Durban dynamics: navigating for progress on climate change

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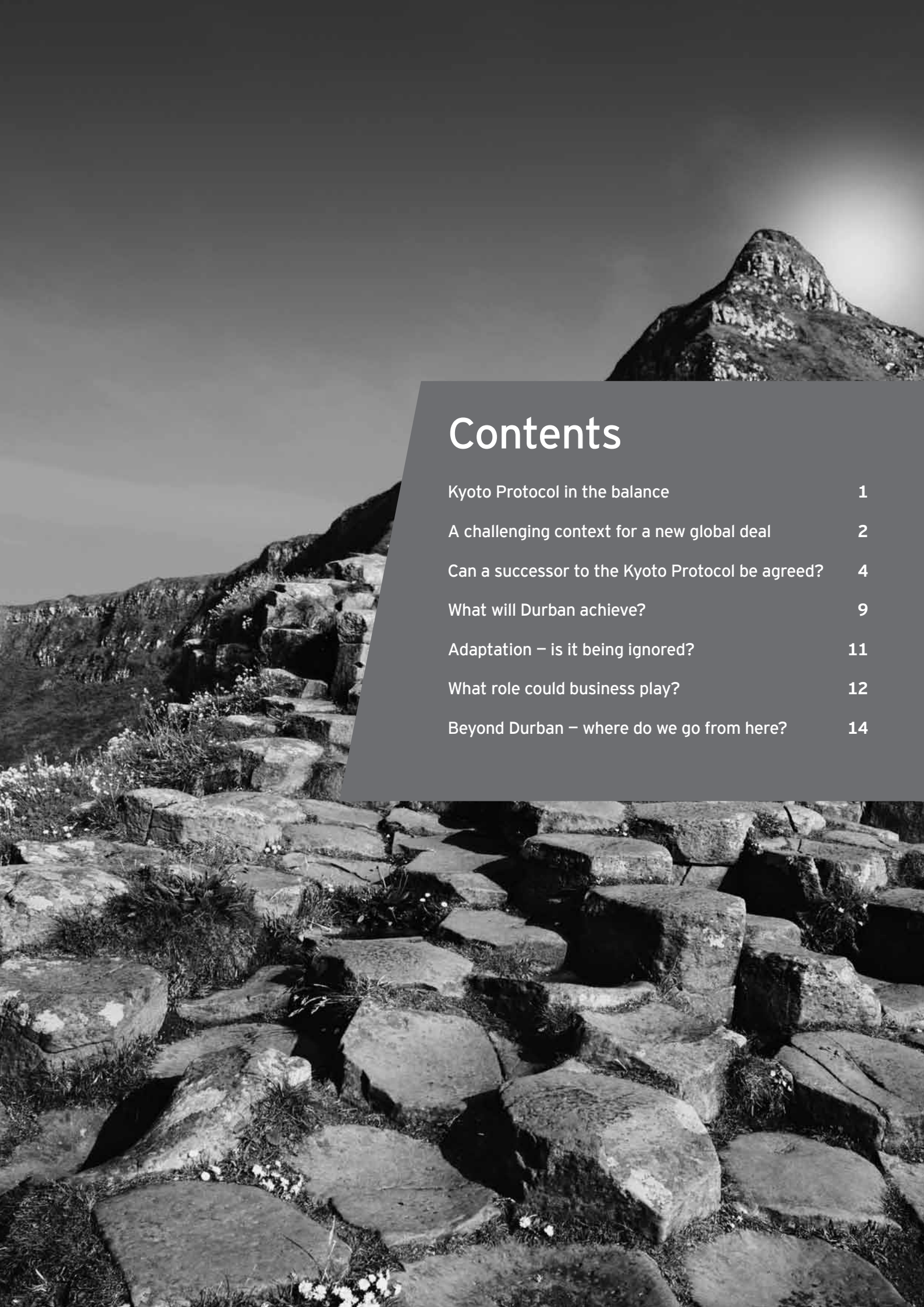

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Kyoto Protocol in the balance

The battle against climate change is at a crucial turning point. From 28 November to 9 December, 2011, the world's climate negotiators will meet in Durban, South Africa, to determine the future of international climate change policy. The meeting, which is officially known as the 17th Conference of the Parties (COP17) to the United Nations Framework Convention on Climate Change (UNFCCC), will be vital because, without an agreement coming out of the meeting, there will be no internationally binding targets forcing countries to reduce their greenhouse gas (GHG) emissions after 2012.

In an ideal world, Durban would see a comprehensive, legally binding agreement to succeed the Kyoto Protocol, which came into force in 2005. This would involve developed countries agreeing to cut their emissions, and developing countries agreeing to limit the amount by which they increase, by a certain deadline.

According to many climate change specialists, after limited progress at previous UN meetings in Cancun and Copenhagen, the chances of reaching a deal in Durban are relatively low. In addition to the political challenges of brokering a multilateral deal, the economic environment is also unfavorable. Developed countries, in particular, are struggling to emerge from the global financial crisis and are weighed down by huge debts. This means that there will be limited scope for them to increase spending on environmental policies. There is, therefore, a real risk that climate change may slip down the political agenda due to the more immediate economic pressures that the global economy faces.

Although the Kyoto Protocol is the centerpiece of the Durban meeting, negotiators will also be hoping to make progress on a range of other climate-related initiatives. These include the Green Climate Fund (GCF), a mechanism to finance climate change action in developing countries; Nationally Appropriate Mitigation Actions (NAMAs), which are voluntary emission reduction schemes in developing countries, the REDD+ process to cut emissions from deforestation, the MRV system for industrialized (Annex I) and developing (Non-Annex I) countries, new market mechanisms, technology transfer and capacity building among others.[1]

"In the last decade, the Kyoto Protocol and resulting national and sub national carbon regulations have been the main drivers for an increasing carbon consciousness among corporations, the media and the general public."

Juan Costa Climent
Global Leader, Climate Change and Sustainability Services, Ernst & Young

1 List of Annex I Parties to the Convention, *UNFCCC website*, http://unfccc.int/parties_and_observers/parties/annex_i/items/2774.php, accessed 4 November, 2011. List of Non-Annex I Parties to the Convention, *UNFCCC website*, http://unfccc.int/parties_and_observers/parties/non_annex_i/items/2833.php, accessed 4 November, 2011.

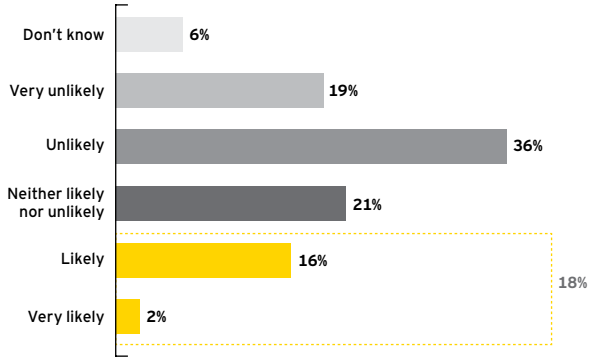
Failure to reach agreement at Durban will create lingering uncertainty for business that could deter investment and undermine economic growth opportunities. Among the C-suite and senior managers from large multinational corporations surveyed for this report, an overwhelming 83% think that a multilateral agreement is required to tackle climate change (see figure 6, page 5). But at the same time, only 18% of senior executives said that they thought a deal was likely to emerge (see figure 1).

With the chances of a global agreement at Durban in the balance, this raises a number of important questions:

- If no deal is reached, will the UN climate process and the Kyoto Protocol be consigned to history as a failure, or can they be brought back to life?
- Can the US$142b carbon market that exists as a result of the Kyoto process survive without the backstop of internationally agreed binding targets?[2]
- If a global deal does not emerge, will anything of value come out of the meeting and what will the implications be for business?

