Department of Energy and Climate Change

The Road to Copenhagen

The UK Government's case for an ambitious international agreement on climate change

Presented to Parliament by the Secretary of State
for Energy and Climate Change
by Command of Her Majesty
June 2009

Cm 7659

£19.15

ISBN: 978010765923

The Rt Hon Ed Miliband MP
Secretary of State for Energy and Climate Change

December 2009 is a make-or-break moment for the future of our planet: a global climate change deal, if it can be won in the negotiations in Copenhagen in December this year, will affect all of our lives and the prospects for generations to come. With decisions as important as these, I believe we must open up the debate as much as possible, and every British citizen should be able to find out what their government is arguing for – so here we are setting out the UK's position for the global climate change negotiations.

To match the scale of the challenge, the deal will need to be ambitious, securing commitments to limit climate change as far as possible to 2 degrees celsius (2°C), with global emissions peaking and starting to decline by 2020 and falling at least 50% below 1990 levels by 2050; effective, driving low carbon investment and ensuring that commitments made are kept to; and fair, so that poorest countries have the support and voice they need.

The task for all nations in the next six months is to find the common ground to achieve such a deal. We will need action by all countries, and, to help developing countries move from a high-carbon path to low-carbon and climate-resilient growth, we will need action on finance, technology, deforestation, adaptation and institutional reform. The UK will be persuaders for a global agreement consistent with the science.

The Government's commitment to a new international agreement, though, is only one part of our approach to tackling climate change. We are taking action on five fronts:

First, we are protecting the public from immediate risk. Because climate change is a reality now not just a future prospect, we have more than doubled spending on flood protection since 1997 and established a new approach to coastal erosion.

Second, to prepare for the future, Defra has published new detailed information produced by the Met Office on how climate change could affect the UK. More than a hundred providers of important public services will be required to report on their assessment of climate risks and their plans to respond to them. Each government department will produce an adaptation plan by spring 2010.

Third, we are pushing for an international argreement, as outlined in this document.

Fourth, we are building a low carbon Britain. Through the Climate Change Act we are the first country in the world to introduce legally-binding carbon budgets, which commit us to carbon savings of 34% by 2020 and at least 80% by 2050. We are transforming how we generate power and use it in homes, businesses and public services, creating new jobs and industries and new sources of wealth.

Finally, we are helping everyone, whether as individuals, communities or businesses, to play their part. Our Act on CO_2 campaign provides advice for people to lower their 'carbon footprint'. On the international picture you can now join the debate and see the latest updates on the road to Copenhagen at www.ActonCopenhagen.gov.uk. With action on all five points, we can still beat dangerous climate change.

Success in this project – in building a low carbon Britain in a low carbon world – is an imperative not an option. The security and prosperity of our nation depends on it. We know that if we act now, together, and with the necessary ambition, success at Copenhagen is within our reach.

The Rt Hon Ed Miliband MP
Secretary of State for Energy and Climate Change

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Taking international action on climate change

Without urgent action, when a child born today reaches 50, the world could have warmed by up to 2.5°C above pre-industrial levels. It will be a world that will be experiencing dramatic change:

- Summer temperatures like those experienced in Europe in 2003 – a summer with a record breaking heatwave in which 35,000 people died – will be exceeded regularly[1]. Some 20-30% of plant and animal species could be extinct[2].
- Food production may be starting to decline – whilst the world's population is set to increase to 9 billion by 2050[2a].
- Such changes could lead to increasing millions of displaced people.
- 60% reduction in glaciers in the northern hemisphere, potentially affecting the drinking water supply of a sixth of the world's population[2a].
- Severe impacts on many of our most important ecosystems.

The decisions made at the UN climate change conference, to be held in December 2009 in Copenhagen, will affect everybody in Britain, and all people around the world for generations to come. This document has been published so that everyone in the UK can see how we will be arguing in the negotiations, and how they can help the debate so their own voices can be heard.

The challenge facing negotiators at Copenhagen is global in scale. The science is clear that we need to limit global temperature increases to no more than 2°C compared to pre-industrial levels to have a good chance of reducing the risks of dangerous climate change in the future. But the consequences are not only environmental. The costs of inaction are economic and financial. If we fail to act, the impacts on our way of life become much greater, and the costs ever higher.

Part one sets out why we need a deal in Copenhagen. If climate change continues unchecked, our prosperity, our environment and our security will be put at risk. The UK faces a higher risk of flooding, severe impacts on our agriculture and more extremely hot summers, putting our health services and transport networks under pressure and weakening our economy. In developing countries climate change threatens human and ecological catastrophe, with food and water shortages, more widespread disease and an increasing number of climate refugees. The resulting political instability could have major consequences for our own national security. Climate change poses systematic risk to our economy.

But tackling climate change is also about seizing opportunities. The UK stands to benefit from the enormous potential for innovation

in new low carbon technologies and green industries, already worth an estimated £3 trillion worldwide and employing 880 000 people in the UK[3]. Developing new low carbon energy sources will reduce our long-term dependency on fossil fuels, making our economy less susceptible to volatile oil prices and ensuring our future energy supplies are more secure. Low carbon investment is crucial to our economic recovery.

Only an international agreement can take on the challenge of tackling climate change. No one country on its own can do it: this is a global problem which requires a global solution. All countries must be confident that they do not act alone, and poorer countries need support from others. Building on and learning the lessons from previous agreements, we must put in place a comprehensive framework for action by all countries that ensures that commitments are delivered.

This is urgent. The longer we delay, the more severe the consequences of climate change become, and the higher the costs of the subsequent actions we will be forced to take. International political momentum has been building towards Copenhagen for two years: the moment has to be seized now.

Part two sets out the kind of agreement we want, describing the UK's principal priorities in each of the main fields of the negotiations.

The UK is working for a deal that is **ambitious, effective** and **fair**.

Ambitious: The UK believes that the over-riding goal of the Copenhagen agreement is to limit climate change to an increase in global average temperature of 2°C. This means the deal needs to establish a credible trajectory for reducing global emissions by at least 50% on 1990 levels by 2050 and to put in place the measures now to ensure that emissions start to fall within the next decade.

Developed countries need to lead the way, setting new binding targets to reduce their emissions by at least 80% by 2050, including stretching mid-term targets on a pathway to getting there. The IPCC's analysis suggests developed countries should collectively reduce their emissions by 25-40% below 1990 levels by 2020[4].

The level of effort and commitment from **developing countries** will need to reflect their national circumstances, but they too will need to take action, with appropriate support from developed countries, to put themselves on a low carbon development pathway. Recent research suggests that by 2020 emissions in developing countries as a group need to be roughly 15% to 30% lower than projected "business as usual" levels[5].

An ambitious agreement must also ensure that all major sources of emissions are included, including those from aviation and shipping and from deforestation.

Tackling deforestation is vital: emissions from deforestation account for a little under a fifth of the global total, while forests also have huge biodiversity and environmental value. The international community has a clear interest in preserving the world's forests, but they are the property of the countries in which they stand. Taking account of the rights of the local communities and indigenous peoples who live in them, at Copenhagen we want to reach agreement to reduce tropical deforestation by at least 50% by 2020, and to halt global forest cover loss by 2030 at the latest. We want to agree to substantial early financing until longer term finance (e.g. from the carbon market) comes fully on line.

Effective: The Copenhagen agreement needs to put in place a framework which provides certainty for, and therefore drives investment in, clean energy, sustainable forestry and land use and adaptation.

The UK supports in particular the development of a **global carbon market** to encourage emissions reductions in a cost-effective way, and to provide large flows of finance to developing countries. We want to agree an international framework that supports the linking of emissions trading systems between developed countries by 2015; that establishes new sectoral carbon trading systems to allow the more economically advanced developing countries to access finance and cost effective emissions reduction in key sectors; and which reforms the existing Clean Development Mechanism (which supports low carbon projects in developing countries) to improve its efficiency and environmental effectiveness.

Developing and deploying **technology** is essential to tackle the causes and consequences of climate change – from low carbon sources of energy to building infrastructure that can withstand the effects of climate change. At Copenhagen we will aim to ensure that existing technologies are rolled out more rapidly around the world partly by building the carbon market, and partly through providing additional support and technical assistance to developing countries. We will also accelerate the development of new technologies so that they can be deployed commercially as rapidly and cheaply as possible, through increased investment in innovation and enhanced collaboration with developing countries.

To be effective, the agreement must be legally binding on all parties, with an effective compliance regime, and ensure that every country's emissions reduction commitments are transparent and are being implemented. So the UK is calling for robust monitoring, reporting and verification (MRV) arrangements.

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Fair: Climate change involves a fundamental injustice: it has been largely caused by the industrialised countries' historic emissions, but it is the poorest and most vulnerable people who will suffer its worst and earliest effects. It is very important therefore that the Copenhagen agreement provides support to developing countries for both coping with and acting on climate change. We will aim to ensure that the poorest and most vulnerable countries get the financial support they need to make **adaptation** to climate change an integral part of their national development planning processes, with money targeted where it is needed most. We will also seek to secure international support for better sources of climate information to assess the future risks of climate change and knowledge about how to adapt.

So a high priority for Copenhagen will be to put in place the **finance** needed to support action by developing countries on both mitigation and adaptation. Much of the funding for reducing emissions – and some for adaptation – is likely to come from the private sector, and it will be essential for the global deal to put in place measures that encourage this investment. But a significant amount of public funding will be required - particularly in the short term to ensure action happens fast enough and emissions peak in the next decade, and to help countries adapt.

At Copenhagen we will aim to ensure developed countries pledge to meet their long term Official Development Assistance

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(ODA) commitments and to 'climate proof' this spending. On top of this we will also aim to ensure that developed countries commit to providing new finance addtional to their ODA commitments. We would like to see future climate finance provided both by developed and developing countries (except the poorest), with contributions calculated according to emissions and countries' ability to pay. We will aim to agree systems for generating predictable revenues for action on climate change, so that developing countries have the confidence to take ambitious action knowing that the money will be there.

To make an ambitious new agreement work, we need robust **international institutions** that are capable of implementing a deal quickly and at sufficient scale. Wherever possible, we want to reform and build on existing institutions, only establishing new ones where necessary. At Copenhagen we will aim to agree simple, fair and efficient governance structures for finance, with equal representation of contributors and recipients in a high-level coordinating body under the guidance of the UNFCCC. We want to see climate finance directly supporting national low carbon and climate resilient development strategies, consistent with internationally agreed standards of financial management. This will enable decisions about spending to be made by developing countries themselves.

Part three sets out what the UK is doing itself at home to contribute to the global climate effort. Since 1990 the UK's greenhouse gas emissions have been reduced by 20%, exceeding our target under the Kyoto Protocol.

