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ThinkTank Thought Pieces

Summer 2011

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Vivienne Cox, Chairman of the Board

1. Don't rely on oil profits for pensions

As the true financial impact of the Deepwater Horizon crisis on BP becomes clearer, including plans potentially to reduce the regular dividend from next year, an inconvenient truth about the exposure of our pension funds (and pensions) is emerging. Quite simply, the funds we hope to rely on when we retire are highly dependent on the dividends paid out by high-carbon sectors, especially oil and gas.

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Ben Caldecott, Head of European Policy

2. Green bonding: a primer on green bonds and how they can transform climate finance

Over the last 18 months you may have noticed an increasing number of people and organisations calling for the creation of “green” bonds. Potentially these are a way of raising the huge amounts of capital needed to tackle climate change and protect our natural world. They could be critically important, but they remain shrouded in mystery and there is a great deal of confusion about their exact form and structure. What are they? Are they a way for Government to borrow money for green projects? Are they a new savings product for ethical consumers? Or are they something to do with that proposed UK Green Investment Bank (GIB)?

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Rupert Edwards, Head of Research and Market Analysis, Carbon Finance

3. Give us a carbon price contract, not a promise

The Coalition Government has recognised that in the absence of meaningful emissions reduction targets in the EU, the price of carbon in the EU Emissions Trading System (EU ETS) is insufficient to drive new low-carbon investment at the scale and pace required.

Energy secretary Chris Huhne has recognised that this is a major problem and that the current price of carbon is far below the level that's needed. Consequently, the government has proposed a solution: a promise of a "carbon price support".

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4. Protecting and restoring biodiversity will require private investment

Unfortunately and coincidentally, as the UN-led International Year of Biodiversity was coming to its end late last year, it was confirmed that 2010 targets to halt biodiversity loss across Europe and significantly reduce the rate of biodiversity loss internationally had not been reached.

Progress will require us to rapidly increase the money available for biodiversity protection and restoration from all sources and in particular, this means raising the private sector's contribution.

Habitat banking and biodiversity credits are one set of critically important tools for increasing private sector investment in the protection and restoration of our natural world.

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London is already the world's leading green financial capital, but this privileged position was achieved almost entirely by accident. London's promising start in this new sector could be successfully challenged.

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At Cancun the UNFCCC needed to redeem itself and renew its relevance for organizing international responses to climate change. This was a direct challenge to the multilateral system and the stakes couldn't be higher. Did delegates flying in from around the world rise to meet the challenge?

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Article 1 by **Vivienne Cox**, Chairman of the Board

Don't rely on oil profits for pensions

As the true financial impact of the Deepwater Horizon crisis on BP becomes clearer, including plans potentially to reduce the regular dividend from next year, an inconvenient truth about the exposure of our pension funds (and pensions) is emerging. Quite simply, the funds we hope to rely on when we retire are highly dependent on the dividends paid out by high-carbon sectors, especially oil and gas.

I appreciate that the political climate for addressing these issues is rather different now than it was a year ago when the countdown was on for the Copenhagen climate change talks. Now, with the follow-up conference starting in Cancún on Monday, the appetite for concerted global action is reduced.

Yet, looking at BP, we can appreciate the extent of this exposure to high-carbon sectors. Before halting its dividend amid the furore of the Deepwater oil spill, the company alone is widely acknowledged as having accounted for £1 in every £6 of dividends paid to UK investors. If you count Shell and BP together, they have historically created 20–25 per cent of total annual UK dividends.

Having profitable companies able to pay dividends at this level is valuable. However, even though I am an ex-BP employee myself – I worked there for 28 years until last year and ran its gas, power and alternative energy

sectors – I think it is a risk to rely on cash flows from these high-carbon investments for the long term.

Fossil fuels will continue to be used for a long time, and increasingly the risks associated with their use are becoming more evident: risks associated with climate change, physical risks associated with drilling in deeper water and in more technically challenging environments; and the geopolitical challenges arising from the concentration of resources in a few countries. Historically, investors have underpriced or largely ignored these risks, whether oil spills or the effect of greenhouse gas emissions. Finally facing up to these risks and pricing them appropriately is becoming unavoidable. It will be critical for improving the appeal of low-carbon investments relative to high ones.