In this report, we assess the prospects for success at Durban, analyze the key issues that need to be addressed at COP17 and outline what this could mean for the business community.

Figure 1: How would you rate the chances of an international deal being reached in Durban later this year?



2 World Bank, *State and Trends of the Carbon Market*, 2011.

A challenging context for a new global deal

The conditions under which the Durban meeting will take place could not be more challenging. The United States and the European Union are trying to deal with the lingering repercussions of the financial crisis. A decade-long credit boom, combined with the massive cost of bailing out banks and stimulating economies has left many governments with high debts and limited financial resources.

Already, 77% of our survey respondents think that governments have not been investing enough in initiatives to facilitate the transition to a low-carbon economy (see figure 2). Among those from Asia Pacific, the Middle East and Africa, this proportion is even higher.

A study conducted for Ernst & Young for this report suggests that current austerity measures adopted by governments could give rise to a large funding gap in their spending toward climate change (see 'A growing funding gap').

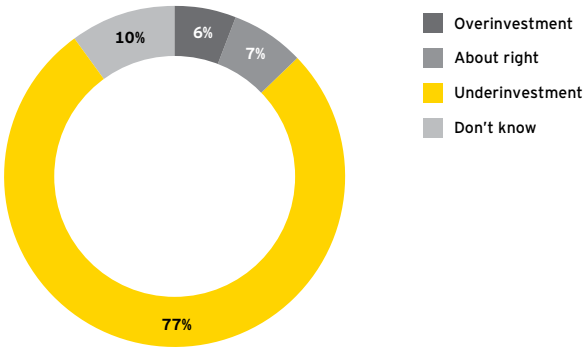
The aggregate funding gap among 10 of the world's major economies could reach up to US$45b by 2015, according to the research (see figure 4 – scenario 2). Confidence is fragile around the world and policy-makers are under pressure to focus on the state of their economies rather than on the state of the planet.

Other recent events complicate matters even further. The accident at the Fukushima nuclear plant in Japan has re-opened the debate about the future of nuclear power as a low-carbon alternative to fossil fuels. Public concern about nuclear safety has been heightened and this has thrown the spotlight on energy policy around the world. Germany, for example, has accelerated its plans to phase out nuclear power, partly in response to the Fukushima accident. This new nervousness about nuclear power presents a real challenge to governments looking to de-carbonize their economies because it was widely seen as one of the key ways in which governments will be able to reach carbon reduction targets. With nuclear power effectively off the table, governments will have fewer options available to help them achieve their goals.

This combination of factors will place policy-makers at the meeting under huge pressure. Without a deal and binding targets on nations, the Kyoto Protocol could potentially cease to exist. At best, it would be suspended, and no longer serve as a channel through which countries can address the challenge of climate change. Either scenario will diminish the prospects of a global carbon market and undermine the entire low-carbon agenda.

The absence of a global deal also takes the world further away from reducing emissions in a way that will limit the global temperature increase to around 2°C by 2050.[3] This is widely regarded by most climatologists as the upper limit within which serious climatic impacts could possibly be prevented. Instead, we may be moving to a world where emissions continue on their current trajectory and average temperatures may rise an expected 6°C over the next century according to some of the potential scenarios.[4]

Figure 2: In your opinion, have world governments been investing enough in the development of low carbon energy solutions? (% of respondents)



3 "Milestones on the road to 2010: The Cancun Agreements", *UNFCCC website*, http://unfccc.int/essential_background/cancun_agreements/items/6132.php, accessed 24 October 2011.

4 "Expect big jumps in temperatures, E.U. warns" *msnbc website*, http://www.msnbc.msn.com/id/33011378/ns/us_news-environment/t/expect-big-jump-temperatures-un-warns/, accessed 7 November 2011.

A growing funding gap

In the next few years, governments in developed countries will face significant challenges to ramp up or even maintain their investment in policies aimed at addressing climate change. The combination of a high debt burden and austerity measures means that many governments will face funding gaps that could see investment in climate change mitigation fall down the priority list.

A study by Oxford Economics commissioned for this report reinforces the challenges that lie ahead. It calculates the level of climate change-related government spending across 10 major economies and assesses the extent to which expected future austerity in the public sector could impact upon climate change investment (see figure 3). This includes spending on pollution abatement and certain programs of environmental protection, renewable energy, clean technology and environmental tax credits and subsidies. According to these figures, Germany is currently the biggest spender on climate change prevention, with an annual bill of almost US$23.5b, or 1.6% of the government budget. The United States is the second biggest spender at US$15.9b, although this is a much smaller proportion of its overall government spending at 0.3% considering the size of its economy.

Austerity measures being imposed by some governments will alter spending patterns considerably. By comparing a 'business as usual' scenario in which governments increase spending according to historical rates (1990–2010) with a situation in which the government spending is constrained by a need to reduce budgetary deficits, some sizable gaps emerge. Among the 10 economies in the study, the cumulative funding gap could reach US$22.5b by 2015 (see figure 4 – Baseline scenario). In Spain, for example, current austerity measures could imply that the Government will spend US$5.1b less between 2011–15 compared with historical average investment on climate change prevention.

Figure 3: Government spending on climate change in 2010

Country	US$m at market exchange rates	Percentage of government spending
Germany	23,498	1.6
US	15,936	0.3
Japan	14,201	0.6
France	10,343	0.7
Italy	6,734	0.6
UK	5,983	0.5
Spain	4,321	0.7
South Korea	2,207	1.0
Australia	2,050	0.6
South Africa	463	0.4

Source: Oxford Economics. Refer to page 16 for research methodology.

The study also calculates the funding gap under a scenario in which the Eurozone debt crisis escalates as disorderly defaults by peripheral countries lead to a new banking crisis and a global economic slump. Under this more extreme outcome, the cumulative funding gap widens ever further to a total of US$45b in aggregate. Spain would face a gap of more than US$6b (see figure 4 – Scenario 2). Germany would face an even bigger gap in absolute terms of US$8.3b, although due to the size of its economy, this is equivalent to a smaller proportion of its overall government spending.

The table below shows the funding gap in the case of planned austerity measures (baseline scenario) and with additional cutbacks (scenario 2) that would be required if the debt crisis escalates.

Figure 4: Government funding gap on climate change between 2011–15

Country	Baseline scenario (US$m at market exchange rates)	Scenario 2 (US$m at market exchange rates)
Germany	2,101	8,340
US	2,002	6,413
Japan	2,505	6,075
France	2,880	5,377
Italy	2,263	4,110
UK	4,228	5,686
Spain	5,133	6,176
South Korea	178	949
Australia	748	1,203
South Africa	472	702
Total	**22,510**	**45,031**

"The funding gap and the magnitude of the challenge ahead forces us to think of new ways of scaling-up finance for climate adaptation and mitigation. Financial innovation is key to unlocking the capital markets. New schemes could drive down the cost of financing and help ensure risk in developing countries is better priced," says Juan Costa Climent. Many public officials believe there is a need for green bonds – and special tax treatments for those bonds – soft loans, grants, more debt availability, guarantees and new insurance products. This quantum of investment will imply a significant coordination and collaboration so that policy incentives and public finance work in conjunction with private sector initiatives.

"Public finance should seek to provide an arena for the private sector to minimize investment risks. It has a key role to play in leveraging private finance, mitigating real and perceived risks and funding R&D climate-related activities," continues Costa Climent. While this cannot be restricted to the UNFCCC framework, it could take the lead in designing new scaled-up financing vehicles such as the Green Climate Fund (GCF).