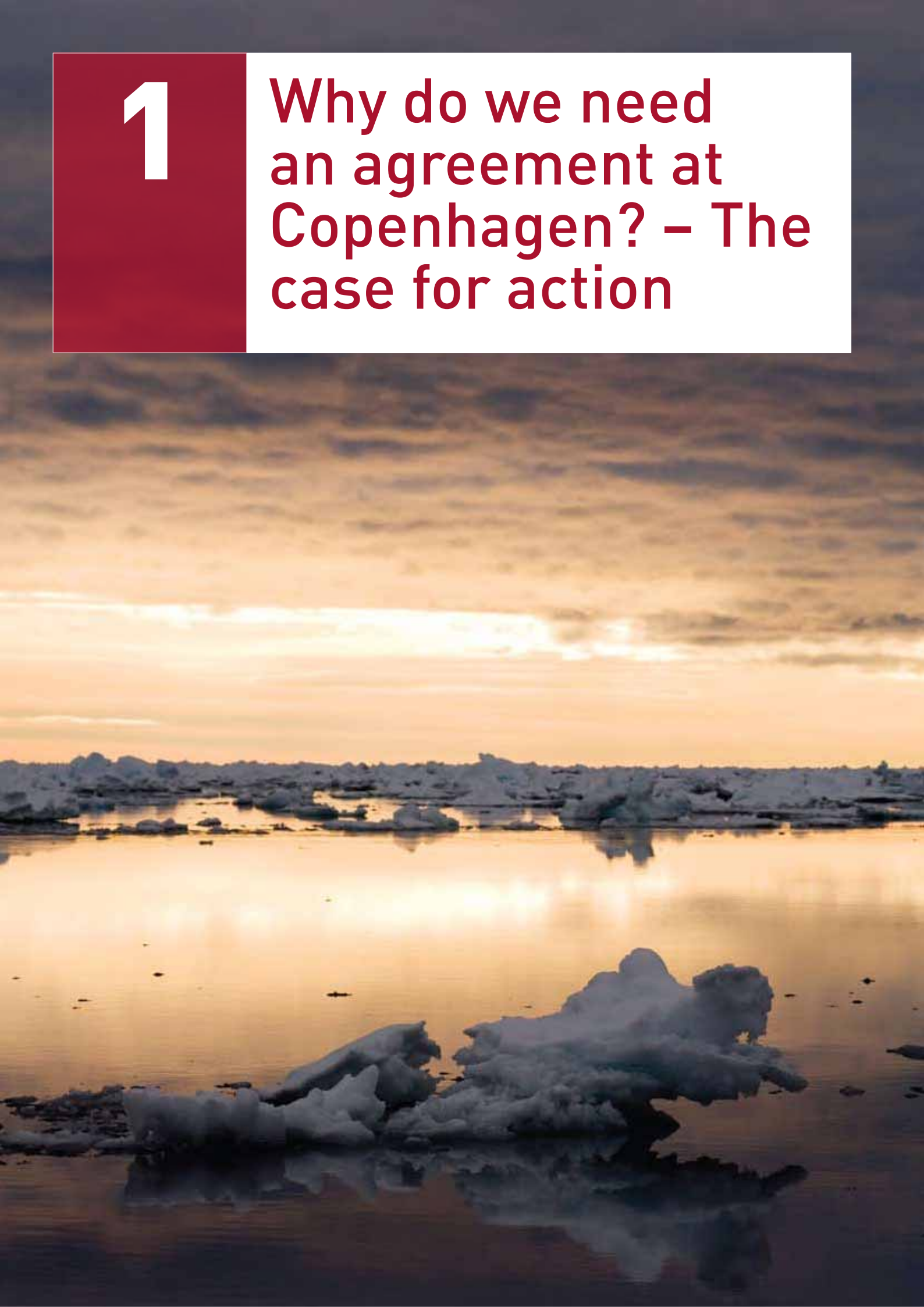
Under our 2008 Climate Change Act we have now become the first country in the world to set legally-binding 'carbon budgets', which will reduce UK emissions by 34% by 2020 and 80% by 2050. Later this summer the Government will publish a White Paper setting out a comprehensive strategy to meet these

targets, creating the long-term conditions for businesses to invest in the low carbon economy. This will include our policies to help homes and businesses improve their energy efficiency; to increase the proportion of energy from renewable sources such as wind and biomass to 15% by 2020; to facilitate the building of new nuclear power stations to replace those due to close; and to support up to four carbon capture and storage demonstrations, making us a world leader in this vital technology to reduce emissions from coal-fired power stations. The Government is committed to maximising the economic benefits of moving towards a low carbon economy, to safeguard the UK's energy security and to protect the most vulnerable in society.

An ambitious agreement at Copenhagen is imperative for the UK. Success – or failure – will affect everyone in this country, and generations to come. The Government is striving for ambition but it is vital too that there is public pressure for a strong deal at Copenhagen, both in the UK and across the world. We need a deal that is ambitious enough to put us on a pathway towards the 2°C goal; and which secures action on a sufficient scale to trigger the investment and action needed to move rapidly towards a low carbon economy. Everyone can help make the case for ambition at Copenhagen.

Agreement at Copenhagen is a down-payment on a more secure, more stable world. We cannot afford to let the opportunity pass.

1 Why do we need an agreement at Copenhagen? – The case for action



1.1 Why must we act?

This chapter sets out the Government's case for a new international climate agreement in Copenhagen later this year. It explains why we need to act at all; why it has to be done through an international agreement; and why we need to do it in Copenhagen in December.

The scientific consensus is clear: human induced climate change poses a huge threat to our world.

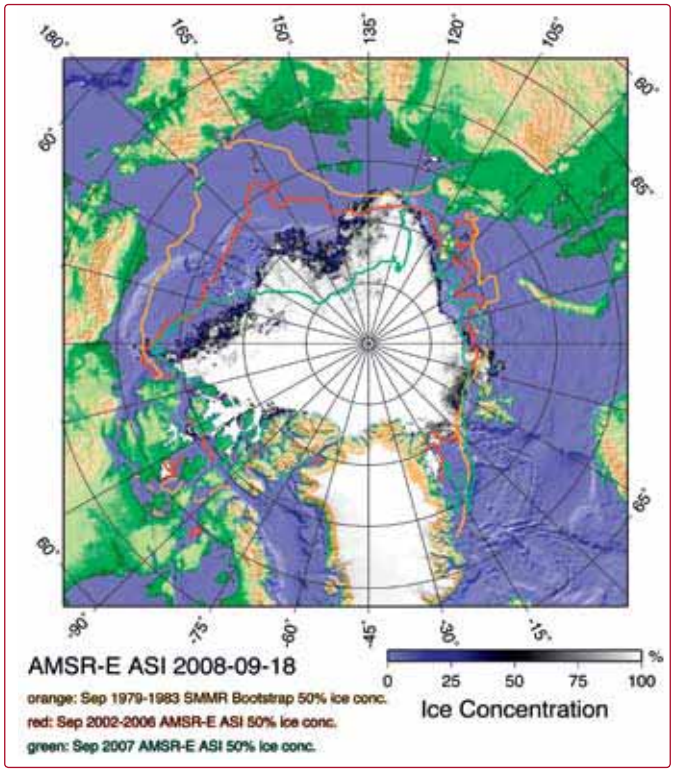
Over the past century, the Earth has warmed by about 0.75°C, and the underlying rate of warming is accelerating. Since the mid-1970s, global temperatures have increased at an average of 0.15°C per decade and in the UK increased by 1°C. The nine warmest years on record for central England have all occurred in the last 15 years.

The impacts of climate change will not just be felt later this century, but are already being felt, for example:

- The proportion of very dry land across the world has doubled since the 1970s[6]. There are already signs that increasing drought is affecting agricultural yields and encouraging forest fires.
- Global sea levels have already risen by 10 centimetres during the last 50 years[7], as land ice has melted and oceans have warmed; there are signs that the rate of increase is accelerating.

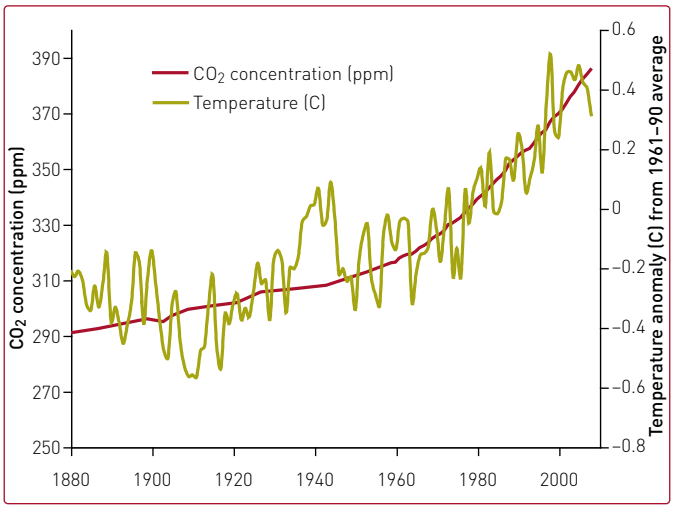
- The increasing acidity of the oceans caused by increasing atmospheric CO_2 concentrations is already having a negative impact on the many ocean animals that build shells of calcium carbonate - including many tropical reef building corals, molluscs and crustaceans such as lobsters - as well as species higher up the food chain which depend on them for survival [8].
- Sea ice is already reducing in extent and coverage[9]. Arctic summer sea ice is disappearing at an alarming rate with the lowest and second lowest extents on record occurring in 2007 and 2008, respectively. Within a few decades, large parts of the Arctic Ocean are expected to have no late summer sea-ice cover.

Minimum Arctic Sea Ice Cover in 2008[10]



There is now overwhelming agreement amongst scientists from more than 130 countries, under the auspices of the Intergovernmental Panel on Climate Change, that this warming of our climate has been caused by human activity. The main greenhouse gas responsible for recent climate change is carbon dioxide (CO_2) and levels in the atmosphere have risen by 40%[11] since the industrial revolution. Such high levels have not been experienced on earth for at least 800,000 years and in all likelihood not for the last 35 million years.

An illustration of the correlation between CO_2 concentrations and temperature increase[12]



Even if we stopped emitting greenhouse gases tomorrow, we would already be locked into a warming of a further 0.6°C by 2100[13] because of the time lag between emissions and temperature rise – giving an overall increase of at least 1.4°C[14].

MISCONCEPTIONS ABOUT CLIMATE CHANGE

There is inevitably some scientific uncertainty associated with climate prediction. For example, scientists have to estimate future emissions of greenhouse gases to model the temperature response; there is natural variability in global mean temperature between years; and different climate models have used different estimates for climate feedbacks (for example the effect of clouds). Our knowledge and understanding is improving all the time, which means these uncertainties will diminish but they can give rise to misconceptions about climate change.

"The climate is always changing"

It is true that looking back over millions of years there have been large variations in the earth's temperature, largely due to changes in the Earth's orbit around the sun, the strength of the sun, the reflectivity of the earth and the composition of the atmosphere. Since the end of the last glacial period about 10,000 years ago the Earth's climate has been relatively stable. Natural variations have led to relatively cool and warm periods, both globally and regionally. However, over the last century there has been an underlying trend of warming that cannot be explained by natural factors and is almost certainly caused by man's activities. Keeping greenhouse gases in balance is essential for the long-term stability of the Earth's climate. But there is now clear evidence that man-made greenhouse gases have tipped the balance and are threatening rapid and alarming climate change.

"Scientists disagree anyway"

The overwhelming majority of climate scientists agree on the fundamentals: that climate change is happening and has recently been caused by increased greenhouse gases from human activities. A 2007 report on core climate science from the Intergovernmental Panel on Climate Change (IPCC) was written by 152 scientists from more than 30 countries and reviewed by more than 600 experts[15]. It

"Climate change is not a traditional security threat, we cannot deter it, nor can we contain its consequences. The threat can only be limited by addressing the underlying causes through an urgent transition to a global low-carbon economy"
Baroness Taylor, Minister for International Defence and Security, speaking at the NATO Arctic Conference in January 2009

concluded that most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in man-made greenhouse gas concentrations.