But, as investors, fund managers and policymakers wake up to these systemic risks and seek alternatives, there are few options of the size required to displace high-carbon investments. Without credible options it will be too easy to continue with the status quo and so build up systemic risks and their associated consequences for the future. So, in addition to pricing properly the risks that high-carbon investments face, whether voluntarily or through mandatory requirements, we must create low-carbon investment opportunities that meet investor needs.

For this to happen at the scale and speed required, a number of things must happen in tandem. First, companies such as BP can transform their business models so their activities help drive rather than hinder a global low-carbon transition. Existing players can continue to create value for investors by evolving in response to the threats and risks associated with a dependency on the high-carbon economy. The oil companies need to rebalance towards gas, which produces fewer emissions than oil. They also need to open up their infrastructure and distribution to other providers. There are plenty of people who may be better at the development and production of new fuel sources, but they need access to the market.

Second, many more low-carbon innovators and new entrants, boosted with the help of well-designed policy frameworks and carbon pricing, need to expand quickly and create opportunities for investors. Ensuring that the policies are in place to prime new sectors for sustained growth will be vital.

Third, we need to find better ways of financing low-carbon infrastructure. One possible way to achieve this would be creating a liquid market in “green” infrastructure bonds. These longdated corporate bonds, issued on the back of operational cash flow produced by low-carbon infrastructure and at a sufficient scale to be liquid, could be attractive to a range of investors looking for diversified financial returns in the long term. Without them, we will not be able to find the capital required for the transition to alternative energy, whether offshore wind farms in the North Sea or solar farms in California.

This strategy – one that generates the dividends needed to fund growing pension liabilities, while also delivering the capital for a global transition to a clean, green, low-carbon economy – is essential. If low-carbon investments cannot generate the stable long-term returns needed by pension funds and institutional investors, we will never be able to access the pools of capital deep enough to finance the estimated \$46,000bn in additional investment required by 2050 to tackle climate change.

Article 2 by **Ben Caldecott**, Head of European Policy

Green bonding: a primer on green bonds and how they can transform climate finance

Over the last 18 months you may have noticed an increasing number of people and organisations calling for the creation of “green” bonds. Potentially these are a way of raising the huge amounts of capital needed to tackle climate change and protect our natural world.

They could be critically important, but they remain shrouded in mystery and there is a great deal of confusion about their exact form and structure. What are they? Are they a way for Government to borrow money for green projects? Are they a new savings product for ethical consumers? Or are they something to do with that proposed UK Green Investment Bank (GIB)?

This lack of clarity is understandable and is a direct result of all the different types that have been recently proposed. They could, in fact, be all of the above: green gilts, green retail bonds and Green Investment Bank bonds. But, there are many more being proposed as well, including: green infrastructure bonds, multilateral development bank green bonds, green corporate bonds, green sectoral bonds, rainforest bonds and index-linked carbon bonds.

All of these different (and sometimes confusing) classes of green bond have an important role in helping to raise finance for different parts of our low carbon transition. They would occupy different niches, raising

money from different types of investor and then deploying the cash in different ways. For example, rainforest bonds could front-load aid and conservation credit income into preventing deforestation, while local governments could raise finance from local people through bonds issued to improve and green communities. Given the sheer scale of our low carbon ambitions, this range of diversity and its potential to scale up overtime, is a tremendously good thing.

But, if you’re interested in which of the green bonds is likely to be the most important in the short to medium term, there is one that stands above the rest – the green infrastructure bond.

Green infrastructure bonds are bonds issued to refinance built and operating low carbon infrastructure. They are asset-backed corporate bonds that would be rated by ratings agencies (so as to be investment grade) and issued in sufficient quantities to be easily tradable in a deep and liquid market.

This green bond is not only useful right across the low carbon economy, but can be quickly created on the back of existing commercial structures, generate an impressive quantum of capital and, crucially in these times of austerity, do nothing to increase our public sector debt.

Their development is critical for a number of reasons: to reduce the average cost of capital; to create a credible, low cost exit for higher cost construction phase capital, as well as for the longer term project finance debt held by banks with constrained balance sheets; and to match stable long term returns from infrastructure with the growing liabilities held by our pension funds and insurance companies. But perhaps their most important role is to help us access the sheer scale of capital required for our low carbon transition.