Can a successor to the Kyoto Protocol be agreed?

Four out of ten respondents to our survey think that conflicting agendas will prevent an agreement at Durban and three out of ten believe economic costs is another key barrier. In this section, we look at some of the positions that have emerged among the countries represented at the meeting.

- **Different political stances overshadow a global goal:** Countries such as Russia, Canada and Japan say they will not sign up to a new deal unless all major emitters, including China and the US, are bound by targets. Many industrialized countries also want developing nations to take on some form of internationally binding commitments to limit their emissions growth. But developing countries argue that the industrialized nations have been largely responsible for historical emissions and so should bear the economic burden of tackling the damage they have caused. Most developing countries would like to see an extension of the Kyoto Protocol and the retention of the Clean Development Mechanism (CDM), which allows industrialized countries to invest in emission reduction programs in developing countries in return for carbon credits, although they would like to see a reduction in bureaucracy. They are, however, reluctant to take on any binding targets themselves. Meanwhile, some countries are taking action. For example, Australia joins the European Union in setting a price on carbon through the introduction of a carbon tax. But it remains to be seen if this kind of a move encourages other countries to commit to an international deal.
- **Growing frustration in the Eurozone:** The European Union, which has for many years been a leader in climate policy, has stated that there is no point in it continuing with the Kyoto Protocol if the other major players do not also agree to take on significant legal commitments. Its earlier commitment to increase its emissions reduction target to 30% if others made significant commitments will stay on the negotiation table, but a decision to move to this target will not be made before Durban.[5] This is partly because coal-reliant Poland currently holds the EU presidency and partly because it seems so unlikely that others will make such commitments.

For the EU, one focus will be on reaching agreements "in relation to commitments on adaptation, technology, improvements on monitoring, reporting and verification and the role of the Green Climate Fund," the EU's chief climate negotiator Artur Runge-Metzger has said. "All these issues will have repercussions on how business perceives the possibility to act and the level of confidence business needs in order to make further investments," he added. The other focus will be to achieve a roadmap for negotiating a new legal framework that would close the gap in the current level of ambition, and ensure that, in the long-term average global temperature increase would stay below 2°C compared with pre-industrial levels.[6] However, given the current trend of emissions, many analysts believe that this target may be unrealistic.

- **Kyoto not a focal point of the US political agenda:** Although President Obama entered office in 2009 with climate change high on his agenda, it now seems unlikely that the US will focus on supporting a global climate agreement. The US has said that any agreement that is conditional on access to funding is unacceptable. With the financial crisis and current economic difficulties high on the agenda, and with the 2012 presidential election looming, economic challenges closer to home are likely to take priority. When climate change does enter the political debate, it is more likely to relate to the potential for cleantech investments to generate new jobs.

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Artur Runge-Metzger
Head of Unit Climate Strategy, International Negotiation and Monitoring of EU Action, DG Environment, European Commission

5 "Climate change: European Union notifies EU emission reduction targets following Copenhagen Accord" *Europa EU website*, http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/97, accessed 24 October 2011.

6 "Milestones on the Road to 2012: The Cancun Agreements", *UNFCCC website*, http://unfccc.int/essential_background/cancun_agreements/items/6132.php, accessed 24 October 2011.

Kyoto – success or failure?

It is tempting to say that the Kyoto process has failed. After all, developed and developing countries have pledged only 60% of the emissions cuts needed by 2020, according to the UNFCCC.[7] Among our survey respondents, views were mixed about the effectiveness of the Protocol. Just over 4 in 10 said that it had been important in tackling climate change, but a similar number thought that it had not (see figure 5).

Despite this skepticism, Kyoto should not be seen as a disappointment. The positive actions and policies that have been implemented around the world would not have happened without it. Virtually every country in the world has developed some kind of climate change policy and is taking actions to reduce or limit the rise in their emissions. The Kyoto Protocol has encouraged the adoption of low carbon technologies, helped the Annex I countries to reduce emissions at a lower cost through carbon markets and played a leading role in creating global awareness on climate change. As such, the protocol is a symbol of the commitment of the international community to tackle climate change, even if the outcomes of individual summits often seem underwhelming.

"I'm not sure that a legally binding agreement is the end goal," says Andrew Pendleton, Associate Director for Climate Change, Energy and Transport at the Institute for Public Policy Research, United Kingdom. "Changing the structure of economies is the goal."

"Climate change is not only an environmental problem. It's a major economic issue which has to be addressed as part of the economic policy," concludes Juan Costa Climent.

Figure 5: Do you think the Kyoto Protocol has been valuable in helping the world combat climate change?

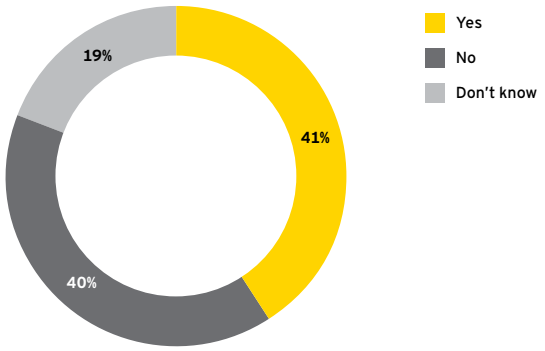
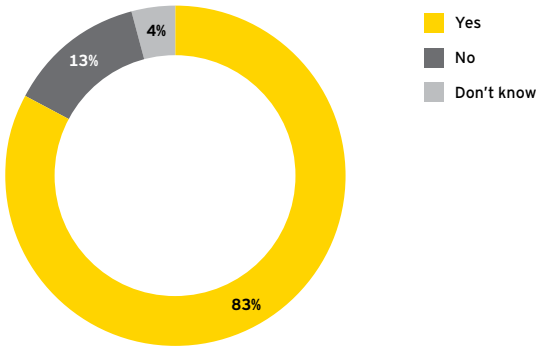


Figure 6: Do you believe that solving the climate change problem requires a multilateral deal between all of the world's governments?



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7 Milestones on the Road to 2012: The Cancun Agreements", *UNFCCC website*, http://unfccc.int/essential_background/cancun_agreements/items/6132.php, accessed 24 October 2011.

A new wave of initiatives among developing countries

Countries in the developing world are starting to realize that they will be most affected by climate change and that they cannot rely on the developed world alone to deal with the issue. The financial problems of many industrialized countries are making many emerging markets realize that help from the West may be limited. Also, some of them are large contributors to the emissions and therefore feel an increased share of the global responsibility towards reduction. As a result, they are developing their own approaches to tackle the problem.

- **National targets take center stage:** Even if a global agreement cannot be reached at Durban, progress is still being made at a national level. When the negotiations at the Copenhagen summit (COP15) were about to end in virtual non-agreement, India took the lead in bringing together some of the major developing economies to agree to a voluntary emission reduction target. India itself took a position to reduce its carbon intensity by 20%–25% between 2005 and 2020.[8] China made a voluntary commitment to reduce its carbon intensity by about 40–45% during the same time period and so did some of the other large developing countries.[9] These initiatives demonstrate the willingness of the developing world to make its own contribution.

  Brazil has signed into law a commitment to reduce its emission growth by up to 39% below 'business as usual' levels by 2020.[10] South Africa, meanwhile plans to reduce its emissions trajectory by 34% below business as usual projections by 2020.[11] However, this is only on condition that developed countries offer financial and technological assistance.[12]

"China might be willing to sign up to legally binding targets – as long as they are perceived to be achievable. China is looking to increase its influence on the global political and economic stage, so if it thinks the targets are acceptable, it will sign up to them."