"Global temperatures in recent years have been falling"

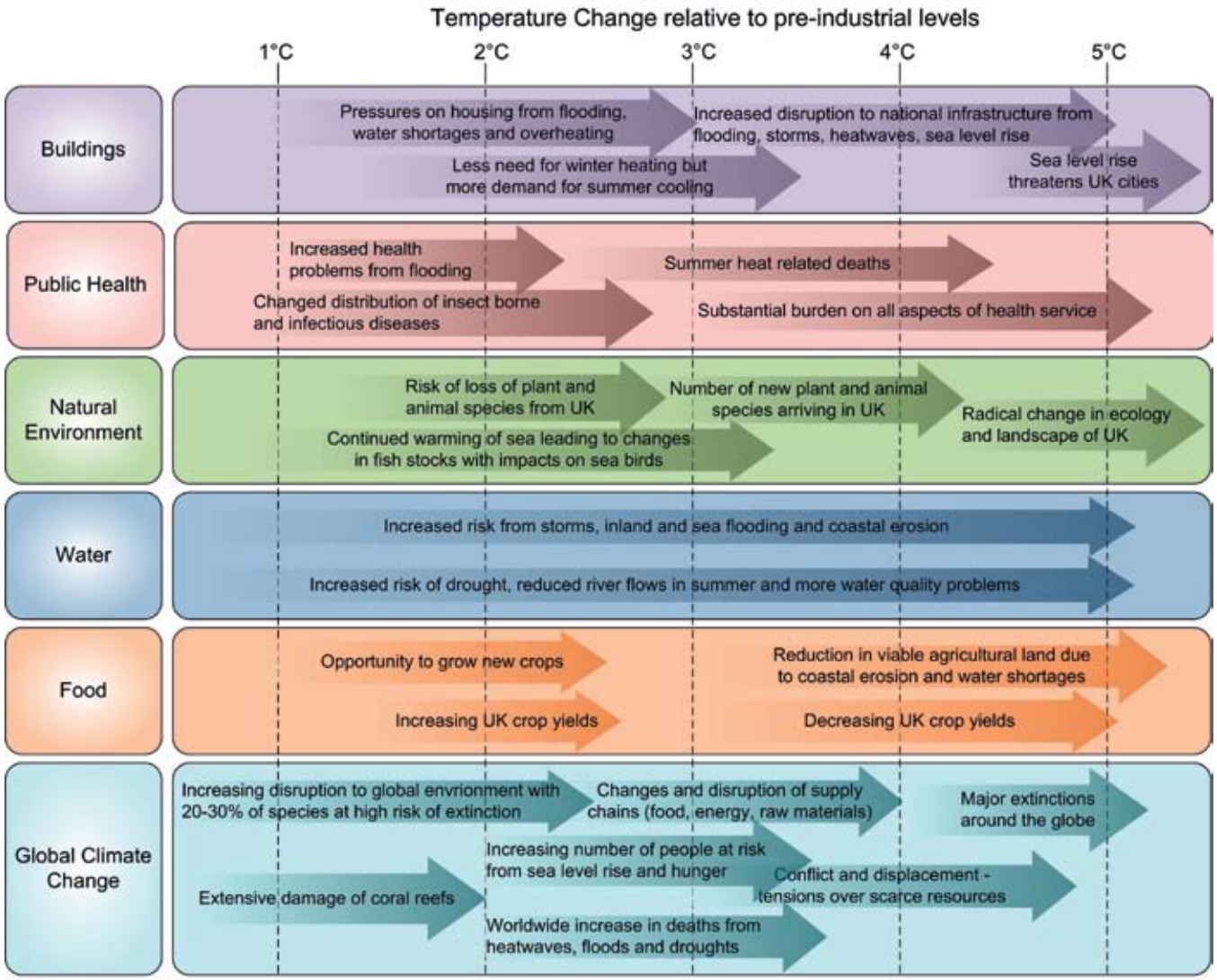
Ocean temperatures vary naturally over periods of years. For example when there is an El Niño event the tropical eastern Pacific is warmer than average and global temperatures are also warmer. A particularly strong El Niño occurred in 1998, the warmest year on record across the globe. The opposite effect is La Niña. When La Niña occurs, it is cold in the eastern Pacific resulting in cooler than average global temperatures. 2007 and 2008 saw a long-lasting La Niña, *but* even so 2008 was still the tenth warmest in the global record and temperatures are on a clear and underlying rising trend.

Action to limit climate change becomes more vital given that the world's population is predicted to rise to 9 billion people by 2050, which will mean agricultural production has to increase by 50% just to feed the growing population[16]. In this period global agricultural production is likely to be decreasing, adding stress to an already challenging situation. At the same time, global energy generation also needs to increase substantially to raise living standards in the poorest countries. This has to be done in a way that limits global greenhouse gas emissions from rising overall.

The UK is therefore arguing, with our European partners, that climate change needs to be limited to an increase in global mean surface temperature of no more than 2°C since pre-industrial times. This is based on consideration of impacts and vulnerabilities of peoples and ecosystems around the world. Global temperature increases of more than 2°C would result in huge impacts on water availability, food security and ecosystems, as well as increasing the likelihood of moving beyond tipping points and incurring irreversible events or climate impacts such as the melting of permafrost[17] that would have significant but unpredictable effects.

It is also based on the view that global mean temperature increases of up to 2°C (relative to pre-industrial levels) are likely to allow adaptation to climate change for many human systems at globally acceptable economic, social and environmental costs. It is considered to be achievable if we act quickly enough. Therefore, the target is a choice determined by balancing the scientific evidence for risks with the economics of taking mitigation and adaptation actions.

The Consequences of Climate Change



Consequences are indicative

Sources: IPCC (2007) *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.* Eds. Parry, M.L. et al. Cambridge University Press.
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Without action, the consequences for the UK of climate change are predicted to be stark.

Our Prosperity: In 2006, the UK Government asked Lord Stern, former Chief Economist of the World Bank, to review the economic evidence on climate change. His Review showed that if we don't take action now the costs associated with climate change – as a result of outcomes such as declining food production, loss of infrastructure due to sea level rise and extreme weather events, and the impacts on biodiversity – would be equivalent to removing around 5-20% of GDP from the global economy each year from now and forever. This could, for example, be higher than that of the two world wars and the Great Depression.[18]

Many of those worst affected will be in the world's poorest and most vulnerable countries. Climate change has the potential to significantly slow or even reverse efforts in those countries to reduce poverty and stimulate development.

Our Environment: Climate change is expected to put significant strain on our environment with more frequent extreme weather events, including higher flood risk from heavy localised rainfall. We are likely to see hotter, drier summers in Europe and the UK similar to the record-breaking summer experienced across Europe in 2003 which led to an estimated extra 35,000 heat-related deaths and put stress on health services, transport, energy infrastructures, and water supply. By 2040 the record-breaking summer temperatures in Europe in 2003 could become the norm[19]. We could see changes to agricultural practices with the risk of reduced productivity as more crops become at risk from drought as well as the loss of infrastructure and a greater risk of coastal flooding due to rising sea levels.

Globally, the impacts will become increasingly severe, with sea level rise leading to increasing risk of flooding and storm surges in low-lying countries like Egypt, Bangladesh and Thailand; water shortages affecting between 75 and 220 million people in Africa by 2020[20]; food shortages as global production declines towards the middle of the century and predictions of up to increasing numbers of displaced peoples.

Our Security: In the first National Security Strategy launched by the Prime Minister last year, climate change was identified as one of the key drivers of UK national security threats. The first Annual Update to the National Security Strategy, published in June this year, reinforces this assessment. Climate change

will increasingly be a wide-ranging driver of insecurity acting as a threat multiplier, worsening existing weakness and tensions around the world. It presents a challenge that goes far beyond the direct physical disruption to the environment. Everyone is affected by climate change, but it is the world's poorest countries that will be hit first and hardest by the impacts. It could lead to a wide-range of social, economic and political problems such as large-scale migration, water stress, crop failure and food shortages, faster and wider spread of diseases, increased scarcity of resources, economic instability and the possibility of new geo-political disputes.

Will tackling climate change make our economy less competitive?

It has been argued that action on climate change will cause industries which have high emissions to relocate production, investment or jobs to countries without emissions reductions targets. This is known as 'carbon leakage'.

There are a range of other factors that also determine a company's location choice, for example considerations such as labour costs, proximity to raw materials and the investment environment. Nonetheless, research suggests that a limited number of sectors, particularly those which are energy intensive, could be at significant risk of 'carbon leakage'. These risks need to be analysed on an ongoing basis using an evidence-based approach.

The most effective way of addressing the risks is by reaching a comprehensive global agreement at Copenhagen, to provide a more level playing field for the sectors that are at the greatest risk.

Pending that global agreement, the EU has revised the EU Emissions Trading System from 2013 to safeguard those industries where there is clear evidence of the risk of carbon leakage. Those industries will face a reduced carbon price impact by receiving free allowances. The EU System will be revised after a global agreement and an EU-wide assessment of the extent to which the leakage risk remains.

Our call for ambition at Copenhagen is not solely focused on managing risks; it is about seizing opportunities. Moving to a low carbon economy offers enormous economic and social benefits and is a necessary precondition for a successful, competitive British economy. It will also reduce reliance on imported fossil fuels and increase energy security. The development of new low carbon technologies can stimulate innovation and can provide employment opportunities in new and existing 'green industries'. Already, low carbon and environmental goods and services are worth an estimated £3 trillion worldwide, generating £106 billion a year in the UK – 7.4% of GDP and employing 880,000 people[21]. An ambitious agreement will also minimise competitiveness concerns and help address 'carbon leakage' concerns for some sectors.

Last year, green energy overtook fossil fuels in attracting global investment in power generation for the first time[22]. Wind, solar and other clean technologies attracted $140 billion (£85 billion) compared with $110 billion for gas and coal for electrical power generation.

The Government is determined to use the imperative of building a low carbon economy as a route to creating jobs and growth, helping Britain recover from the present economic downturn. The UK is at the forefront of those embracing this economic transition in order to be amongst the first to benefit from the jobs and economic growth it will deliver. The April 2009 Budget committed £1.4 billion extra spending on the low carbon economy, along with £4 billion in new lending from the European Investment Bank. It is estimated that this will generate £10.4 billion in new low carbon and energy investment in the UK – a major green stimulus. The Budget allocations included £375m for home energy efficiency, £525m support for offshore wind power and £405m to develop low-carbon technologies and advanced green manufacturing.

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"Climate change is a story of both risk and opportunity. The likelihood of catastrophic outcomes under business as usual is increasingly clear from the science. The cost of taking strong action now is manageable and far less than incurring the risks and cost of doing nothing. However, the debate around climate change action should not be seen purely through the lens of containing and managing economic costs. More importantly, the transition to a low-carbon economy offers substantial opportunities for those countries which act early. Such action will lay the foundations for more sustainable economic growth in future, driving future innovation and job opportunities, whilst supporting energy security and a cleaner, safer, quieter and more bio diverse environment."

Lord Stern

2050 Vision: A Cleaner, smarter, better world

It will be cleaner – If we move away from carbon intensive energy production; there will be reduced emissions but also fewer pollutants. In the UK low carbon energy sources such as wave, wind and nuclear power will be important.

It will be quieter – We will drive electric vehicles and fuel cell vehicles and use efficient public transport systems – without the noise and the pollutants of today's vehicles.

It will be smarter – We will use smart appliances in our homes that allow us to monitor our energy use through smart meters and use energy that is more efficient. In turn this will help us save money.

It will be more secure – We will use energy from more diverse sources and reduce our dependence on imported fossil fuels such as oil.

1.2 Why do we need an international deal?

Climate change is a global problem: greenhouse gas emissions can be emitted from anywhere on the planet but they have the same impact on the atmosphere. The impacts of the climatic changes they cause are felt by all countries. The issue therefore has to be tackled internationally.

It is sometimes asked why people in Britain and elsewhere should make changes in their own lives to reduce their 'carbon footprint' if others, including the most polluting and the fastest growing countries, are going to continue on a high-carbon path. In fact most other countries are now taking action. But the underlying point is correct: only if all countries contribute will the problem be tackled. The UK cannot address climate change alone: the UK accounts for just 2% of global greenhouse gas emissions[23]. Climate change is a global challenge and we will need to take global action to address it. That is why a new international climate agreement is so important. It will ensure that every major country takes action and that they all know others are doing so too.

The details of individual policies are for individual countries to decide, but the UK believes that countries need to make commitments internationally, and be held to those commitments by other countries, because we believe an international framework is the only way to secure sufficient action.

The case for a strong international framework is reinforced by the experiences – good and bad – of the Kyoto Protocol. At the Earth Summit at Rio de Janeiro in 1992, 189 countries agreed to establish the United Nations Framework Convention on Climate Change. The Kyoto Protocol, signed in 1997, was the first time legally binding emissions reductions targets were set for participating developed countries. Whilst the Kyoto Protocol marked real progress and has driven real action in developed countries which we should carry forward, there are also some important lessons we can learn to make a new international agreement even stronger.

The most successful features of the Kyoto Protocol have been the establishment of legally binding national emissions reduction targets or "national caps" for participating developed countries and the establishment of new market mechanisms to facilitate the trading of carbon emission allowances between countries and businesses. We want to ensure these features are maintained and strengthened in a new agreement.

