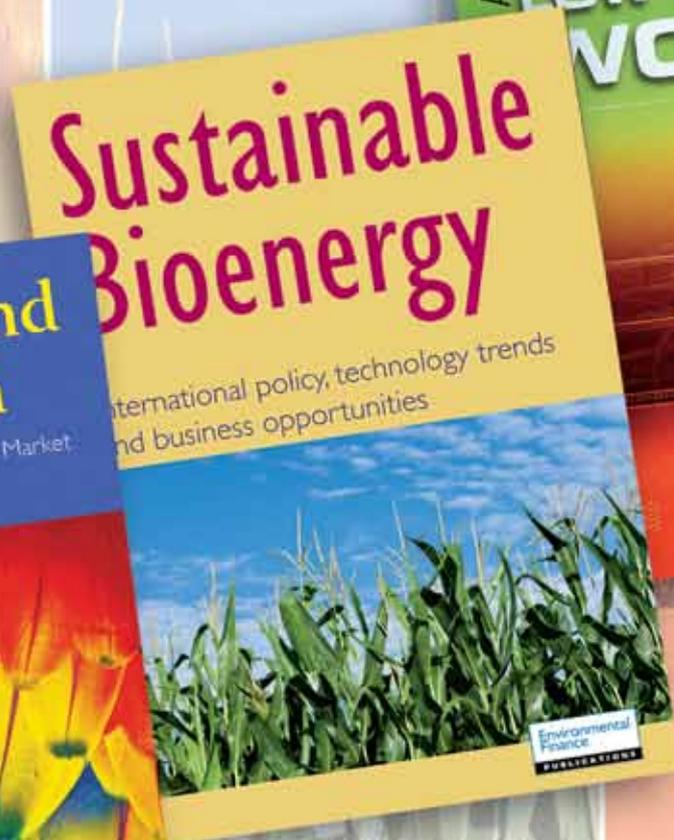
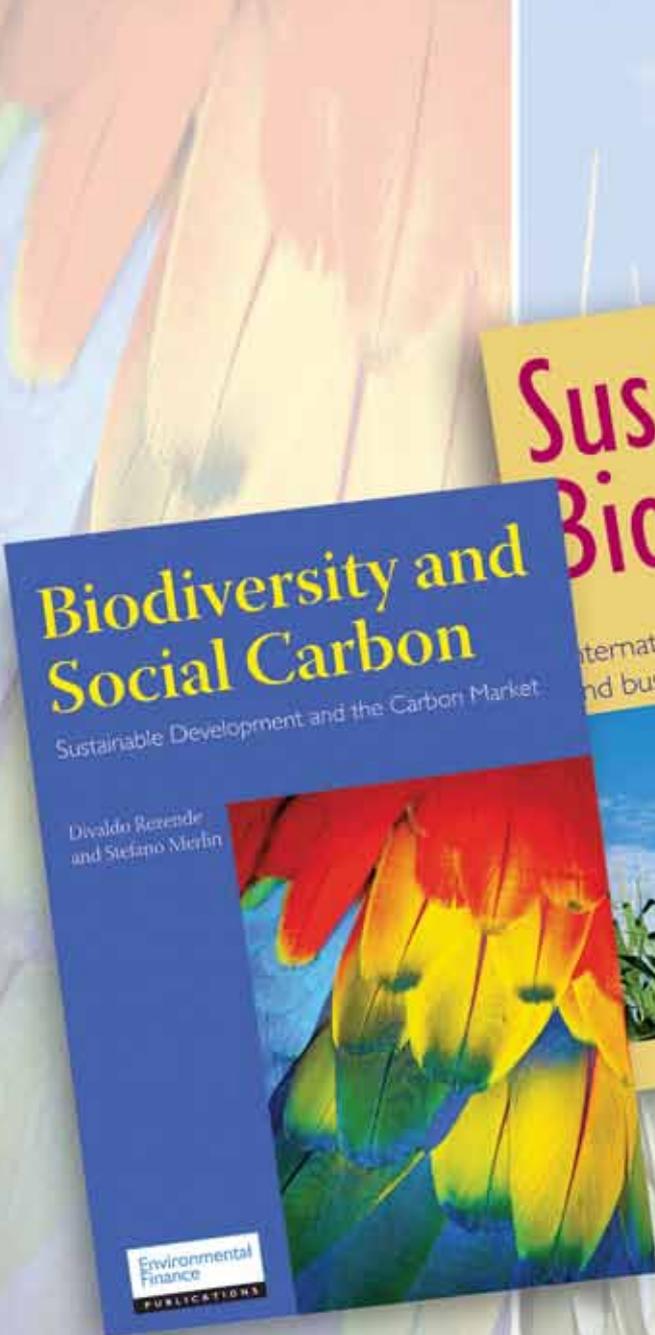
"Increasingly, verification will become an important factor in our assessment of supplier responses to future CDP requests"

PepsiCo

¹ See www.cdproject.net/verification

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Verification

Companies that wish to verify their emissions data need to have in place a full GHG inventory that is calculated to recognised standards (eg, GHG Protocol). The inventory should be supported by objective evidence ranging from meter readings to on-site fuel consumption, waste inventories to expense accounts, which may detail mileage travelled for business. Companies that do not yet have such systems in place should make this a priority.