Dr Jing Zhang
China Policy Institute, University of Nottingham

- **China and India show signs of flexibility:** China and India are likely to insist on maintaining their "common but differentiated responsibilities." They share the view that developed countries must take responsibility for emissions reductions and help developing countries by transferring technology. However, there may be a breakthrough on one of the sticking points of previous meetings. "China might be willing to sign up to legally binding targets – as long as they are perceived to be achievable," says Dr Jing Zhang of the China Policy Institute at the University of Nottingham. "China is looking to increase its influence on the global political and economic stage, so if it thinks the targets are acceptable, it will sign up to them."
- **Carbon markets open for business in developing countries:** In April 2011, India rolled out an energy trading mechanism known as Perform, Achieve and Trade. This is built around the principles of penalizing inefficient energy consumers, while incentivizing efficient ones through a market-based mechanism. Meanwhile, China is introducing voluntary carbon markets in a number of cities and provinces. If the trials in China prove successful, Beijing says that it will roll out a national carbon market within the next few years. Market instruments introduced by India and China highlight the new approach among leading emerging markets. These initiatives send a clear signal to business that it needs to tackle climate change by reducing its greenhouse gas emissions. "It is at national level that business takes its cues on climate change," says Thierry Berthoud, Managing Director of Energy and Climate at the World Business Council for Sustainable Development (WBCSD).

  Climate negotiations have tended to pit the developed economies against the emerging markets. Our survey finds that perceptions between the two blocs about the importance of climate change and sustainability vary widely. Now, concern for climate change seems to be greater in businesses from emerging markets rather than in those from industrialized countries (see figure 7).

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8 World Bank, *State and Trends of the Carbon Market*, 2011.
9 *Ibid*.
10 *Ibid*.
11 *Ibid*.
12 *Ibid*.

South Africa's balancing act

South Africa finds itself in a delicate position. As host nation for COP17, it is eager to drive through a deal and keen not to be a burial site of the Kyoto Protocol. At the same time, it must reconcile its twin ambitions to speak for Africa (without appearing to dominate proceedings) and to be seen as an equal to the BRIC nations as an emerging economic powerhouse. This creates the potential for conflict because Africa is likely to be hard hit by climate change, while the leading emerging markets are some of the world's biggest emitters.

Africa has woken up to the seriousness of climate change and the need to tackle it. The continent has experienced a period of relative stability over the past few years and it now believes it is ready to benefit from a wave of climate-related investment. As the most advanced economy in sub-Saharan Africa, South Africa is keen to act as a gateway to the rest of the continent for international businesses wanting to invest across the region.

Many UNFCCC parties agree that the Kyoto Protocol should remain as a cornerstone of the legally binding multilateral regime in the future. However, differences remain among those that would prefer keeping the Kyoto Protocol in its current form, complemented with a separate agreement under the Convention, and those who would prefer a completely new global agreement that incorporates elements both from the Kyoto Protocol and the Convention negotiations. A third option, although less feasible, could simply be to keep and enhance the current version of the Kyoto Protocol to include obligations from Non-Annex I countries, probably in the form of supported NAMAs. It is possible that negotiations may converge at some point in the future into a single and comprehensive regime that includes commitment from all parties, in line with the principle of common but differentiated responsibilities and respective capabilities. Some parties are asking for a roadmap in Durban that clarifies the legal nature of the final agreed outcome of the working group under the Convention.

If a global agreement cannot be reached at Durban, this does not automatically mean the end of the Kyoto Protocol. Although developed countries will no longer be subject to binding targets if no agreement is reached, the Protocol will remain in force until a specific decision is made to abandon it. But failing to agree a second set of climate targets at Durban sends a powerful message around the world that policy-makers are far from agreeing a united approach to tackling climate change.

The publication of the next Intergovernmental Panel on Climate Change (IPCC) report in 2013 or 2014 will provide an update of the scientific, technical and socio-economic aspects of climate change and its potential implications. In addition, the introduction of planned carbon markets across the Asia-Pacific region will mean a different price on carbon in each country. Increased awareness from the IPCC report, along with multiple compliance schemes, could set the scene for an improved political environment to internationalize the system and re-awaken the Kyoto process. This may be the thinking behind a proposal from Australia and Norway, which calls for a new timetable that would extend the current Kyoto deal until 2015.

The hope is that governments can at least be persuaded to "agree to agree" on a new treaty at some point in the future, thereby preventing the risk that the climate talks collapse altogether. The United Nations suggests an interesting solution in the form of a "provisional application" to bridge this potential gap between the first and the second commitment period. This is a legal technique to apply an agreement before it comes into force. Countries can voluntarily sign up to the agreement without being legally bound. This ensures that the entire infrastructure is still in place in the absence of a deal to set a second commitment period at a later date.

Figure 7: Emerging market businesses more concerned about climate change than those in industrialized countries (% of respondents)

	Developed	Emerging
Are personally concerned about climate change	50%	70%
Think their organization is concerned about climate change	28%	40%
Believe an international deal is likely	11%	29%
Rank "environmental sustainability" as important for the organization	38%	55%
Believe environmental sustainability is more of a priority in the last 12 months	32%	45%
Are in favor of shift to clean energy sources	87%	98%

Will carbon markets survive?

Although the prospects of a global carbon deal will recede in the absence of a successor to the Kyoto Protocol, carbon trading will continue as long as there is demand and a market for it. The European Union is committed to maintaining its Emissions Trading Scheme (ETS), which makes up more than 80% of the global carbon market, to 2020 and beyond. The European Court of Justice recently ruled against US Air Transport Association, which challenged the legality of the EU Emissions Trading Scheme (ETS) on aviation. While the ruling is not binding, it implies that plans to include the aviation sector in the ETS starting 2012 are on track.[13] "The EU ETS will not be affected, whatever happens in Durban, because it is written into EU legislation and regulated by EU Directives," points out Stig Schjølset, Head of EU Carbon Analysis at Thomson Reuters Point Carbon.

The CDM is in a similar situation. Unless a specific decision is taken to abandon it, it will continue as an institution. But without a second commitment period for Kyoto, it is extremely uncertain how possible it will be to have CDM projects registered with UNFCCC beyond 2012. Some analysts think that the demand for CDM carbon credits, known as Certified Emissions Reductions (CERs), may fall, while others feel the price of CERs will go up in line with reduced supply after 2012 and as new regional trading schemes emerge in different parts of the world. But, whatever happens, a certain level of demand from participants in the EU ETS is guaranteed. This will depend on the target for Phase III of the EU ETS, the number of allowances finally put in circulation and the types and volumes of offsets allowed into the system for compliance. Further clarity from the European Commission on these matters is urgently required in order to enhance investor confidence in the market. This may include, according to some officials, a potential set-aside of Phase III permits so the level of ambition is raised to where it can really drive abatement in Europe, through a consistent carbon price signal.

Over time, new carbon markets in South Korea, Australia, New Zealand, China and, perhaps Japan could provide new sources of demand, but not until 2015. The EU is also tweaking its scheme to favor least-developed countries, which should boost demand in parts of Africa and Asia that have not benefited from the CDM so far. Many companies have already invested substantial funds in the CDM process and will be keen to keep the process alive. This means that they will be looking for clear signals about the future prospects for the market.

> **"Carbon markets are already pretty complex, but they will become even more so. There will be a move toward different regulated markets with different allowances and different processes. There will also be a split between the credits that the private sector uses and those that government uses. At some stage, it will make sense for there to be a convergence toward a more standardized market, but I don't see it happening any time soon."**
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Between June and October 2011, actions were taken by Russia to boost the Joint Implementation process and take advantage of the mechanism before the end of the first commitment period of the Kyoto Protocol. This process that is centered on Eastern European countries is likely to disappear in the absence of a second commitment period because it is backed by credits issued to governments under the Protocol. The situation is complicated by the advent of REDD+ projects and NAMAs, which could generate credits of their own.