We can also learn from areas where the Kyoto Protocol has been less successful. First, it does not cover enough countries - important countries such as the United States did not sign up to it and it does not require action from many of the larger emitting advanced developing countries with significant emissions. Neither does it cover key sources of emissions such as deforestation in developing countries and aviation and shipping. So the UK wants to see an agreement at Copenhagen that is much more comprehensive. The announcement by the new US Administration that it is committed to seeking an agreement at Copenhagen, together with the strong engagement of so many major developing countries in the negotiations, represents an important step forward.

Second, many developing countries argue that developed countries have not done enough to deliver the financial support and share the technologies that they need to take effective action to limit emissions. These remain difficult issues to resolve, but the UK will continue to encourage other countries to provide

more predictable, secure sources of finance, technology and capacity building support. We are also promoting innovative measures such as the preparation of national low carbon development strategies to provide a framework for developing country action and ensure finance and the right technologies are deployed where individual countries have identified their greatest needs, building on action that they take themselves.

We want to see an agreement built on mutual confidence and trust - between the major advanced economies, and between developed and developing countries. We are calling for an agreement in which all parties make robust commitments and set out a clear plan for how they will deliver them, with support for developing countries to deliver.

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1.3 Why do we need an agreement now?

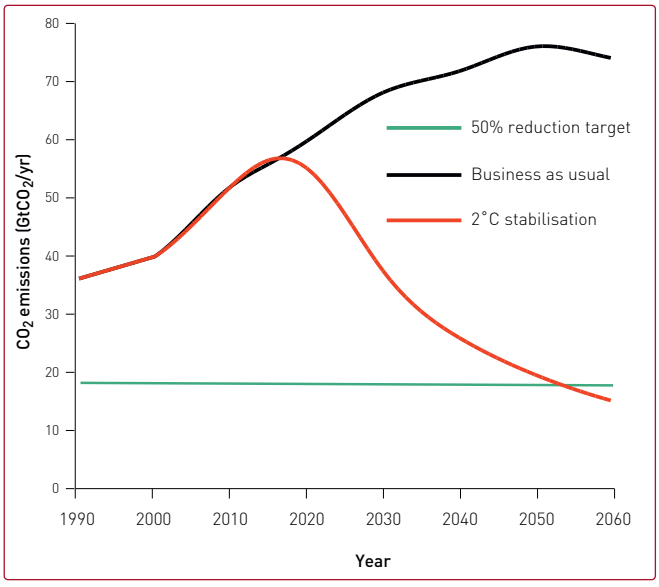
When the global economic downturn began, some people argued that action on climate change had to be delayed. We could no longer afford, it was argued, to take the necessary action. The Government profoundly disagrees.

First, the issue is too urgent to delay. The longer we leave taking action, the more greenhouse gases will build up in the atmosphere, and the more severe the consequences will be.

A failure to act early could lead to irreversible environmental impacts. So-called 'tipping points' may be reached where the climate system sees runaway change, or shifts permanently to a different state. For example, the ocean circulation is driven by the wind regime, temperature structure and water salinity. During the last ice age the North Atlantic circulation was quite different and the warm water of the Gulfstream did not reach our latitudes, leaving Britain in a colder climate. Such changes can happen rather rapidly but are hard to predict.

In order to limit the global temperature increase to no more than 2°C, the graph shows that action to cut emissions on a global scale needs to start now. Under business as usual[24] levels, the concentration of greenhouse gases in the atmosphere would increase to levels above 550 parts per million[25] by the middle of this century.

An illustration of an emissions reduction trajectory to achieve our 2°C goal



This would mean that the 2°C target is very unlikely to be met and there would be significant risks of temperature rises of 4°C and higher.

Reducing emissions to 50% below 1990 levels by 2050 would dramatically increase the chance of keeping the temperature change below 2°C – though further significant reductions will still be needed beyond 2050 to make this a 50% chance.

Delaying would also increase the costs of the subsequent action that would be needed to reduce emissions. The Stern Review[26] showed that if we postpone taking action the costs increase: the climate change damages are greater and the pace of reduction has to be faster, thereby increasing the costs. Since his review, Lord Stern has said that he underestimated the risks of global warming and the damage that could result from it. He has said that the economic impacts of unchecked climate change would dwarf today's global economic downturn.

In order to achieve emissions cuts on the scale required, all countries around the world must therefore act quickly and strongly. Global emissions need to peak and start to decline before 2020, and to reach less than 50% of 1990 levels by 2050. This means putting in place policies and measures now to achieve low carbon economic growth in the future.

In fact there are good reasons for acting now. Low carbon investment can act as a vital part of the global economic recovery from the present downturn. As we invest for new growth, the need to act on climate change provides opportunities to build new, cleaner infrastructure and more energy efficient businesses – the foundations of a sustainable future.

Many countries around the world are already seeking to capitalise on the economic opportunities which the transformation to a low carbon economy offers. We have the chance to make a decisive shift towards a more resilient lower carbon economy.

Under the chairmanship of the UK, the G20 Leaders at the London Summit confirmed the importance of a green recovery by agreeing *"to make the best possible use of investment funded by fiscal stimulus programmes towards the goal of building a resilient, sustainable, and green recovery."* The G20 leaders also agreed a strong commitment to achieving a deal at Copenhagen – the first time all major countries have collectively done so.

Low Carbon Recovery: Examples of Global Commitments

- In the UK, over the present three year period to 2011, Government policies are supporting £50 billion of low carbon investment (public and private).
- The new United States administration has pledged $150 billion investment in clean energy – with predictions that this will create five million new jobs;
- Around $70 billion of China's financial stimulus this year is directly targeted at energy efficiency and environmental improvements;
- Japan has committed $16 billion in their most recent stimulus package for green growth;
- The Republic of Korea has announced $38 billion over the next four years to promote green technologies as well as undertaking major environmental projects.

2 Priorities for Copenhagen

SHAPING THE DEAL

The UK is working for a deal that is **ambitious, effective** and **fair**.

Ambitious: The UK believes that the over-riding goal of the Copenhagen agreement is to limit climate change to an increase in global average temperature of 2°C. This means the deal needs to establish a credible trajectory for reducing global emissions by at least 50% on 1990 levels by 2050 and to put in place the measures now to ensure that emissions start to fall within the next decade.

To do this the agreement should:

- include strong commitments to reduce emissions from both developed and developing countries (section 2.1).
- cover all sources of emissions, including aviation and shipping and deforestation (section 2.1 and 2.4).

Effective: The Copenhagen agreement needs to put in place a framework which provides certainty for, and therefore drives investment in, clean energy, sustainable forestry and land use and adaptation.

To do this the agreement should:

- establish a reformed and expanded global carbon market (section 2.2).
- enable low carbon and adaptive technologies to be developed and disseminated (section 2.3).
- provide robust monitoring, reporting and verification arrangements (section 2.1).

Fair: Climate change involves a fundamental injustice: it has been largely caused by the industrialised countries' historic emissions, but it is the poorest and most vulnerable people who will suffer its worst and earliest effects. It is very important therefore that the Copenhagen agreement is equitable in the relations it creates between developed and developing countries.

To do this the agreement should:

- support developing countries to adapt to the climate change that is now unavoidable (section 2.5).
- provide sufficient finance, technological assistance and capacity building to enable developing countries to take action on both mitigation and adaptation (section 2.3 and 2.6).
- establish governance structures that strengthen the voice of developing countries (section 2.7).

This section sets out the UK's key priorities in all these areas of the negotiations.

What form of deal are we seeking?

The form that the agreement takes will be important in setting an effective framework for action by all the parties represented at

Copenhagen. The UK would expect to see a high level agreement by ***all*** parties on the broad political elements of the deal. This would cover ambitious and comparable developed country targets, significant emission cuts from business as usual from developing countries, a credible framework for action on adaptation, and the supporting measures needed to deliver these. This would provide a strong framework for countries to put in place detailed, practical implementation arrangements following the negotiations at Copenhagen.

To ensure that the agreement is robust, the UK wants to see a deal with the following characteristics:

- it should be legally binding on all parties so that all Parties can be confident that the commitments entered into at Copenhagen will be met
- there should be an effective compliance regime
- there should be scope for early and regular review of the agreement to consider the adequacy of the emission reduction requirements and targets in the light of the latest scientific assessments.

Working through the European Union

The UK negotiates as part of the European Union (EU), which gives us much more leverage and influence than we would have if we negotiated alone. The UK is seeking to make progress in all these areas to help shape common EU negotiating positions and we will be working closely with our EU partners in the months ahead towards Copenhagen.

We are taking a leading role in particular areas, including how we identify sources of finance needed to support a deal and the institutional architecture needed to deliver it, thinking creatively about how we can best facilitate the rapid development and deployment of low carbon technology, and leading work to agree a new international framework to tackle deforestation.

2.1 Cutting greenhouse gas emissions

THE CHALLENGE

The gases already emitted into the atmosphere mean we are locked into warming of at least 1.4°C by 2100[27]. To avoid the impacts of climate change becoming too severe to handle, we need to limit greenhouse gas concentrations in the atmosphere at a level which avoids dangerous climate change. The risks associated with going above this level are considerable. The UK strongly supports this goal.

It is estimated that stabilising the concentration of greenhouse gases in the atmosphere at 450 ppm CO_2 equivalent gives around a 50% chance of keeping temperature levels below 2°C and reduces the chance of increases of between 3 to 4°C. Higher concentrations would reduce the chance of staying below 2°C significantly and increase the chances of much higher temperature rises.

If we are to put ourselves on a pathway which keeps 450ppm within reach, global emissions need to peak and start to decline by 2020, and to reach less than 50% of 1990 levels by 2050 and continue falling. Developed countries need to lead the way by committing to binding emissions reductions targets which reflect their capacity to take action and their responsibility for emissions already in the atmosphere.

But action by developed countries will not be enough. Under business as usual trends – if no action is taken – increases in emissions in developing countries will account for the majority of global emission growth in the future (around 70% by 2030), though estimates vary according to different sources[28]. Even if developed countries reduced their emissions to zero the world would still considerably exceed 2°C of warming if developing countries continue on their business as usual paths.

WHAT DO WE WANT TO ACHIEVE IN A DEAL AT COPENHAGEN?

Ambitious Developed Country Targets

If we are to halve global emissions by the middle of this century, developed countries as a group will need to reduce their emissions by at least 80% by 2050 compared to 1990 levels.

To ensure we are on the right pathway to deliver these long-term commitments, and to provide a clear framework for low carbon investment, developed countries need to set demanding and legally binding mid-term targets. The Intergovernmental Panel on Climate Change (IPCC) suggests developed countries should adopt targets which, taken collectively, are within the range of 25 to 40% below 1990 levels by 2020.[29]

The EU has already committed to a 20% reduction in EU emissions by 2020 compared to 1990 levels, and if other developed and developing countries make sufficiently ambitious commitments, and developing countries contribute adequately, we will increase this to 30%.

If the EU commits to a 30% reduction in emissions in the context of an ambitious agreement in Copenhagen, the purchase of carbon credits is expected to form part of the EU's effort to meet the more challenging targets. These purchases could make an important EU contribution to global mitigation finance flows.

Some of the individual targets from developed countries are ambitious. However, when added together the current offer from developed countries as a group does not meet the level of ambition required. In total, the current pledges from the individual countries that have officially announced mid-term targets add up to less than what would be required for developed countries as a whole to meet the range cited by the IPCC.

However, we are optimistic that other commitments will be tabled and that during the course of the negotiations there is scope for countries which have already announced commitments to increase their level of ambition. The US Congress is currently debating legislation[30] which it has been estimated (if passed) could deliver emissions reductions equivalent to at least a 4% reduction on 1990 levels. The Bill also includes additional policies, such as investments in preventing tropical deforestation, which could make this target much more ambitious. We will be working closely with other developed country partners over the coming weeks and months to ensure that the commitments in place for Copenhagen, add up to the right combined level of ambition.