In the last two years studies have shown that around £200 billion of low carbon infrastructure investment is required in the UK between now and 2020. Ernst & Young estimates though that traditional sources of capital – ranging from utilities through to project finance and infrastructure funds – can only provide £50–80 billion over the next 15 years. How can we close this staggering financing gap?

Facilitating access to the deep pools of low cost capital held by institutional investors will play the major role. For example, in 2008 approximately £3 trillion of long term assets were held by UK pension funds and insurance companies. Allocating a small proportion of this total over the coming decade, say 4 to 5 percent, to low carbon infrastructure would close the gap in capital required.

Under current conditions this is unlikely to happen though. Low carbon infrastructure projects are generally unable to access capital held by institutional investors. This is because projects tend to be financed one-by-one in complex structures and

institutional investors are highly unlikely to invest directly into individual projects.

Green infrastructure bonds could change this forever by finally creating a way to tap into institutional investor cash in the amounts needed. Because green infrastructure bonds are liquid, rated and asset-backed, they would be very attractive to institutional investors who want to invest directly and easily into such assets without the need for additional intermediaries such as fund managers.

This demand is illustrated in traditional infrastructure, where infrastructure bonds are tried and tested instruments (they were, after all, how we financed our Victorian railway network).

But, the lack of a long-term track record for some low carbon technologies, as well as high levels of associated political and policy uncertainty, mean that a functioning market in green infrastructure bonds hasn't taken off. There is also a chicken-and-egg type problem, where little or no liquidity in this bond market means that few investors want to buy them, and without buyers, few want to issue them, which in-turn, results in little liquidity. These are serious problems, but ones that can be corrected rapidly through a temporary and short term intervention.

To quickly kick-start a green infrastructure bond market the new UK Green Investment Bank (perhaps cooperating with the European Investment Bank) would play a leading role. It could speed up the creation of a liquid market by improving the risk profile of these bonds through temporary holdings of first-loss debt from early bond

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issuances. After helping the market gain familiarity, the Bank could then sell back bonds into the liquid market that it had helped create, making its money back.

Another role for the GIB in creating a liquid green infrastructure bond market could be in helping to structure the first issuances. To ensure liquidity, issuances will need to be of a sufficient size and bonds will need to be rated. The GIB could support this process and might be able to help encourage the pooling of assets to improve risk profiles and ensure scale.

In addition to the GIB, another Government policy currently in consultation could have an important role to play too. Electricity Market Reform (EMR) and its efforts to improve our relatively expensive renewables subsidy regime (for example through a Feed-in-Tariff and a carbon floor price) could reduce policy risk and improve the revenue certainty of low carbon assets. In turn, this would improve the risk profile of green infrastructure bonds, lowering the cost of capital further. Reducing the average cost of capital on our £200 billion low carbon infrastructure programme by as little as 1 percent, would reduce interest payments by £2 billion per annum. In our cash-strapped times, these are savings worth making.

Green infrastructure bonds will allow us to access the deep pools of low cost capital held by institutional investors at the scale needed to tackle climate change. Without them and their ability to provide a means for banks and utilities to quickly recycle risk capital back into building new infrastructure, our clean energy revolution could be muted. Moreover, our existing efforts will cost much more than they need to. As the Government

works up its final EMR and GIB proposals in detail, there is now a unique opportunity for policy makers to connect the dots and help create a new market in green infrastructure bonds. This could transform the availability of green capital and is an opportunity that should not be missed.

Article 3 by **Rupert Edwards**, Head of Research and Market Analysis, Carbon Finance

Give us a carbon price contract, not a promise

To its credit, the thrust of the government's overall climate policy is demonstrating leadership at a time when the European Union as a whole seems to be losing its nerve. The coalition government has recognised that in the absence of meaningful emissions reduction targets in the EU, the price of carbon in the EU Emissions Trading System (EU ETS) is insufficient to drive new low-carbon investment at the scale and pace required.

Energy secretary Chris Huhne has recognised that this is a major problem and that the current price of carbon is far below the level that's needed. Consequently, the government has proposed a solution: a promise of a "carbon price support", using the tax system to top up the carbon price set through the market. In theory, it would provide a trajectory of minimum carbon prices out to 2030.