"Carbon markets are already pretty complex, but they will become even more so," says Mr. Schjølset. "There will be a move toward different regulated markets with different allowances and different processes. There will also be a split between the credits that the private sector uses and those that government uses. At some stage, it will make sense for there to be a convergence toward a more standardized market, but I don't see it happening any time soon."

13 "European Court of Justice Releases Opinion on Legality of ETS" *Era website*, http://www.eraa.org/publications/industry-news/731-european-court-of-justice-releases-opinion-on-legality-of-ets, accessed 11 November, 2011.

What will Durban achieve?

COP17 is not exclusively about the extension of a globally binding deal. Regardless of what happens with the Kyoto Protocol, there are other areas where some kind of progress is more likely. Other issues that are up for discussion at Durban include the Green Climate Fund, Nationally Appropriate Mitigation Actions and Reducing Emissions from Deforestation and Degradation.

Hope for progress on the Green Climate Fund

The Green Climate Fund (GCF) was first proposed at Copenhagen (COP15) and it was at Cancun (COP16) that the parties agreed to establish the fund and a committee to design it.[14] Its goal is to help with the long-term funding needed for emission cuts and adaptation in developing countries, estimated at US$100b a year by 2020.[15] The UN says that the GCF is intended to be a "central tool to finance climate change action, both adaptation and mitigation, in developing countries." A Transnational Committee consisting of 40 members has the task of designing the fund and targeting investment opportunities.

Beyond these basic details, much about the GCF needs an agreement. How the GCF will raise the funds that it is intended to distribute, or how it will fit in to the existing architecture of development assistance and climate finance, are key issues. Policy-makers also have to determine how business will be engaged and how the funds will actually be delivered. They need to establish the rules of governance of the Fund and to design methods to ensure financial accountability, to evaluate performance of activities and to ensure stakeholder participation. But there is no doubting the intent. The UNFCCC Executive Secretary, Christiana Figueres said recently that "the Transitional Committee of the Fund is now fully on track to conclude the design of the Fund for the approval by UNFCCC's Conference of the Parties in Durban."[16] She suggested that the fund could be up and running by 2012.

Some commentators remain skeptical about the likely effectiveness of the fund, particularly if the goal is to fund it through contributions from developed countries. Michael Liebreich, Chief Executive of Bloomberg New Energy Finance, recently argued that this approach to funding will be "a recipe for failure" because of the fragile finances of the Annex I countries that are bound by the Kyoto Protocol to reduce emissions.

"Investment flows of the order of US$100b per annum can only be achieved if the bulk is provided by the private sector, not the public sector," he said.[17]

Figures from Bloomberg New Energy Finance suggest that these concerns may be valid. In a research note, Bloomberg points out that, while developed countries have pledged US$27.3b in "fast-start" finance to developing countries, only US$11.3b had actually been delivered by August 2011.[18] Assuming equal monthly installments, Bloomberg calculates that countries should have delivered US$16.7b.[19] There are also serious doubts over whether this finance is "new and additional" to existing aid programs, because of the lack of transparency in the system. The GCF will be a key instrument of climate finance to achieve the $100b per year by 2020, although not the only one. Moreover, the private sector will have to contribute heavily to this amount.

Will NAMAs offer a new potential opportunity?

Nationally Appropriate Mitigation Actions (NAMAs) are voluntary emission reduction measures undertaken by developing countries that meet the needs of their specific national circumstances. They are expected to be one of the main vehicles for mitigation action in developing countries under a future climate agreement, and can take the form of policies or actions implemented at national, regional or local levels. For example, optimizing the conventional bus system in Mexico City has been identified, in a recent study conducted by the World Bank, as one of the opportunities to significantly reduce GHG emissions. This will include the establishment of a new regulatory framework and initiatives to streamline the operations. The development of this NAMA has been funded by the Inter-American Development Bank (IDB).[20]

14 "Transitional Committee for the design of the Green Climate Fund" *UNFCCC website*, http://unfccc.int/cooperation_and_support/financial_mechanism/green_climate_fund/items/5869.php, accessed 7 October 2011.

15 "The Cancun Agreements", *UNFCCC website*, http://cancun.unfccc.int/financial-technology-and-capacity-building-support/new-long-term-funding-arrangements/ accessed 24 October 2011.

16 "Design process of UNFCCC Green Climate Fund fully on track", *UNFCCC website*, http://www. unfccc.int/files/press/press_releases_advisories/application/pdf/pr20110909_genevatc_gcfclose.pdf, accessed 7 October 2011.

17 "Towards a green climate finance framework", *Bloomberg New Energy Finance website*, www.Bnef.com/WhitePapers/download/46, accessed 24 October 2011.

18 "Have developed nations broken their promise on $30bn 'fast-start' finance?" *Bloomberg New Energy Finance website*, www.Bnef.com/WhitePapers/download/47, accessed 24 October 2011.

19 *Ibid*.

20 "Nationally Appropriate Mitigation Actions", *ecofys website*, http://www.ecofys.com/files/files/report_ecofys_nama_overview_eng_04_2010.pdf, accessed 13 November 2011.

In essence, NAMAs involve developing countries submitting mitigation plans to the UNFCCC and then receiving funding and technology from developed countries to put the plans into action. Over the past three years, the number of NAMA submissions has increased. Early indications suggest that NAMAs are more varied than CDM projects, both in terms of the types of projects that have been proposed and the range of countries that have put forward proposals.

But despite this progress, NAMAs are still not in their implementation phase. Three years since agreeing on the concept of NAMAs, neither host countries nor financing ones know how to move forward. It is as yet unclear how funding and technology transfer from developed countries will take place. Developing countries will also need confidence that they will receive adequate support for implementing their plans.

Funding of NAMA projects is likely to depend on a robust monitoring, reporting and verification (MRV) system. This will ensure transparency and provide confidence that funds are being utilized in an appropriate manner. But many developing countries remain suspicious of the MRV process, because they regard it as a violation of their sovereignty.

There remains much to discuss at Durban over how NAMAs will work and how they will relate to other aspects of the UN climate process. A formal process needs to be put in place to enable the transfer of funds and technologies to projects, and a credible and robust MRV process must be established to help smooth the flow of finance to developing countries. The role of the private sector also needs to be clarified, because this could be an important opportunity for companies with the funds and know-how to kickstart this market.

New market mechanisms can support NAMAs

Carbon markets are a key mechanism of future climate finance, but they need to be expanded and reformed. There are high expectations from new scaled-up market mechanisms, but a demand for their credits is essential for them to be effective. According to many analysts, this would require higher mitigation targets in Annex I countries for any future carbon markets. Additionally, a decision to design new market-based mechanisms at Durban could include a common core set of rules and procedures at the international level to allow for different forms of national implementation. This set of rules would define sectors and coverage of gases, criteria for determining baselines, sector targets and guidelines for MRV. The new and current mechanisms should co-exist and could become an avenue to support NAMAs.

Can REDD+ fulfill its potential?

Forestry activities account for close to 18% of the worldwide GHG emissions.[21] Reducing Emissions from Deforestation and Degradation (REDD+) is a framework designed to provide incentives to developing countries to reduce the emission from deforested lands.