A summary of individual pledges made to date by developed countries is set out below[31]:

Country	Absolute emissions in 2005 (gigatonnes equivalent – GTe)	2005 emissions (vs 1990)	2020 target (vs 1990)	2020 target (vs 2005)	Comment on 2020 target
Australia	0.6	+8%	-3% up to -14% or -24%	-10% up to -20% or -29%	Top end conditional on ambitious Copenhagen deal, Actual target based on 2000, -5%/-15%/-25%
Canada	0.7	+49%	-3%	-22%	Announced 2020 target -20% vs 2006
EU	3.9	-2%	-20% up to -30%	-18% up to -29%	Top end conditional on ambitious Copenhagen deal
Japan	1.3	+7%	-8%	-15%	Domestic reductions only
Russia	2.3	-35%	-10% to -15%	+38% to +31%	Announced June 2009
Ukraine	0.5	-54%	-20%	+73%	Under consideration
USA	6.3	+16%	0%	-13%	Obama Administration target



Developing Country Contributions

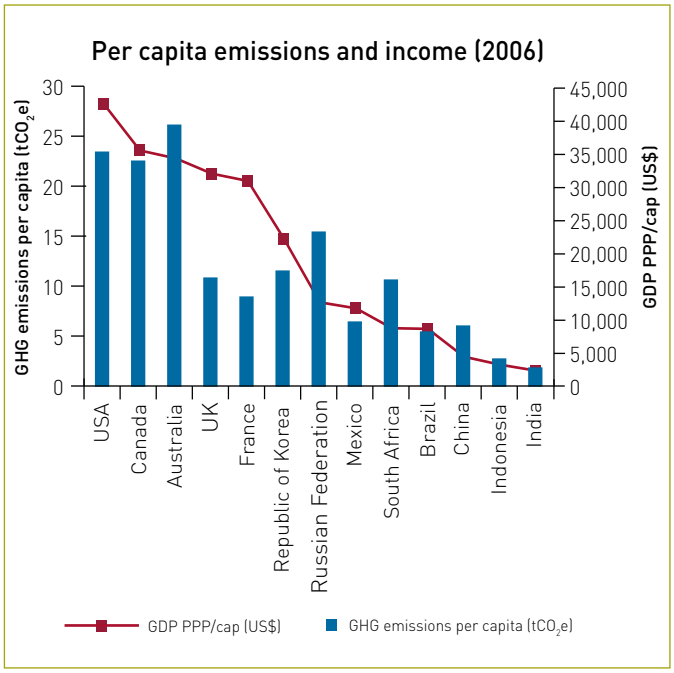
The scale of emissions reductions needed to achieve our 2°C goal means that in addition to ambitious targets for developed countries, developing countries also need to take action. Emissions per person are much lower in developing than developed countries, but will grow fast if we follow a "business as usual" pathway. While total emissions from developed countries fell slightly between 1990 and 2006, those from developing countries grew by around 75% and are set to continue growing rapidly[32]. Although it is difficult to predict, many countries, including China, could see emissions rise by 50% or more between now and 2020. Even if all developed countries could reduce emissions to zero, we would still not be able to achieve the 2°C goal without mitigation in developing countries. It is vital that as well as taking the lead by cutting our own emissions, we support developing countries to make the transition to low carbon development pathways.

By taking action now, developing countries have an opportunity to adopt a different growth path, leapfrogging outdated technologies to become some of the first movers towards a sustainable economy. Depending on their level of development, developing countries will have differing levels of responsibility for emissions reductions, and require different levels of support in order to take the action necessary to halt global emissions increases. The international Convention takes these differences between countries into account through the principle of common but differentiated responsibilities and respective capabilities[33], which means that although all parties have to act, they do not all have to act in the same way because they have different levels of responsibility and capability.

International Aviation and Maritime emissions

Emissions from international aviation and maritime sectors were not included in countries' targets under the Kyoto Protocol, despite the fact that combined they currently account for some 6% of global emissions, and could triple by 2050 unless action is taken. Developing countries are concerned that constraints on these sectors could have a negative impact on their economic development, but developed countries are reluctant to proceed without engagement from developing countries as this would leave much of the sector's emissions unaccounted for and create the risk of carbon leakage and have adverse effects on competition. In shipping, it could also lead to the 'reflagging' of vessels (vessels changing the country in which they are registered to avoid measures adopted by that particular country) from developed countries to developing countries.

The UK and EU firmly believe that we need to reach an international agreement to manage these emissions collectively. We are therefore calling for the agreement at Copenhagen to include global sectoral targets for aviation and maritime emissions that can be delivered cost-effectively and are consistent with limiting climate change to below 2°C. All countries will need to redouble their efforts through the International Civil Aviation Organization and International Maritime Organization, and agree and implement specific measures to meet these targets within an agreed timeframe.



Many developing countries have already recognised the need to take action and have put in place concrete plans that will move them to a low carbon development pathway. But as with developed countries, the total scale of the response does not yet meet the scale of the challenge.

The first priority for developing countries is to raise the living standards of their populations and take people out of poverty. Therefore emissions will continue to rise, before they peak and start to decline. Such a trajectory is consistent with action over time to improve energy efficiency in developing countries and further development of low carbon energy sources. Developing countries will need financial support from the international community if they are to take action. Recent research[34] estimates that by 2020 emissions in developing countries as a group need to be at least 15% (and possibly as much as 30%) lower than projected "business as usual" levels.

Many developing countries have already announced national climate change action plans. For example, each of the so-called +5 economies:

- Brazil's National Plan on Climate Change (2008) includes a target to reduce electricity consumption 10% by 2030, increases in solar heating and hydropower, and with international support, eliminating net loss of forest coverage by 2015.
- China's National Climate Change Programme (2007) aims to achieve a 20% reduction in energy consumption per unit of GDP and increase the share of renewable energy in the primary energy supply to 10% by 2010.
- India's National Action Plan on Climate Change (2008) includes a 15% renewable electricity target by 2020.
- Mexico's Special Programme on Climate Change (2009) aims for emissions to peak by 2012 and fall 50% by 2050.
- South Africa's work on Long Term Mitigation Pathways (2007) includes commitments to reduce energy demand by 12% by 2015 and have 10TWh (terrawatt-hours) renewable energy by 2013.

Many developing countries do not as yet have the resources or necessary data about their current and future emissions to be able to put in place binding emissions targets. However, we do believe that they are able to make commitments to put in place policies and measures which will reduce their emissions growth and in time their emissions will need to fall.

As part of a Copenhagen agreement, we therefore want developing countries to commit to preparing national low carbon development strategies which set out a clear pathway to reducing their emissions growth – especially in key sectors such as power, transport, major energy-intensive industries and, for some countries, forests and agriculture. These strategies should build on existing national plans and strategies and should be country led – the international community should not look to impose specific actions on individual countries. These strategies should state clearly what action countries can pay for domestically, what action they will take with further support from developed country governments and what actions could be supported by the carbon market. They should also set out the policies countries will need to put in place to ensure that new flows of finance are effective. Where possible, developing countries should integrate low carbon activities into existing national plans so they can have their plans in place as soon as possible – ideally by no later than 2012. The purpose of these strategies is to ensure that

support from developed country governments and carbon markets is effective. As these plans are prepared at the country level, it is up to the countries themselves to decide what to include and which investments to prioritise.

We do not expect full plans to be developed by all developing countries in time for Copenhagen. But we would expect the most advanced amongst them to propose low carbon development strategies, or update existing strategies, before Copenhagen, to demonstrate enhanced contributions to the global emissions reduction effort.

Monitoring, Reporting and Verification

We need the Copenhagen agreement to provide an improved system for the regular monitoring, reporting and verification (MRV) of actions by each country to limit emissions, including the production of regular emissions inventories by both developed and developing countries. An improved system will help to build trust between countries by giving greater confidence in the credibility and integrity of each other's actions, and of contributors' financial support.

At Copenhagen we will aim to:

- Ensure developed countries set new binding targets to reduce their emissions by at least 80% by 2050, and stretching mid-term targets on the pathway to getting there. The IPCC's analysis suggests that developed countries should collectively reduce their emissions by 25-40% below 1990 levels by 2020[35].
- Ensure significant action is taken by developing countries so they can, with appropriate support from developed countries, put themselves on a low carbon development pathway. Recent research suggests that by 2020, emissions in developing countries as a group need to be roughly 15% to 30% lower than projected "business as usual" levels[36].
- Agree that developing countries should produce low carbon development strategies setting out the actions they will take to reduce emissions, including those actions for which they need international funding and support, with some of these presented in Copenhagen.
- Ensure emissions from international shipping and aviation are included in a global agreement.
- Agree robust monitoring, reporting and verification (MRV) arrangements to ensure transparency of emissions reductions efforts.

2.2 Using the carbon market to support emissions reductions

THE CHALLENGE

More and more developed countries, including the US, Japan, Australia and New Zealand, are planning to introduce emissions trading systems similar to the EU's, and we will continue to share our experiences with these countries. We want to be able to link these systems and move towards one global market. We also want to support other countries, particularly emerging economies, to build their capacity to engage with a global market.

A global carbon market could ensure that global emissions reductions are delivered more effectively. It does this by:

- setting a 'cap' on total emissions, which provides greater certainty about the environmental outcomes that can be achieved.
- establishing a price signal, which provides clarity for private sector and encourages investment in innovative and cost effective measures.
- providing flexibility about the location in which reductions occur, which minimises costs by ensuring that reductions take place where they are most cost-effective.

What are carbon markets?

Systems that allow trading between companies or countries are often known as 'cap and trade' because they operate by 'capping' the total emissions and allowing the participants to 'trade' emissions allowances. Each participant must regularly 'reconcile' their emissions budgets by 'surrendering' an allowance for every tonne of CO_2 emitted. This encourages them to reduce their emissions if they can do so for less than the cost of allowances. Alternatively they can comply with the scheme by buying allowances from elsewhere.

The EU ETS is the only functioning national and transnational carbon emissions trading system.

Estimates suggest that through an effectively designed carbon market the global costs of the action required by 2020 could be reduced by at least one third and possibly up to two thirds depending on market design. Moreover, between now and 2030, 45% of abatement opportunities below $30 per tonne are considered to lie in developing countries and an effective global market could provide a mechanism to ensure that these opportunities are financed in the most efficient way. By minimising the cost of global reductions, the carbon market would allow developed countries to take on much more ambitious

targets than would otherwise be the case and can provide significant financial flows to developing countries.

In 2008, the carbon market was estimated to be worth $126 billion having doubled in size over the previous year[37]. It has been estimated that a global market might be worth up to $2 trillion by 2020[38]. London is currently the centre of the global carbon market: other financial centres, such as New York, Tokyo, Hong Kong and Singapore have already shown interest in developing their capacity to engage in the global market.

While developed countries have the regulatory capacity and emissions data to allow them to set sufficiently robust targets and set up trading schemes now, developing countries are not yet ready to participate in full cap and trade schemes. Transitional market mechanisms and technical support are needed to help developing countries engage more fully in a global market in the future.

What do we want to achieve in the long term?

We want to see links between regional and national trading systems established so that companies can see a common international carbon price and can easily access emissions reduction opportunities in other countries. We need a supportive legal framework that allows such links to be established by 2015 between countries who take on emissions reduction targets and who have national trading schemes.

WHAT DO WE WANT TO ACHIEVE IN A DEAL AT COPENHAGEN?

Scaled up market mechanisms in advanced developing countries

To scale up the flows of private sector finance to developing countries by increasing their access to a global market, we want to reach agreement in Copenhagen to establish new 'transitional' market mechanisms by 2020 at the latest. These new instruments, including sectoral crediting and trading, might look at whole sectors of an economy, rather than just individual projects as the existing support mechanism for developing countries (the UN Clean Development Mechanism) does. These new mechanisms should encourage advanced developing countries to set sectoral emissions caps in their power sectors, which are the largest source of emissions and the most easily monitored and reduced. Other heavy energy using sectors could also take sectoral caps, for example cement, aluminium, iron and steel. By linking to carbon markets in developed countries, sectoral trading in particular could bring major new flows of investment to developing countries where emissions are growing fastest and reduce the costs of emissions reduction.

A reformed Clean Development Mechanism

There will be a continuing role for improved project-based approaches in sectors and countries which are not yet ready to take on new sector wide mechanisms. We want agreement to specific measures to reform the efficiency and effectiveness of the UN Clean Development Mechanism (CDM) in Copenhagen, in particular through the use of appropriate benchmarks for measuring emissions reductions and the adoption of a more formal, rules-based approach to decision making by the CDM Executive Board.