A general process that companies go through can be summarised in four steps:

- **Step 1** Collect Scope 1 and Scope 2 emissions data;
- **Step 2** Monitor/measure corporate carbon footprint;
- **Step 3** Manage/highlight areas where emissions savings can be made and the data collection process optimised; and
- **Step 4** Reduce emissions.

The verification process can take place as soon as Step 2 is completed. The verification provider must be given full access to personnel with energy and carbon responsibilities, as well as to the data, internal systems and documented records to ensure that all relevant material can be taken into account.

The cost and duration of verification is based on factors that uniquely apply to the organisation to be verified. These include: the number of facilities and complexity of the company's logistics; the number of employees; and the number of emissions sources. The level of assurance sought and the actual scope of the verification will also impact the time required for the verification and associated costing.

Key components of verification

An important point to clarify early is stakeholder expectations – what are investors, customers' and other stakeholders' criteria for carbon reporting and how much reliability will they expect or demand of the disclosure? This will help companies address the five key components that form part of any verification:

■ **Objectives** These usually reflect the aim to gain assurance in conformance with programme eligibility or standard-related criteria.

■ **Level of assurance** The degree of confidence required by the intended user of the verification statement.

■ **Criteria** Policies, practices, procedures or requirements against which the verifier compares evidence about the subject matter. The final assurance statement will compare against these criteria – ie, the GHG assertion is in accordance with an internationally recognised standard or meets a certain benchmark.

■ **Materiality** The concept of materiality is that errors, omissions and misrepresentations could affect a company's GHG assertion and could thus influence data users' decisions. It is used when designing the verification process and sampling methodology and can, for example, be set at 5% of total emissions.

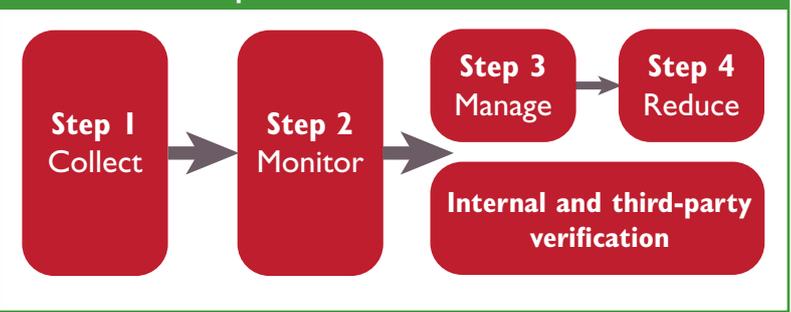
■ **Scope** Defining the scope is important to ensure that adequate resources are available to carry out verification and answers questions such as: what is covered (in terms of activities, technologies and processes)?; what are the operational and geographical boundaries?; what is the relevant time period?; who is the intended user?; and what methodology should be used (eg, recognised GHG verification-specific standards)?

Streamlining the verification process

Companies subject to market-based mechanisms or other schemes that require them to disclose and verify certain climate change related information, can leverage this in a positive way. The data collection and collation under such regulatory schemes can support CDP or other voluntary verification requirements.

Carbon management solutions that help companies gather and manage climate-related data can also be advantageous for verification. The systems can allow the verifier to more

The verification process



efficiently assess the information if all relevant GHG information is more centralised and accessible from just one location.²

The use of standards

A number of standards exist that set out the requirements of the verification process for GHG and non-financial reporting. Use of these standards provides consistency in the delivery and outcomes of verification. However, the number of standards continues to grow and an indicative list of standards that meet the 2012 CDP disclosure criteria will be maintained on the verification pages of the CDP's website. Standards that already meet the CDP criteria include ISO 14064-3, AA1000 and ISAE 3000.

Identifying a suitable verification provider

It is important that the verification service provider brings the required expertise, skill and experience to the assurance process. Technical expertise of verifiers and specifically sector expertise of relevance to the company's operations is of particular importance.

A proven track record in GHG verification across a broad range of services with case studies to substantiate claims from the verification body can help in the selection process. But ensuring that a verification body has the appropriate accreditation to the scheme in which you are participating is vital. An accredited verification body is subject to regular independent oversight and will thus ensure that the verified data is trustworthy.

There are currently no specific accreditation requirements to be able to verify data submitted to the CDP. However, companies wanting to select a verifier with relevant GHG experience could check for current accreditations from monitoring and reporting schemes such as the EU ETS, the US Regional Greenhouse Gas Initiative or the Clean Development Mechanism.

These accreditations should provide abundant reassurance over the technical ability of those bodies to perform CDP or other GHG/climate-related work. The service provider may for example also be subject to the International Federation of Accountants Code of Ethics for Professional Accountants

and will thus be governed by the standards and ethics of the governing body.

To support its work around verification, the CDP has initiated a verification partnership programme, working with Bureau Veritas, LRQA Lloyd's Register Quality Assurance, PricewaterhouseCoopers and TÜV Nord. The CDP does not require companies to have their data assured by one of these providers but interested parties can visit www.cdproject.net/verification for further information. **EF**

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For more information visit www.cdproject.net

This article is based upon the white paper *Verification of Climate Data*, produced by the CDP in collaboration with the members of its verification partnership programme – Bureau Veritas, LRQA Lloyd's Register Quality Assurance, PricewaterhouseCoopers and TÜV Nord.

² See www.cdproject.net/carboncalc



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