The financial flow deriving from GHG emission reduction from REDD+ is estimated to be US$30b a year. The cost of halving deforestation at the scale and speed that is required by internationally agreed targets is estimated at between US$17b and US$40b.[22] So far, governments have pledged US$7b, which suggests that the private sector must play a bigger role in plugging the funding gap.[23]

An important point of discussion in Durban will be to determine how this can take place. Although public financing will continue to play a role, more must be done to establish the role that the carbon markets will play in REDD+.

While 32 "afforestation and reforestation" projects have been registered under CDM, the market, REDD+, remains in its infancy in part because the final details are yet to be agreed.[24] The first REDD+ credits were registered on the voluntary market earlier this year.

Policy-makers in Durban need to develop financial mechanisms to support the full implementation of results-based REDD+ actions in order to reduce gross tropical deforestation by at least 50% by 2020.[25] These mechanisms should direct incentives toward actions with lower mitigation costs while contributing to poverty alleviation and biodiversity co-benefits. This could include a thematic window in the GCF to support REDD+ activities. In the medium-to-long term, verified emission reductions from REDD+ could be used for compliance subject to quantitative limitations. They also need to address whether the funds should go to national governments or to those implementing projects on the ground, and whether it should be the public or private sector that originates the projects.

Another important issue that still needs to be clarified is the possibility to include monitoring and reporting standards to protect indigenous rights and loss of biodiversity. Some countries have argued against that, claiming that REDD+ projects would become too onerous on the host country. A specific accountability process is being developed to ensure further clarity and prevent misconduct and breaches.

21 "Bringing forest carbon projects to the market", *UNEP website*, http://www.unep.fr/energy/activities/forest_carbon/pdf/Guidebook%20English%20Final%2019-5-2010%20high%20res.pdf, accessed 7 November 2011.

22 "Part 2 – Private Sector suggestions for International Climate Change Negotiators, Sept 2011" , *unepfi website*, http://www.unepfi.org/fileadmin/documents/reddysetgrowII.pdf, accessed 7 October 2011.

23 "United Nations – convened coalition of financiers warn of huge costs of failure to protect forests beyond Kyoto", *unepfi website*, http://www.unepfi.org/fileadmin/documents/reddysetgrowII_press.pdf, accessed 24 October 2011.

24 *UNFCCC CDM website*, http://cdm.unfccc.int/, accessed 13 November 2011.

25 "Combating deforestation", *europa website*, http://europa.eu/legislation_summaries/agriculture/environment/ev0007_en.htm, accessed 4 November 2011.

Adaptation – is it being ignored?

Climate change funding is supposed to be equally split between mitigation and adaptation measures. Currently, however, the perception is that it overwhelmingly favors mitigation – just US$250 million has been committed to the UNFCCC's Adaptation Fund, which was set up at the Bali COP in 2007.[26]

Even if current emission reduction targets are met, climate change adaptation will be required. Already, some countries around the world are facing new climate-related risks. But if Durban fails to bring about a new round of targets for cutting emissions, the world may be confronted with additional adaptation challenges.

Ian Noble, Chief Scientist at the Global Adaptation Institute (GAI), argues that developing countries, which will be hit hardest by the changes, also have the lowest capacity to adapt. The GAI has developed an index to help guide investment and measure progress in adapting to climate change. The index is based on a Readiness Matrix that illustrates the comparative resilience of countries (see figure 8).[27] It measures their relative vulnerability and the extent to which they are prepared to deal with climatic and environmental changes. Vulnerability measures a country's exposure, sensitivity and ability to cope with climate-related hazards, as well as accounting for the overall status of food, water, health and infrastructure within the nation. Readiness targets those portions of the economy, governance and society that affect the speed and efficiency of absorption and implementation of adaptation projects.

The Readiness Matrix shows a clear link between GDP and the vulnerability of countries to climate change. Although a number of emerging markets have made progress in enhancing their adaptation capabilities, important gaps remain. "India remains vulnerable in its agriculture and food sectors; China must confront strains on its water resources and lacks infrastructure to access internal markets; and South Africa's highly vulnerable health sector drains human resources from innovation," notes Juan Jose Daboub, Founding CEO of the Global Adaptation Institute.

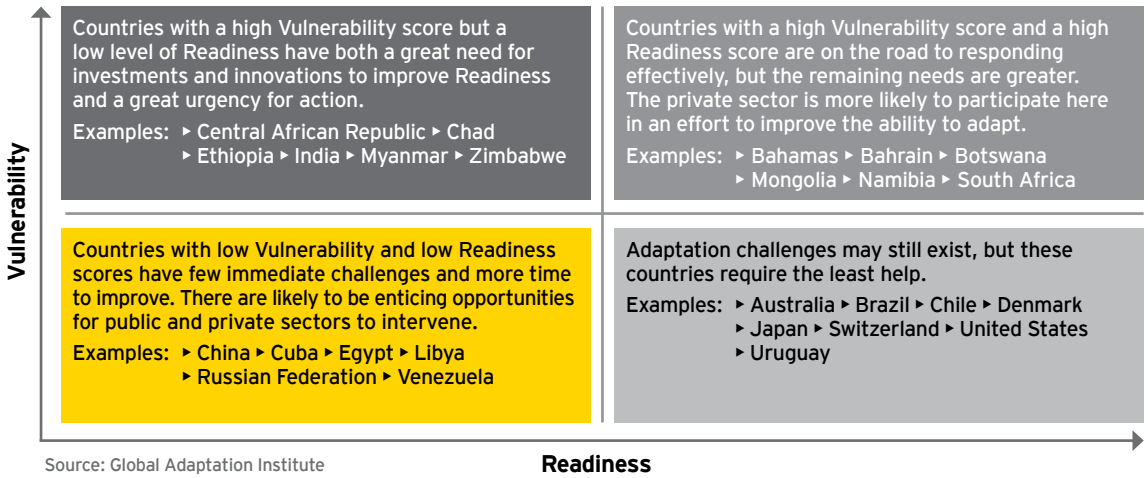
One reason why funds have not flowed to adaptation projects is that it is much harder to measure the impact of adaptation projects than those related to mitigation, where the amount of CO_2 saved is easy to establish. But despite these difficulties, the return on investment across both types of project is broadly similar. "Recent work has shown that the investments needed for effective adaptation are about the same order as those needed for efficient mitigation," says Mr Noble.

At COP17, South Africa is likely to take advantage of its host position to make sure that adaptation is high on the agenda, because this is a particular focus for developing countries. It should also be a focus for business, according to Mr Noble. "There will be increasing discussion about the effects climate change will have on the private sector and how different industries will be impacted," he says.

> **"Recent work has shown that the investments needed for effective adaptation are about the same order as those needed for efficient mitigation. There will be increasing discussion about the effects climate change will have on the private sector and how different industries will be impacted."**
>
> **Ian Noble**
> Chief Scientist, The Global Adaptation Institute

Figure 8: The Readiness Matrix

The figure opposite shows the need for different responses in countries depending on the quadrant they are in.



Source: Global Adaptation Institute

26 "Climate Funds Update", *climatefundsupdate website*, http://www.climatefundsupdate.org/listing/adaptation-fund, accessed 24 October 2011.

27 "Global Adaptation Index", *Global Adaptation Institute website*, http://gain.globalai.org/, accessed 13 November 2011.

What role could business play?

The UN process has demonstrated the challenges of formulating a multilateral policy on climate change. Although progress has been made, a global deal to replace the Kyoto Protocol has proved elusive. But even if the process has been frustrating at a policy level, it has succeeded in raising the profile and importance of climate change among society and the business community. "Kyoto's main success has been in raising awareness of climate change around the world and sending a strong signal to the global business community that this is an issue that they should engage with," says Mr. Berthoud of WBCSD.