Monitoring and Reporting of Emissions

To participate and take advantage of new sectoral mechanisms and a reformed CDM, will require robust monitoring and reporting of emissions at both sector and installation (e.g. power plant or factory) level. Developing countries will need capacity building support to do this. Greater accuracy in reporting at this level will help build capacity to participate in trading but also will help inform the national reporting of emissions which will give us greater clarity about the progress we are making to tackle global emissions.

The Prime Minister has commissioned a report from Mark Lazarowicz – his special representative for carbon trading – on achieving a UK vision for the carbon market. We expect this to be published at the end of July 2009.

The UN Clean Development Mechanism (CDM)

The Clean Development Mechanism (CDM) allows developed countries and the private sector to earn Certified Emission Reductions (CERs) – carbon credits - by funding projects that result in emissions reductions in developing countries which don't have Kyoto targets. Developed countries can then use these CERs to help them meet their own emissions reduction targets, or trade them in the carbon market. This helps to ensure that emission reductions are achieved cost effectively, and helps developing countries to access investment and technologies they would not otherwise have.

Typically emissions reductions are assessed against a business as usual scenario on a project by project basis. This means the CDM relies on the assessment of the business as usual baseline and assessment of whether the project would have occurred anyway – 'additionality'.

At Copenhagen we will aim to:

- Agree an international framework that supports the linking of emissions trading systems between developed countries by 2015.
- Agree that new sectoral carbon trading systems should be established by 2020 at the latest to allow the more economically advanced developing countries to access finance and cost effective emissions reduction in their power sectors and potentially in some other sectors that use a lot of energy e.g. cement, aluminium, iron and steel.
- Agree that sectoral crediting systems (rewarding emissions reductions below a baseline) with appropriate monitoring and reporting systems should be established for developing countries and sectors where they have capacity to engage with them.
- Agree to reform the Clean Development Mechanism in order to improve its efficiency and environmental effectiveness.

2.3 Using technology to tackle climate change

THE CHALLENGE

Developing new technologies and deploying them globally is essential to tackle both the causes and consequences of climate change – from low carbon energy sources to building infrastructure that can withstand the effects of climate change. Technology will be particularly important for developing countries that need to increase access to modern forms of energy to help eradicate poverty.

We need to find ways to encourage governments and businesses to work together to facilitate easy and affordable access to existing technologies, and to ensure new technologies are developed and made commercially viable as soon as possible.

The scale of the challenge we face is enormous: to achieve the emissions reductions necessary in time to reach our goal of limiting temperature increases to no more than 2°C, we need a huge global shift towards low carbon technologies in the next ten years. Yet this is achievable with the right blend of private sector investment and public policy incentives and support.

UK-India collaboration to assess the barriers to the transfer of low carbon energy technology

The UK Government and the Government of India are collaborating on a study to assess the barriers to the transfer of low carbon energy technology between developed and developing countries. The study aims to provide analysis as to how intellectual property rights (IPR) barriers can be addressed and how international public/private collaborative Research, Development, Demonstration and Deployment (RDD&D) initiatives can be structured to maximise their contribution to developing low carbon technological capacity in developing countries.

This will include identification of key technologies where India is most likely to benefit from such collaborative initiatives. The scope for joint RDD&D to contribute to overcoming IPR issues will also be examined.

To make this technological revolution happen, we need a new approach to technology cooperation between developed and developing countries. Developing countries have called for the creation of a fund to help pay for the large-scale transfer of technologies and patents – intellectual property rights (IPR) – from developed countries. But we do not believe this is the right solution. Low carbon technologies are too many and too varied, they constantly evolve and develop and technology needs vary from place to place. Simply sharing intellectual property will not deal with the initial development challenge, and could even reduce incentives to innovate – and therefore increase costs – as IPR is an incentive for companies to invest in developing technologies. Nor will it support the development of skills and know-how needed to transfer technologies successfully.

The UK believes that it is possible to deliver enhanced technology cooperation, whilst both protecting IPR and where appropriate sharing and transferring it. In most cases innovation is at its greatest when there are strong market incentives and a high level of competition: companies race to be the first to bring new technologies to market. At the same time effective collaboration can bring together the best skills from different companies and help make sure products are tailored to suit different locations. We need to reach an agreement in Copenhagen that capitalises on the benefits of both competition and collaboration, so that technologies are deployed cost-effectively wherever they are needed most.

WHAT DO WE WANT TO ACHIEVE IN A DEAL AT COPENHAGEN?

If countries commit to ambitious emissions reductions in Copenhagen, this will in turn encourage the development of national policies and regulations to support and stimulate investment in technology. Similarly, confidence that clean technologies will be developed and deployed quickly, and at low cost, will give countries more confidence to take ambitious emissions reductions targets. The UK wants to see an agreement on technology under which **existing technologies** can be disseminated more widely and where they are needed most around the globe; and **new technologies** are developed more quickly and through enhanced innovation activity and stronger collaboration between countries.

To support the deployment of **existing** technologies, we propose a bottom up approach in which developing countries say what they want in their low carbon development strategies, and developed countries help provide support to deliver these priorities through the carbon market, international financial assistance and capacity building.

To support the development of **new** technologies, we propose specific international partnerships, from research and development in the laboratory to commercial demonstration in the field.

To deliver these two things we need:

- **Robust national low carbon and climate resilient development strategies:** Each country would identify in their low carbon development strategies the specific technology policies, measures and investments needed to meet their mitigation commitments and contribute to their long-term development objectives, including proposals where further funding support is needed. This 'bottom-up' approach would be tailored to the requirements of different countries and would help ensure that technology needs are clearly identified and international funding supports each country's strategy for low carbon growth. Where technology is also important for adaptation, this would be included in climate resilient development strategies.
- **An effective global carbon market:** A fully functioning carbon market will help create the right conditions for the private sector to plan ahead and invest in low carbon solutions at the lowest cost.
- **International public finance:** To fill the gap until carbon markets are up and running and to support key new technologies that might not be supported nationally, such as those with high demonstration costs (e.g. carbon capture and storage or concentrated solar power) or those which are important for poorer countries, such as drought resistant crops. The Clean Technology Fund[39] created last year with support from the UK provides an example.

Carbon Capture and Storage (CCS)

CCS technology has the potential to reduce emissions from fossil fuel power stations (and other industrial plants) by up to 90%. It captures CO_2 before it reaches the atmosphere and puts it in an underground location.

Many of the processes involved in CCS are not novel, as they have all been demonstrated on a small scale, but they have yet to be demonstrated together at commercial scale. Until we have been able to do this, the costs of this technology will remain too high for it to be used widely.

We need to work with others to make this happen – no one country can develop this technology alone. The UK Government is amongst a handful of countries that have committed to supporting large scale demonstration of CCS technology and we are one of the first countries worldwide to put in place legislation to ensure the safe storage of CO_2 in the UK offshore area.

In October the UK will be co-hosting with Norway the Carbon Sequestration* Leadership Forum (CSLF) where we aim to scale up international action on Carbon Capture and Storage demonstration and build the momentum for an ambitious outcome at Copenhagen.

* Technique for the long-term storage of carbon dioxide or other forms of carbon.

- **Building skills and capacity in developing countries:** There is also a need to build the capacity of developing countries so they can create the right conditions for scaled-up investment in low carbon and climate resilient technologies. We need an agreement at Copenhagen that provides the policy support and technical assistance required by developing countries to innovate, create new markets, and stimulate the deployment of new and existing technologies. This is likely to involve work on national policy and regulatory frameworks, and support for India's idea of national and regional innovation centres.

- **International collaboration in the development of new technologies:** The UK would like to see international arrangements which would identify innovation gaps and encourage developed and developing countries and the private sector to work together where appropriate to accelerate development and demonstration of specific technologies.

What the UK is doing already

The UK is already supporting the International Energy Agency to develop International Technology Roadmaps, which help identify and address the barriers stopping technologies from being used on a commercial scale. The UK is also a major donor to the Clean Technology Fund (CTF), which is part of the Climate Investment Funds administered by the World Bank. The CTF is supporting innovative programmes in renewables, energy

efficiency and public transport, and is already providing valuable lessons on how developed and developing countries can work together to deploy low carbon technologies on the ground – lessons that can be applied in the negotiations in Copenhagen.

At Copenhagen we will aim to:

- Ensure existing technologies are rolled out more rapidly around the world by providing support to developing countries' priorities set out in their low carbon development strategies, increasing policy support and technical assistance to developing countries, and introducing market-based incentives for companies to enter into new partnerships with each other.
- Accelerate the development of new technologies so that they can be deployed commercially as rapidly and cheaply as possible, through increased investment in innovation and enhanced collaboration with developing countries, including through demonstration and sharing of know-how.

EU-China Near Zero Emissions Coal (NZEC) Initiative

The UK is working to build knowledge and expertise in China on CCS as part the EU-China Near Zero Emissions Coal (NZEC) agreement. The UK has provided up to £3.5m for the NZEC Initiative to assess the options for CCS in China as part of Phase I of the agreement. This project commenced in 2007 and the conclusions will be launched in Beijing on 28-29 October 2009 (http://www.nzec.info). The UK is working with the European Commission and China to develop the next two phases of the project, with the aim of launching Phase II (plant design and storage site characterisation) in early 2010 and having the demonstration plant operational by 2015.

2.4 Forestry and land use

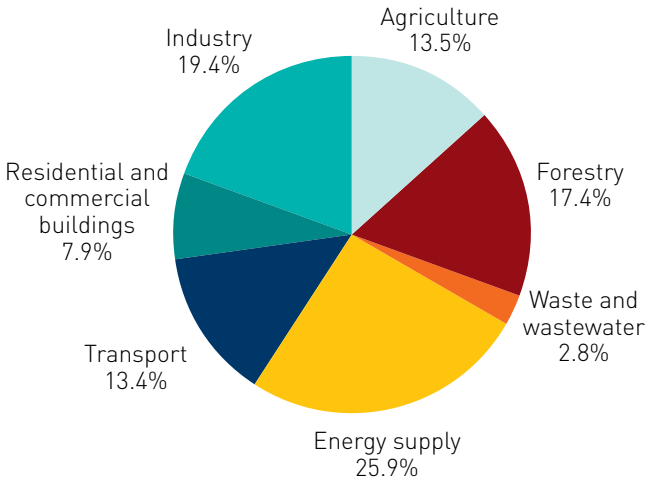
Key facts

- Emissions from deforestation are equivalent to the emissions from around 600 coal fired power stations[40a].
- The net benefit of halving deforestation is estimated to be around $3.7 trillion[40b].
- Forest resources directly contribute to the livelihoods of 90% of the 1.2 billion people living in extreme poverty[40c].
- In the tropics a forest area the size of England is changed to other land uses each year[40d].

THE CHALLENGE

There are big advantages to tackling deforestation. The international community recognises that it has a major role to play in tackling emissions, but at the same time rightly recognises that it cannot dictate what action needs to be taken. National governments, indigenous people and local communities need to take the lead.

Global greenhouse gas emissions by sector – from Intergovernmental Panel on Climate Change Fourth Assessment Report, Working Group 3 (2007)



Deforestation – mainly in the tropics – and changes in the way this land is used account for nearly 17% of human induced greenhouse gas emissions. This is more than the whole global transport sector. Including agriculture, the total is about 30%. We must reduce these emissions substantially to be on track for the 2°C target.

Avoiding deforestation helps preserve the wide diversity of plant and animal life that lives in forests. And it helps regulate our environment, for example through helping ensure natural water supplies are not interrupted. The Amazon rainforest alone releases 20 billion tonnes of water into the atmosphere each day,[41] which is critical to a mostly rain fed agricultural sector and hydro-power industry across Latin America.

Deforestation has negative impacts on indigenous peoples and local communities who rely on forests for their livelihoods. Sustainable forest management can help to reduce poverty by providing additional sustainable ways for local communities to earn a living. The Eliasch Review into the economics of tropical deforestation calculated the overall net benefit of halving deforestation at up to $3.7 trillion over the longer term.