But just as the Romans asked, "who guards the guards?", investors ask "what guarantees the guarantee?", and the answer is disheartening. The government top-ups would be exposed to the changing winds of every subsequent government. They would need a Parliamentary vote each year as part of the annual Finance Act. They would be designed in the same model as previous commitments that have been famously abandoned, not least the "fuel price escalator", introduced in 1993 but

abandoned in 1999 to the sound of beeping horns as lorry drivers protested.

Claiming to be the "greenest government ever" is one thing; saying that all future governments will be too is more than investors can believe – particularly given the perceived risks to the UK of going further than other EU countries, and the temptation for governments to renege on promises once investments have been made. Worse, the most important decisions to top up the price of carbon would need to be taken at the most politically difficult times: when the market price is low, because of a weak economy. It is then that the support would be needed most, and would be least popular.

Without credibility, the benefits of the policy melt away. If investors do not believe in the commitment, it will not reduce the costs of energy investment, nor will it lead to new investment in nuclear generation. According to work commissioned by the government itself, investment in renewable power, instead of increasing, would actually be reduced, as would security of supply.

The government's consultation on electricity market reform, which the carbon price support would complement, closed on 10 March. The final decision will be announced in the Budget. It is not too late. Instead of resting on a promise, the carbon price support could be locked in with a contract.

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In a new report from the Climate Change Capital think-tank, The UK Carbon Price Floor: How to Enhance its Credibility with Investors, Dominic Maxwell of Harvard Kennedy School and I set out how this could be done relatively easily with a Carbon Price Support Guarantee (CPSG). This would involve the Treasury underwriting the value of the carbon price support, and selling these guarantees for a nominal sum.

If the Treasury promised a certain level of carbon price including tax, and the market price in the EU ETS was above it, the promise would be kept, the carbon price support would be zero, and the guarantee would be met without any cost.

If, however, they promised £30 per tonne in 2020 and the market price was only £20, two things could happen. The Treasury could set the carbon price support to make up the difference – and again the guarantee would cost nothing. Or the CPSG would come into effect. It would oblige the Treasury to pay the difference to all owners who exercised it – but, crucially, this cost only occurs if the Treasury breaks its commitment. They are the only ones who control this risk, and if the government is unwilling to take on the liability implied by uncertainty over its own future actions, then it cannot expect investors to do so.

By reducing uncertainty, an underwriting mechanism would reduce the incentive for investors to “wait and see”, accelerating investment and allowing for a lower overall path of carbon prices. It would ensure that the cost of capital in investment spreadsheets was as low as possible. And it would show that the government, at least, has faith in its own promises. It would be

a powerful commitment to a low-carbon Britain, as part of a powerful package of policies.

Article 4 by **Ben Caldecott**, Head of European Policy

Protecting and restoring biodiversity will require private investment

Unfortunately and coincidentally, as the UN-led International Year of Biodiversity was coming to its end late last year, it was confirmed that 2010 targets to halt biodiversity loss across Europe and significantly reduce the rate of biodiversity loss internationally had not been reached.

The failure of these targets to galvanize action at the scale and pace needed to protect and restore biodiversity has not prevented new 2020 targets being created. The EU has again agreed another target to halt biodiversity loss in Europe, but this time by 2020, while the latest international conference on biodiversity held in Nagoya, Japan, agreed various new international targets, including at least halving the rate of loss of natural habitats by 2020.

These new targets mean that we will continue to have legally binding international targets in place, but this by itself is insufficient to avoid repeating the failures and disappointments of the last decade. To succeed in the present decade and beyond, we must do something for the first time: actually stump up enough cash to deliver our biodiversity objectives.

Given the developed world's fiscal crisis, this will necessitate novel approaches to raising and deploying capital. The way money has been raised historically – primarily through public sector expenditure or voluntary donations to charities – while

important, is unlikely to generate the scale of capital needed to finally halt the loss of biodiversity, or turn the tide through ecological restoration. Progress will require us to rapidly increase the money available for biodiversity protection and restoration from all sources and in particular, this means raising the private sector's contribution.

Habitat banking and biodiversity credits are one set of critically important tools for increasing private sector investment in the protection and restoration of our natural world. In a joint report I set out with others how we could introduce a successful habitat banking and conservation credit system.

In the report we focus on Britain, and specifically England, because the coalition government has said that it will introduce new ways to protect biodiversity in the forthcoming natural environment white paper due this spring. In the Conservative party's general election manifesto there was also a pledge to "pioneer a new system of credits to protect habitats". As a result of these commitments, there is a unique opportunity to successfully render a working and effective system in the UK that could be replicated, improved and expanded across Europe and throughout the world.