- **Business ramps up its investment in sustainability:** Besides climate change, increased natural resource scarcity, consumer pressure and a recognition that improved energy efficiency is good for business have encouraged many companies to ramp up their commitment to sustainability and emission reduction. By streamlining their operations and cutting energy usage, companies have an opportunity to generate bottom-line savings and improve their competitiveness. Among our survey respondents, 44% say that their investment in sustainability has increased over the past year, while another 44% say that it has remained the same (see figures 9 and 10). This trend indicates that there may be contrasting responses from the public and private sectors during the financial crisis; whilst governments struggle to fund climate change initiatives, businesses continue to invest.

  The private sector is the source of 86% of global investment, so it has a key role to play within climate finance and needs to be seen as part of the solution to climate change.[28] It can serve as an effective vehicle for raising funds, but this calls for a strong commitment from the public policy sphere. Effective private sector participation in a venture of this scale requires clear market signals. Financial innovation is also key for unlocking the capital markets to fund the billions of dollars of private sector investment required to transform our economies to a low carbon model.

- **Businesses recognize climate change as an opportunity:** More than half (54%) of the respondents surveyed said that addressing climate change was an opportunity for their business (see figure 11). Participants from the manufacturing sector and from the Middle East and Africa were particularly enthusiastic. Increased demand for energy efficiency, renewable energy sources, energy efficient buildings and related services such as consulting, advertising and legal were identified as the main opportunities arising from climate change. The rapid development of the cleantech industry is one example of this. According to our fourth annual global cleantech report,

Figure 9: Over the past 12 months, would you say that environmental sustainability has become more or less of a priority for your business?

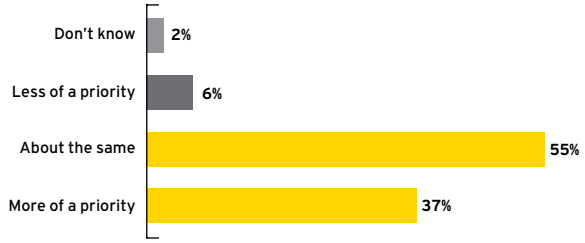
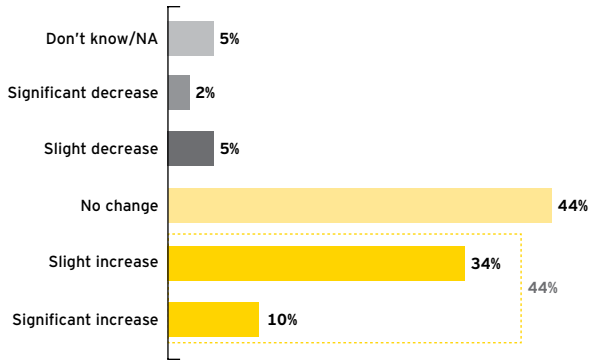


Figure 10: Has your company's investment in products or services related to environmental sustainability increased or decreased since the financial crisis?



"Kyoto's main success has been in raising awareness of climate change around the world and sending a strong signal to the global business community that this is an issue that they should engage with."

Thierry Berthoud
Managing Director of Energy and Climate at the World Business Council for Sustainable Development (WBCSD)

28 "Fact sheet – Financing climate change action", *UNFCCC website*, http://unfccc.int/press/fact_sheets/items/4982.php, accessed 4 November, 2011.

Figure 11: Does your company see climate change (and the steps being taken to address it) more as a threat or an opportunity for your business?

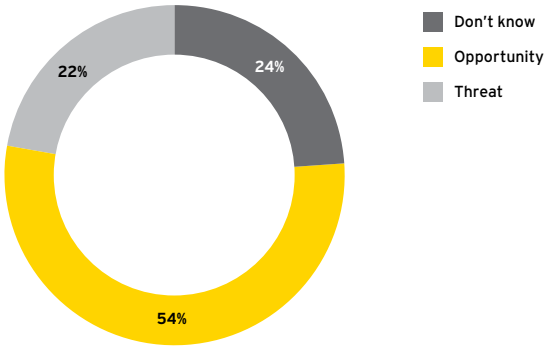
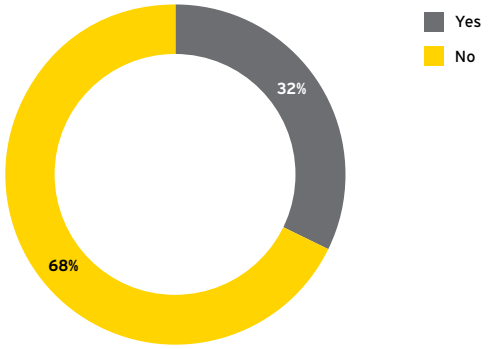


Figure 12: Do you think your company is taking maximum advantage of the business opportunities from climate change?



Seizing transformational opportunities, US$243b was invested in clean energy worldwide during 2010.[29] Cleantech investments not only offer a significant new opportunity, they also provide a means for companies to deal with volatile energy prices, increase their energy security and manage natural resource scarcity. Our survey shows that businesses consider solar as the most promising low carbon technology followed by wind, nuclear and hydro electric.

The carbon market also demonstrates the willingness of business to create opportunities from addressing climate change. In 2010, the carbon market was worth an estimated US$142b, according to the World Bank.[30] Five years previously, in the first year of the European Union's Emissions Trading Scheme, it was worth just US$11b.[31]

Despite these opportunities, many companies remain unsure about how to take advantage of climate change linked investment (see figure 12). Although 58% of respondents in our survey were personally very concerned about climate change, only 34% say (see figures 13 and 14) that their companies feel the same way.

This suggests that companies have a long way to go before they take advantage of the opportunities and respond to the threats of climate change in an appropriate way.

Governments can help by educating business and making it easier for them to take advantage of opportunities and incentives. This is partly a matter of funding, but it is also about setting out clear structures and creating "turnkey" solutions for companies to follow. It is important to have a clear, predictable regulatory framework that can provide certainty for business and encourage the right behavior.

However, this process should not be entirely one-way. Governments can also learn much from the experience of business in trying to incorporate climate change into their strategies. In much the same way as "many Chief Executives and Chief Financial Officers have recognized that sustainability is becoming a core part of their business strategy, similarly, more Prime Ministers and Finance Ministers need to build these issues into their overall economic policies," says Juan Costa Climent at Ernst & Young.

Figure 13: On a scale of 1 to 5, how worried are you personally about climate change?

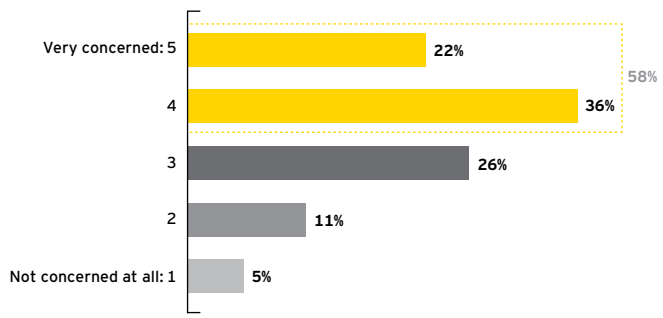
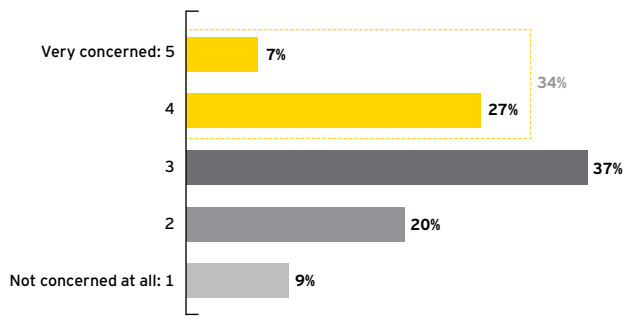


Figure 14: On a scale of 1 to 5, how concerned would you say your business is about climate change?