The Eliasch Review

In 2008 Johan Eliasch, the Prime Minister's special representative on deforestation, led a review to look at how much finance is needed for reducing emissions from global deforestation, and what mechanisms could be used to reduce emissions effectively. The review concluded that the global economic costs of climate change caused by deforestation could rise to around $1 trillion a year by 2100 if we don't take action. The review estimates that, with global carbon trading, the finance needed to halve emissions from deforestation could be around $17-33 billion a year.

The review recommended that credits for avoided deforestation should be included in the international carbon market subject to appropriate conditions for monitoring, control and governance being put in place. This would provide significant funds for avoided deforestation in the medium term. However, in the short term, public and private finance will be crucial to support planning, capacity building and to help countries take early action. The review found that the public/private financing gap could be around $11-19 billion a year by 2020.

To tackle tropical deforestation effectively, the incentives for people to stop or avoid deforesting have to be right. Trees need to be worth more standing than they are as timber, or when they are cleared for agriculture. Those who make a living from logging or agriculture on cleared land need another way to earn money. Countries need the capacity to protect and monitor forests. It needs to be clear who owns forest land. Laws which prevent illegal logging need to be upheld. And the demand for sustainable timber needs to be increased.

WHAT DO WE WANT TO ACHIEVE IN A DEAL AT COPENHAGEN?

At Copenhagen the UK wants to reach agreement to reduce tropical deforestation by at least 50% by 2020, and to halt global forest cover loss by 2030 at the latest, while providing sustainable livelihoods to forest communities.

Financing for forestry

A key challenge will be to identify how best to finance action. There are a number of different estimates of the overall cost of avoiding deforestation – depending on which costs are factored in, and the alternative land uses considered. As well as replacing the lost income from avoided deforestation finance will be needed for capacity building and the promotion of alternative livelihoods. Taking these factors into account, the Eliasch review estimated that using carbon trading, the annual finance needed to halve deforestation emissions is in the range of $17-33 billion a year.

How will the costs be met?

In the medium to long term, the UK believes that including forestry in the carbon market is the best solution to generating significant sources of finance. But this will take some time and will depend on robust monitoring, control and governance arrangements, which are not yet in place. The EU has suggested government to government trading from 2013 with the possibility of full carbon market entry from 2020. Certain conditions will need to be met before forestry can enter the carbon market. Firstly, countries would need the capacity to monitor, report and have verified that deforestation had in fact decreased or been avoided, relative to a target representing additional action. Secondly, there needs to be enough demand for the carbon emissions that are saved. And finally the price of a tonne of carbon emissions from avoided deforestation should not be much cheaper than other abatement measures or the market will be unbalanced.

In the short term, public and private finance is therefore needed before forestry can be included in the carbon market, particularly to fund capacity building, alternative livelihoods and early action which leads to avoided deforestation. Some of these costs will be met by the country itself. Existing funds and programmes, including the Forest Carbon Partnership Facility (FCPF), the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest

Degradation in Developing Countries (UN-REDD), and the Congo Basin Forest Fund (CBFF), are already providing support. But these are unlikely to be sufficient. The UK is co-chairing a Working Group on Interim Finance for Forests which is considering how early finance can best be brought into the forest sector at scale. This includes ideas for leveraging private finance, for example through public-private partnerships, and bringing forward future finance, for example through bonds or early crediting for the carbon market.

Local priorities

We need to ensure that our approach not only reduces emissions but also takes account of the needs of indigenous people, helps reduce poverty and promotes biodiversity and other environmental benefits. Central to this is the involvement of local communities, including indigenous people, in decision making on how to avoid deforestation. Countries will also need systems to be put in place to ensure finance gets to those who need it; otherwise actions to reduce emissions will not be effective.

Forest Finance Working Group

Given the potential emissions reductions achievable by addressing deforestation, the $3.7 trillion net benefits and the importance of forests for communities, animals and plants that depend on them, there is an overwhelming case for supporting early action.

The Prince of Wales' Rainforest Project focussed international attention on the issues. On April 1st world leaders, attending a meeting in London hosted by his Royal Highness, established the Informal Working Group on Interim Forest Finance. The aim of the Working Group is to examine interim financing needs, mechanisms and architecture to help address tropical deforestation.

The Working Group met for the first time in Oslo on May 14th. A core group of countries (including the UK, Norway, Brazil, Papua New Guinea, Costa Rica) is co-ordinating the work, with the aim of delivering a final report to inform the Copenhagen climate negotiations in December.

Measuring emissions from avoided deforestation

There are significant technical challenges in measuring avoided deforestation and ensuring that the emission reductions are real. A more comprehensive approach to forestry and land use will help make sure that real emission reductions are occurring. The current system in developed countries is complicated and patchy – only certain activities can count towards greenhouse gas targets. We are seeking agreement at Copenhagen for a simpler and more comprehensive approach. For tropical forestry we need to establish rules for measuring emissions by setting baselines. This needs to accommodate countries that are rapidly deforesting as well as those which have conserved their forests. So we are interested in approaches that combine national levels of deforestation with average global historic levels. And we agree that developing country deforestation should include not just reduced emissions from avoided deforestation but also degradation, sustainable forest management and conservation (known as REDD+). We also need to be sure that reduced deforestation in one area does not just displace it elsewhere, and that avoided deforestation is permanent.

What the UK is already doing

The UK is supporting efforts to build country capacity and test approaches to engage with an incentive mechanism for avoided deforestation and has announced up to £100 million to support such work. The UK is already a major donor to the FCPF which is providing support to prepare 37 countries to develop national strategies and piloting payments to countries for reducing deforestation below an agreed level. The UK is also supporting the CBFF launched in June 2008, which will support transformative and innovative proposals from the countries of the Congo Basin and civil society to slow the rate of deforestation.

This builds on existing work to address the international drivers of deforestation such as the EU's 'Forest Law and Enforcement, Governance and Trade' (FLEGT) programme, which supports legislative and governance reforms in developing countries where illegal logging is a problem, and aims to improve the functioning of markets for legal and sustainable timber products.

At Copenhagen, we will aim to:

- Reach agreement to reduce tropical deforestation by at least 50% by 2020, and to halt global forest cover loss by 2030 at the latest.
- Take account of the concerns of indigenous peoples and local communities. And realise biodiversity and other co-benefits.
- Agree to substantial interim financing arrangements of action to reduce deforestation in advance of bringing it into the carbon market in due course.
- Work towards the more comprehensive inclusion of forestry and land use in developed countries' targets so that the sector makes a real contribution to the 2°C target.

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2.5 Adapting to climate change

THE CHALLENGE

Some climate change is unavoidable and countries all over the world will feel its effects. For countries like the UK, we may experience more frequent flooding and more extremely hot summers. But many of the world's most vulnerable countries face risks of more severe, more frequent droughts, floods and storms; sea level rise; and increased risks of famine and spread of disease.

Key facts:

- Drought is the most serious climate hazard for rural communities in Ningxia (China); the major drought of 2004–2006 led to crop failure in some areas and caused a direct economic loss of over $185 million[42] .
- Between 1900 and 2004, 73% of disasters were climate related; 94% of disasters and 97% of disaster-related deaths occur in developing countries[43a].
- Climate change brings the risk of increases in serious diseases such as malaria, dengue and yellow fever[43b].
- By 2025 two-thirds of the earth's population will suffer water shortages[43c].

The key imperative for future poverty reduction and development is to stop dangerous climate change happening and limit temperature increases to no more than 2°C.

But even if we manage this, all countries, particularly the most vulnerable, will need to adapt to a changing and more erratic climate. Adaptation to climate change can mean anything from better early warning mechanisms (for example for hurricanes) to planting more drought resistant crops, better water conservation, building roads and buildings to withstand floods, sea-level rises and more extreme temperatures, protecting communities from malaria where this was not previously a problem and providing better social security so people can build themselves back up after climate related disasters.

This will not be easy. Firstly, adapting to climate change is not an exact science. Climate predictions can only tell us about how likely it is that things will happen rather than exactly what will happen. This problem is compounded in developing countries, particularly in Africa, where lack of data, the limited level of modelling and complex weather systems mean predictions are still very long term (fifty year time periods rather than decades) and not geographically specific enough. Even when we have the information, we are still learning how to assess vulnerability and risk and choose effective policies, incentives and investments to reduce this.

Secondly, adapting to climate change is not just about a few one off investments. To effectively adapt to climate change a whole country, economy and society needs to factor climate risks into all their decisions. For example, Ministries of Agriculture need to know for how long their climate is going to be able to sustain a crop like coffee, farmers need to consider what rainfall they are likely to see so they know what crops to plant, businesses which rely on adequate water supplies need to know how this will change in the future, town planners need to take account of sea levels rises and future temperatures when designing buildings. This requires quite a shift in thinking and capability. The current approach, largely involving low levels of support for a few urgent adaptation projects identified by Ministries of Environment, is not equal to this task.

Thirdly, developing in a changing climate will cost more than expected. Developing countries which are working hard to grow their economies, reduce hunger, get children into schools and improve the health of their people, will need more resources than previously thought to keep on track. The UNFCCC estimates that the cost of adaptation in developing countries will reach $28-67billion per year by 2030[44]. But many donors are not even keeping their promises to reach the levels of aid previously committed.

WHAT DO WE WANT TO ACHIEVE IN A DEAL AT COPENHAGEN?

The UK wants to ensure that the poorest and most vulnerable countries get the finance, capacity building support and information they need to adapt to climate change.

Financing for adaptation

The UK wants new and additional finance to be available to developing countries, on top of developed country commitments to deliver 0.7% of their Gross National Income (GNI) as Official Development Assistance (ODA). This is discussed further in the next chapter. We are also exploring whether we can make greater use of mechanisms such as international insurance, which might provide an incentive to adapt, and a safety net for poor households, communities and governments when unavoidable impacts occur.

We would like additional finance to be directed to those who need it most, particularly least developed countries, small island developing states and drought and flood affected African countries. This could be achieved by targeting finance on the basis of poverty and vulnerability.

But we also want to see all existing finance used in a climate smart way. If countries, communities and the private sector take account of climate risk in the way they invest, then national budgets, aid and private investments will all help to build climate resilience. This will involve a higher proportion of aid budgets being directed to dealing with climate change because more of the money will be focused on investments which are good for both development and climate resilience.

Effective delivery

We do not want a new stream of finance to mean that priorities are set at the international level or that adaptation is isolated from normal decision making. National governments, in consultation with vulnerable people, must be in control of deciding how additional finance is spent. And making and acting on these decisions should be an integral part of normal development planning and implementation.

That is why we favour a 'compact' approach to adaptation finance, governance and delivery, which is set out in more detail in the governance and delivery chapter. Whilst we need to support the least developed countries' existing National Adaptation Programmes of Action, we would like to move over time to an approach where both additional climate finance and traditional development aid are directed to support country-owned climate resilient development strategies. Where possible finance would go directly into government budgets to back whole programmes, rather than trying to track money flowing to individual projects. On-going flows of finance would be related to results achieved on the ground, as monitored by the national government and local people.

What the UK is already doing:

The UK is currently testing a bottom-up, country led, integrated approach to adaptation planning through a £225m contribution to the multi-donor Pilot Programme on Climate Resilience (PPCR). This will help demonstrate that mainstreaming climate resilience into national plans in a country led, programmatic way is possible and effective; providing lessons to inform a post-2012 deal.

At the institutional level, we are supporting the UN and multilateral development banks (MDBs) to ensure that they are able to provide the right kind of support to developing countries in adapting to climate change. For example, we are supporting mainstreaming of adaptation within UN Development Programme (UNDP) and the Asian Development Bank.

We have also committed £100m to support for adaptation research over the next five years.

The International Development White Paper which will be published later in June 2009 will set out in more detail the action the UK is taking to support developing countries to respond to the impacts of climate change.

Capacity building and information

Developing countries will need support to get to the point where they have fully integrated climate resilient development strategies. Capacity building should be provided to help countries build on their existing National Adaptation Programmes of Action, towards full integration. This includes supporting governments to use climate information and assess vulnerability and risk, and create incentives for communities, households and the private sector.