Habitat banking is defined as a market where biodiversity credits from actions that benefit biodiversity can be purchased to offset environmental damage. Actions that

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benefit biodiversity might include restoring a habitat or avoiding biodiversity loss in the first place. Credits can be produced in advance of need and stored over time. Simply, they create a means to pay for and finance biodiversity conservation by making those who damage the environment pay for fixing it.

Biodiversity credits are not a license to trash. Credits should only be available to compensate for damage that is unavoidable and the aim of credits must be to provide a new and additional layer of protection for biodiversity above and beyond what is provided through existing national and international protection.

For habitat banking to deliver the scale of private investment required, there also needs to be enough supply and demand for credits in the market. So in addition to establishing biodiversity credits and defining robust rules and standards to govern a new market, government also needs to establish visible long-term demand for credits. Without this, investment in the projects that generate credit supply will not occur at any meaningful scale.

One way to create demand for credits would be to enshrine a legal commitment to no net loss of biodiversity and move towards net gain. To achieve this objective new obligations to purchase biodiversity credits for those that directly or indirectly harm biodiversity and habitats should be introduced. At the start this might apply to property developers and the agricultural sector only, but over time there is no reason why other actors in the economy, whether public or private, should not pay for the inevitable and unavoidable damage to

biodiversity that many economic activities directly or indirectly cause. Ramping up demand for credits over time would translate into credit creation and the scale of investment we need on the ground to tackle biodiversity loss.

To kick start a deep and liquid market in conservation credits in the short term, government could support the development of the market in other ways as well. For example, corporation tax relief on the costs to the buyer of purchasing credits that deliver net gains to biodiversity would be a powerful incentive to encourage investment. Another way to support the development of a vibrant market would be for government to underwrite a fixed number of early credits at a set minimum price. This would create a forward price curve for biodiversity credits, which would immediately encourage private investors to deploy capital into credit supply generation, without waiting for the growth of a market.

By creating a new means to finance the protection and restoration of our natural world and make those who damage the environment pay for fixing it, we can finally address the perennial problem with delivering our biodiversity targets and objectives: a lack of means. Conservation credits would also allow us to price the value of habitats and biodiversity into decision making throughout the economy. Achieving all this will not be easy, but the benefits of success are substantial and long term. Getting a system right in the UK could, hopefully, transform the way we value nature and finance its protection globally and this is a rare and exciting opportunity the government should not pass up.

Article 5 by **Ben Caldecott**, Head of European Policy

Green bankers can help to restore City's reputation

After the events that led to the credit crunch and our current fiscal situation, the last thing people want is more bankers. But what if they were green bankers?

Green bankers could lead a new approach to finance, helping Britain earn its way in a competitive global economy while supporting the entrepreneurs and businesses that are going to deliver a more sustainable future for everyone.

Restoring financial services, especially in London, as a key driver of Britain's economic success should be in all of our interests. Not only does a successful financial services sector buoy tax receipts, but a thriving financial capital underpins growth by creating high-value jobs and economic activity throughout the country. For the last 45 years, the trade in financial services has brought a large surplus of money into the UK – even during the crash – despite the overall balance of payments having been negative for the last 25 years.

So as we look for a way to create a sustainable economic recovery, it would be hard to ignore the potential role of financial services. In the same way that London has played a leading role in financing international industrialisation and development, we can do the same for the capital-intensive global transition to a low-carbon and sustainable economy.

Although this sector is immature, the international market on which it is based is already large and growing rapidly. According to a recent Bloomberg/Pew Center report on global clean energy investment, there was a record \$243bn worth of finance and investment in 2010. In Europe, €1 trillion of energy infrastructure investment is estimated to be required in this decade alone and globally, \$46tr in additional investment is thought to be required by 2050 to tackle climate change.

British efforts to gain market share in these large and growing green markets should extend to every sector, from services to manufacturing to R&D. But we are lucky that in financial services Britain's capital has an excellent foundation on which to build. London is already the world's leading green financial capital, but this privileged position was achieved almost entirely by accident.

As the largest financial centre within the European Union emissions trading scheme (ETS) and being part of a developed country that unlike the US signed the Kyoto protocol, London by default became the centre of both the EU and international carbon market.