29 *Seizing transformational opportunities: Global cleantech insights and trends report 2011*, Ernst & Young 2011.

30 World Bank, *State and Trends of the Carbon Market*, 2011.

31 *Ibid*.

Beyond Durban – where do we go from here?

Climate change is not just an environmental issue but a fundamental economic one. Meeting the needs of a growing economy against a backdrop of finite resources and a more extreme, unpredictable climate will be one of the key challenges of the 21st century.

For business, the stakes are high. The outcome of the Durban meeting will determine the future of the Kyoto process, the development of forestry markets, how the GCF will operate and to a certain extent, the prospects for carbon markets. These are vital issues that will potentially affect not only the business model and strategy of many organizations, but even their future viability.

So will everything be lost if policy-makers cannot agree a global climate deal? The lack of a deal will certainly undermine the low-carbon agenda and tackling climate change will become much more challenging. There may be a retreat from global approaches to addressing a global problem and instead a renewed push to identify local solutions.

Without a global agreement, tackling climate change will become more expensive, fragmented and complex. Society will need to prepare for a world in which temperatures may increase by more than 2°C.[32] In these circumstances, businesses need to start focusing on how they, their suppliers and their customers will adapt to a changed environment. "Rather than working out how to live in a carbon-constrained world, the emphasis may need to be on living in a climate-constrained world. This will have enormous consequences for businesses and make adaptation a key priority in addition to mitigation," notes Juan Costa Climent from Ernst & Young.

Despite the challenges ahead, there is still some cause for optimism. While policy-makers have struggled to agree a joint approach and clear market signals have been lacking, business pioneers have embraced the climate change agenda. Responsible investors have shown that it is possible to be committed to environmental and social value creation at the same time as securing financial returns. And new industries that offer significant growth opportunities, as well as environmental benefits, have started to develop.

In the face of continuing policy uncertainty, the private sector will play a critical role in shaping solutions and developing economically viable approaches to addressing climate change and sustainability. By adopting a proactive approach to both mitigation and adaptation, businesses can set an important example to society at large.

While a lack of international agreement at Durban would certainly set back efforts to address climate change, businesses are not stalling their efforts. In any case, we have not reached that stage and need to wait for the outcomes from the COP summit.

"Rather than working out how to live in a carbon-constrained world, the emphasis will be on living in a climate-constrained world. This will have enormous consequences for businesses and make adaptation a key priority in addition to mitigation."

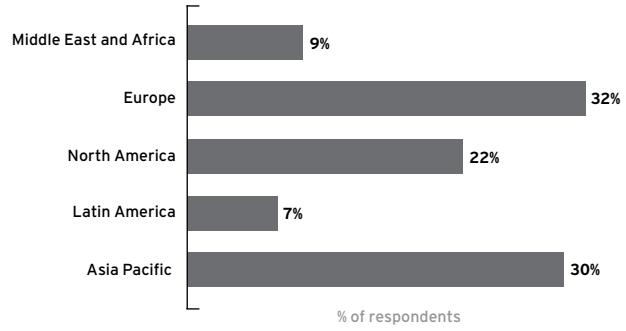
Juan Costa Climent
Global Leader, Climate Change and Sustainability Services, Ernst & Young

32 "Milestones on the Road to 2012: The Cancun Agreements," *UNFCCC website*, http://unfccc.int/essential_background/cancun_agreements/items/6132.php, accessed 24 October 2011.

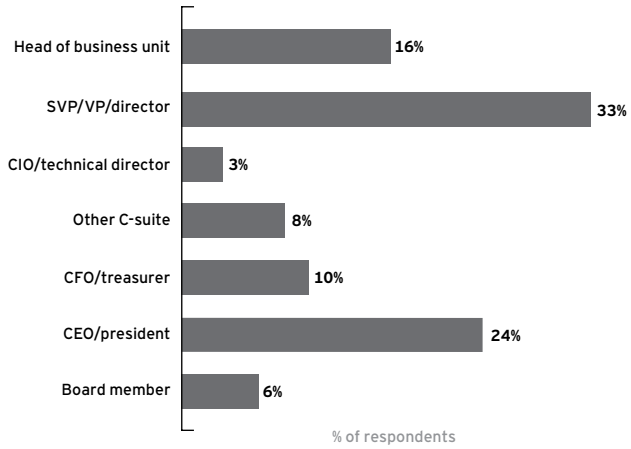
Survey demographics

The survey was conducted by the Economist Intelligence Unit (EIU) for Ernst & Young between 1 Aug and 10 Sep 2011. Globally, over 300 C-suite, board directors and senior managers responded.

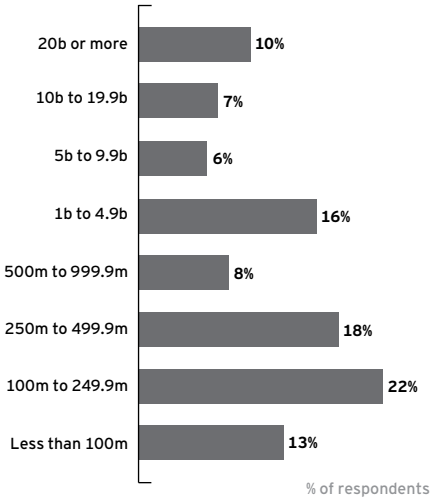
Geography



Role



Revenue (annual global revenue US$)



Sector

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Agriculture & agribusiness
Airlines
Automotive
Biotechnology
Chemicals
Construction
Consumer goods
Diversified industrial products
Education
Financial services
Government & public sector
Health care/provider care
Hospitality & leisure
IT
Logistics & distribution
Manufacturing
Media & entertainment
Mining & metals
Oil & gas
Pharmaceuticals
Power & utilities
Private equity
Professional services
Real estate
Retail & wholesale
Technology
Telecommunications

Research methodology for funding gap in government spending on climate change

This research has been produced in collaboration with Oxford Economics, one of the world's leading providers of economic analysis, advice and models.

The aim of this research project was to quantify the level of climate change-related government spending across 10 major economies (Germany, France, UK, Spain, Italy, Japan, US, Australia, South Africa and South Korea) and assess the extent to which expected future austerity in the public sector could impact upon climate change spending.

There is no internationally agreed definition of what constitutes climate change spending. The UN has produced a set of guidelines on expenditure classification by function, which includes spending on environmental protection. This includes a range of items, some of which Oxford Economics viewed as not directly related to climate change, e.g., waste management. Items that were considered were spending on pollution abatement and R&D spending on environmental protection (including the associated administrative, management and operational costs). In addition, spend on subsidies/tax credits for renewable energy and clean technology sourced from a range of national sources were also included.

Having determined current levels of spending on climate change, Oxford Economics then constructed two scenarios between 2011–15 based on the future path of government spending. They assumed that climate change as a share of total spending remained constant and that government spending would grow at its average historical rate (1990–2010) in an attempt to simulate a business as usual scenario where governments were not forced to retrench significantly.

This was compared to a baseline forecast for government spending, which was based on the assumption that governments stick to proposed austerity plans in order to reduce borrowing. A second scenario was calibrated, in which an escalation of the Eurozone, triggered by disorderly defaults by peripheral governments, generates a significant rise in financial stress as banks are forced to write-down debt, causing a renewed economic slump. The baseline funding gap quantifies the impact of planned fiscal austerity and scenario 2 quantifies the impact of this and additional cutbacks that would be required were the debt crisis to escalate.

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