Another critical factor has been the active promotion of green and climate change-related policies by successive British and EU governments. Not only does this create a

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plethora of green investment opportunities in a large and close hinterland – the European market – that can be accessed by London based professionals, but it also means that London has become a leading green policy hub and ideas machine. Green policy ideas started by London’s thinktanks, NGOs, and academic institutions are quickly picked up by UK politicians, disseminated through London’s international media hub and then promoted in other European member states and internationally. Britain can be proud of this nexus of green innovation.

But London’s promising start in this new sector could be successfully challenged. We will be seriously tested by other ambitious financial capitals, including cities that missed out the first time round, such as New York, Chicago and Sydney, or by those that have identified this as a key growth area, such as Frankfurt, Shanghai, Hong Kong, Singapore and Tokyo. That’s an intimidating mix of competitors by any standard.

So what can we do to support this early success? An essential prerequisite is sustaining the capital’s overall health as a financial centre, for example, by ensuring London is a well-regulated and affordable place to do business. But beyond these generic factors we can and must do more.

The UK government and London mayor can directly and indirectly help. They must ensure that pioneering policies in the UK and Europe are successful, such as the EU ETS, new schemes to enable private investment in energy efficiency (the “green deal”) and renewable heat (the renewable

heat incentive). New initiatives, such as the Capital markets climate initiative launched by Greg Barker, a UK climate change minister, need to become successful long-term platforms for policy-makers and financiers to come together and help create solutions to climate change.

Government can also make sure that London’s academic innovators in the climate change space, such as Imperial College, get the technology research funding they need to succeed. The greenest Olympics ever and the Olympic legacy can also be designed to support green and low-carbon entrepreneurs. In addition to these efforts, we must quickly send the right signals to businesses and investors that London is serious about success. The new UK green investment bank should be located in the capital, for example, and London’s newly promised enterprise zone should be designed to attract and support green innovators over the long term.

These measures can help keep London ahead of the game and support our economic recovery. This will help Britain earn its way in the world, transform our planet for the better and, just perhaps, salvage something of the reputation of bankers.

Article 6 by **Steven Gray**, Vice President, Carbon Finance

To Cancun and beyond?

Even before the Cancun climate summit began, expectations were probably as low as they could have been. The failure of the previous climate change negotiations in Copenhagen last December had successfully shattered faith in the ability of the United Nations Framework Convention on Climate Change (UNFCCC) process to deliver enhanced and appropriate action on climate change.

As a result, at Cancun the UNFCCC needed to redeem itself and renew its relevance for organizing international responses to climate change. This was a direct challenge to the multilateral system and the stakes couldn't be higher. Could delegates flying in from around the world rise to meet the challenge?

With scarce political capital deftly deployed and managed by the Mexican hosts, countries did succeed and managed to break the deadlock. They made progress, built trust and set out a credible pathway forward. By avoiding another Copenhagen, they have partially restored confidence in the international framework and created the political space for further successes next year.

The Cancun Agreement incorporates important elements for the development of an international framework to facilitate national, bilateral, regional and international implementation of climate related activities. The agreement is an imperfect compromise

(as all international agreements inevitably are), but has a number of important elements.

On finance it establishes a Green Climate Fund to help fund adaptation efforts in developing countries and a Transitional Committee responsible for its design. The Committee will look into the legal and institutional arrangements, financing instruments, and funding windows to ensure that the Green Climate Fund can perform effectively and be held to account. This Committee will initiate work in 2011 and make recommendations before the year's end.

On climate finance more broadly, the core issue will be around reaching the pledged \$100 billion per annum by 2020 of financing flows from 'developed' to 'developing' countries for mitigation and adaptation. To what extent these will be public or private funds, the proportion to be deployed via the Green Climate Fund and how far new funding goes to meeting incremental costs have yet to be agreed.

The Cancun Agreement also agrees new levels of monitoring, reporting and verification (MRV). Both developed and developing countries will be subject to a more robust international system of MRV. Developed countries will have to be more transparent on the funds they pledge to developing countries and report on progress

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towards meeting their commitments. Simultaneously, developing countries will have to start reporting on the emissions reductions they have made.

There is now also a Cancun Adaptation Framework and an Adaptation Committee to promote the implementation of better adaptation capacity building. While a new Technology Mechanism will help promote technology transfer and facilitate collaboration between governments.

Clarity was central to success in Cancun and consultations were, for the most part, carried out transparently and collectively by the Mexican Government and UNFCCC. This approach has created goodwill and an opportunity for the negotiations to become permanently more open in the future. When the South Africans host the next summit at the coastal city of Durban they will have the opportunity to consolidate and build on this important progress.

The noticeable lack of ambition at Cancun to increase emission reduction targets despite the recognition that current pledges will fail to prevent a 2 degree rise in average global temperatures was worrying. We hope this can change in time for Durban, but this will only happen if governments can mobilise domestic support and translate that into greater ambition on the international stage.

Biographies

Vivienne Cox, Chairman of the Board



Vivienne is the former CEO and Executive Vice President of BP Alternative Energy and a former member of the BP Executive Management Team. Vivienne joined BP Chemicals in a commercial role moving to BP Exploration in 1985, and then BP Finance.

In 1990 Vivienne set up the commodity derivatives group within oil trading and in 1996 managed the development of new business in central and Eastern Europe.

In 1998 Vivienne became the CEO of Air BP; managing the sales of branded fuels in over 90 countries worldwide. Following this, Vivienne pulled together all BP's trading activities in Oil, Gas, Chemicals and Finance into a single organisation which she led until 2006. Vivienne was an Executive Vice President from 2004 and in 2008 she brought together all of BP's activities in renewables.

Vivienne is a member of the Department for International Development's (DFID) management board. She sits on the Board of Rio Tinto plc; the Board of INSEAD; the Supervisory Board of Vallourec and is the Patron of the St. Francis Hospice Charity, UK.

She holds a Bachelors degree, an MA in Chemistry from Oxford University, an Honorary Doctorate from the University of Hull and an MBA at INSEAD, Fontainebleau, France.

Ben Caldecott, Head of European Policy



Ben Caldecott is Head of European Policy. Ben runs the CCC ThinkTank and advises CCC funds and clients on the development of policy-driven markets. During his time at CCC he has worked at a senior level in the Strategy Directorate of the UK's Department of Energy & Climate Change and as a Sherpa to the Green Investment Bank Commission. Ben is also a Trustee of the Green Alliance and has a number of appointments with organisations working on environment policy.

Before joining CCC, Ben was a Research Director and Head of the Environment & Energy Unit at Policy Exchange, a leading UK based think tank. He has also worked for the United Nations Environment Programme and Foreign & Commonwealth Office.

Ben is a Fellow of the Royal Asiatic Society, Royal Geographical Society and LEAD International. He read economics and specialised in development and China at London, Beijing and Cambridge universities.

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Rupert Edwards, Head of Research and Market Analysis, Carbon Finance



Rupert is Head of Policy and Market Analysis. Prior to CCC Rupert spent 14 years in financial markets at JP Morgan in London, including as Head of European Government Securities Trading.

Rupert Edwards has an MSc in Environmental Technology from Imperial College, London and an MA in History from Trinity College, Cambridge.

Steven Gray, Vice President, Carbon Finance



Steven leads the UN regulatory and policy stream and advises CCC's funds on policy and regulatory developments of the international carbon market and broader international climate policy developments.

In relation to CCC's research programme he focuses on financing mechanisms and financial products to support policy incentives. He is active in the discussions around new flexible mechanisms and the evolution of carbon finance under the UNFCCC (United Nations

Framework Convention on Climate Change) and Kyoto Protocol. Steven leads CCC's finance pieces for the EU Commission's "Global Sectoral Approaches" project with CCAP (Centre for Clean Air Policy), focusing on Mexico and China. He Chairs the Post 2012 and Institutional Reform working group of the Carbon Markets and Investors Association. He is also involved in the creation of a new platform to facilitate a dialogue between business, decision makers and representatives from the international community around emission trading schemes and broader policies related to climate change.

Prior to joining CCC, he worked on linkages between climate change regulation and development at ODI (Overseas Development Institute). As a qualified Mexican lawyer he has experience in environmental and planning law. He has provided legal advice to international and domestic companies with regard to compliance with environmental legislation and has negotiated with Mexican environmental authorities on behalf of clients. Steven holds a law degree from Universidad Iberoamericana in Mexico City and a Master's in Law from the London School of Economics.





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