We also want to see more international support for measures that will benefit all countries – including improved production of, and access to, climate information, climate risk tools and adaptation knowledge – to ensure countries have the tools they need to plan ahead effectively and build their resilience to climate change.

At Copenhagen we will aim to:

- Ensure that the poorest and most vulnerable countries get the financial support they need to adapt, with money targeted where it is needed most.
- Encourage developing countries to make coping with climate change an integral part of their national development planning processes, with developing countries being supported to make their own choices about the best way to adapt.
- Secure international support for better sources of climate information, tools for assessing the future risks of climate change and knowledge about how to adapt to climate change.

2.6 Helping developing countries pay for action

THE CHALLENGE

The costs of action on climate change will be much less than the costs of inaction. Nonetheless paying for action on climate change domestically and internationally raises a significant challenge at the time of an economic downturn.

Summary of Mexican proposal

Mexico has proposed establishing a world climate change fund to finance climate change action. This Fund should mobilize at least $10 billion annually. They suggest that in addition to traditional donor countries providing finance, developing countries should also be contributors, although they would expect to receive much more than they give. They have suggested that an agreed formula be used to calculate the amount countries contribute. This could be based on a variety of principles and indicators: polluter pays (emissions); equity (per capita emissions); efficiency (emissions per unit of GDP); ability to pay (GDP per capita) and population. The Least Developed Countries (LDCs) would be exempted from contributions.

The board of the fund or other funds/ institutions would decide how much finance developing countries would receive, most likely prioritising poorer and vulnerable countries. The Mexican proposal contains suggestions on governance, including a balanced voice for developed and developing countries, as well as annual guidance from, and reporting to, the Conference of Parties, which would decide on an existing multilateral institution to administer the fund.

One of the key attractions of the Mexican proposal is its transparent and dynamic formula, reached by consensus, for agreeing contributions.

What do we want to achieve in a deal at Copenhagen?

The UK would like to see agreement at Copenhagen to provide adequate, additional, predictable and timely international finance for those who need it most.

The amount of finance needed for adaptation, mitigation, forestry and technology will increase after 2013 when developing countries' capacity to invest in climate change related measures will increase. Recent estimates put the need at around $100bn a year by 2020. We expect the private sector to be the main source of finance, with a reformed carbon market providing a significant portion of incremental finance by 2020. This will provide real, substantial and growing investment in low carbon development in developing countries. We also expect developing countries to fund some of their activities themselves.

But international public finance will also have an important role to play, particularly for adaptation and, before it can enter the carbon market, forestry.

The UK would like to see all countries, except the least developed, contribute to this financing. Contributions should be determined based on a country's ability to pay and emissions. Developing countries would receive more money than they contribute.

To ensure that there is adequate finance to both tackle climate change and ensure we meet the Millennium Development Goals, the UK would like a proportion of this climate finance to be on top of long term ODA commitments. The UK will aim to ensure that all developed countries commit to providing new finance additional to their ODA commitments. The UK is committed to providing finance over and above our ODA commitment, which is to provide 0.7% of GNI as ODA by 2013.

In order to provide developing countries with the assurance required that committed finance will be delivered, in the context of a comprehensive deal in which all countries play their part, some form of automatic mechanism will be required. Norway has proposed an automatic international market-based mechanism. Where countries are unable to participate in such a scheme, they could use comparable domestic legislation to provide adequate predictable finance.

We will also remain open to exploring other sources of finance, such as the carbon finance that could be generated by including aviation and maritime emissions in the Copenhagen Agreement.

We believe a small percentage of ODA could also legitimately be used to tackle climate change given that some investments such as better management of water supplies or access to clean energy have both poverty impacts and climate change benefits. Based on our own ODA expenditure and estimates of the finance needed to reach the Millennium Development Goals, the UK will spend up to 10% of our ODA on activities which achieve both climate and development objectives. We will work towards this limit being agreed internationally.

In addition, national spend and ODA must be climate proofed. In the future development and climate agendas will be inseparable – the only secure path to development will be a low carbon and climate resilient one.

Together we believe that these proposals could add up to a new 'finance compact' which, in the context of ambitious mitigation offers from developing countries, could provide adequate, additional, predictable and timely finance for developing countries for adaptation, mitigation, forestry, technology and capacity building.

Summary of Norwegian proposal

Norway has proposed auctioning a percentage (2%) of emission permits and then using the revenue to finance climate change measures. These emission permits are known as Assigned Amount Units (AAUs) and each one is equivalent to one tonne of CO_2 emissions. AAUs are currently allocated to countries who have accepted binding caps or emissions targets under the Kyoto Protocol. For the Copenhagen agreement, Norway has suggested that an overall cap would be agreed, and then an appropriate international institution would auction a proportion (the 2%) of the AAUs at the international level before they were allocated to individual countries. An alternative would be for countries to decide to set aside a proportion of their binding targets in Copenhagen, and then the international institution would auction the AAUs to raise the finance.

Norway has suggested that this proposal would raise substantial and predictable funds for climate change actions under the Copenhagen agreement, ranging from $15-30 billion annually. The amount of finance raised will be dependent upon the carbon price, that is, how much the market will pay for permission to emit carbon, and therefore ultimately on the ambition of the overall agreement in terms of emissions reductions. The more countries participate, the more revenue that could be raised. This revenue could then be placed in a fund for adaptation or used for other climate purposes, depending on the governance arrangements of the Copenhagen Agreement.

One of the key attractions of the Norwegian proposal is its automaticity and positive relationship to the overall deal in Copenhagen and a fully functioning carbon market. The stronger the deal at Copenhagen, the higher and more stable the carbon price and the larger the likely revenues raised.

New governance arrangements will be required to manage this new increased volume of climate finance and ensure that it is spent effectively and targeted where it is needed most. The UK's proposition for reforming the international institutional architecture to deliver is outlined in the next section.

At Copenhagen we will aim to:

- Ensure that a proportion of climate finance is provided on top of existing long term Official Development Assistance commitments.
- Agree that future climate finance should be provided both by developed and developing countries, with contributions calculated according to emissions and countries' ability to pay.
- Agree systems for generating predictable revenues for action on climate change, so that developing countries have the confidence to take ambitious action, knowing that the money will be there.
- Ensure countries commit to meeting their existing long term Official Development Assistance commitments and climate proofing this spend.

2.7 Fair and effective governance - reforming the institutions

THE CHALLENGE

A key challenge for the negotiations at Copenhagen is to agree the institutional architecture necessary to underpin a new climate agreement. This new architecture needs to ensure that financial support is delivered at sufficient scale, where it is needed most, and according to national priorities.

Current international institutional arrangements for the delivery of climate finance are not up to this task. Their focus on individual projects is both slow and expensive to operate, with impacts which are often small scale and localised. Developing countries have long argued that current institutional arrangements fail to reflect their views and priorities, and that their complexity makes it difficult to access funding.

The UK believes that a reformed international institutional architecture is central to the Copenhagen agreement. There are four key principles which should underpin any new arrangements:

i) **Fair governance:** Governance arrangements need to provide for a stronger developing country 'voice' in the international system to reflect the shared challenge we face, ensure developing country views and priorities are reflected and that new governance arrangements command the confidence of all parties.

ii) **A country-led approach:** Developing countries should identify for themselves the actions they need to take on both mitigation and adaptation, and how they would use funding from the international community. They would involve key domestic constituencies in setting these priorities.

iii) **Effective delivery:** Delivery arrangements need to be simplified and streamlined so that it is much more straightforward for developing countries to access the funds they need, and so funds can be delivered

quickly where they are needed most. Countries should only be expected to develop and report against one set of plans to access a range of international finance. Flexibility should be applied in accepting plans from different national systems and at different levels of completeness and integration. We also need to move from an approach focused on individual projects to a more programmatic approach, which supports countries in transforming their economies and societies as a whole.

iv) **Trust and transparency:** We need to ensure that international standards of financial management are met under any new arrangements and that it is clear what results will be delivered from the funding provided. In return, contributor countries would be accountable for providing predictable, reliable sources of funding which gives recipient nations the confidence to plan ahead.

There are already a large number of international institutions delivering climate finance. The UK wants to explore ways to build on and reform these existing institutions where they are working well, and establish new bodies only where there are gaps that need to be filled.

WHAT DO WE WANT TO ACHIEVE IN A DEAL AT COPENHAGEN?

To put these principles into effect, the UK is proposing a new 'compact' approach, which would establish a new partnership of mutual accountability between contributors and recipients, allowing for the delivery of finance at scale to developing countries on the basis of country owned national development strategies.

The key features of the compact approach are set out below.

Reformed international governance

The UK believes that the UNFCCC should continue to play a critical role in setting the overarching guidelines for the delivery of finance. But countries and organisations should be trusted to make decisions about how to spend money in accordance with these guidelines.

The UK is calling for a new co-ordinating body at the international level which would be under the guidance of the UNFCCC and in which developing countries would have a strong and equal voice in decision making. The co-ordinating body would be responsible for managing international climate finance contributions, as well as ensuring coherence with existing bilateral and multilateral channels of climate finance. It would work with its trustee to ensure that all financial contributions were properly accounted for. And

it would allocate contributions from a central pot to adaptation, mitigation, technology and forestry according to the most pressing priorities.

The co-ordinating body would ensure national low-carbon and climate-resilient development strategies were endorsed internationally. It would be supported by 'thematic bodies' – technical panels (e.g. for mitigation, adaptation and forestry) – to which countries could submit their national plans. In most cases these bodies could be existing institutions, reformed or remodelled so that they could engage effectively with the national plans. These thematic bodies could also develop national allocation frameworks that took into account factors such as the quality of plans, level of need, availability of finance from other sources and capacity to absorb finance. It would be important that these thematic bodies were able to make technical judgements quickly and professionally, separate from broader political questions which would be dealt with at higher levels.

Stronger local decision-making

The UK believes that decisions about investment priorities are best made locally. We want to reach agreement at Copenhagen that spending decisions should be made at the country level. Developing country governments, working with key national stakeholders, such as business, NGOs and local communities, should be able to prioritise what they spend the money they receive on.

The UK believes that nationally owned low carbon and climate resilient development strategies would provide a good basis for allocating finance. We envisage that these low carbon and climate resilient development strategies would build on existing national plans and planning processes. While we would envisage certain key elements being in the plans we would not be prescriptive about the form. Some countries, particularly the more advanced developing countries, could prepare or draw on existing plans that take a strategic overview of measures across their entire economy, whereas others might focus on measures being taken in a few key sectors. Some might have low carbon plans which are separate from climate resilience plans

which in turn are separate from development strategies. Some may have gone far enough to integrate some or all of these parts. The more integrated the approach, the easier it will be for countries to make choices and trade-offs, as well as identify potential 'co-benefits' to policies for wider environmental priorities and development goals. The critical test would be that the plans provide a coherent account of each country's strategy to move towards a low carbon and climate resilient economy, with the most economically, socially and environmentally effective measures prioritised.

Any new system must also ensure appropriate monitoring, reporting and verification (MRV) of both action and support, building trust and transparency between contributors and recipients by demonstrating that action is being taken and that funding is being provided and targeted where it is needed most. Different levels of monitoring should be used as appropriate depending on whether support is for mitigation or adaptation.

To increase accountability, developing countries should report progress against their national plans and strategies and how much financial support they have received from the international community to implement them. Future allocations of resources would be linked to results. Contributing countries should also report to the UNFCCC the total amount of financial support they have provided and from what sources (e.g. bilateral finance, or contributions to multilateral funds).

Capacity Building

We anticipate that the integration of low carbon development and climate resilience into existing plans and planning processes would incur additional costs, and require new skills and capacity. The international community should commit to technical and capacity building support to developing countries to help them with their planning. The end goal would be for all national development plans to be climate 'proofed' with low carbon and climate resilience integrated, though, as recognised above, countries would move to this over different time scales, as appropriate to their development.

At Copenhagen we will aim to:

- Agree simple, fair and efficient governance structures – with equal representation of contributors and recipients.
- Ensure decisions about spending are made at the country level and developing countries are able to prioritise what they spend their money on.
- Agree that climate finance should be allocated against country owned low carbon climate resilient national development strategies, consistent with internationally agreed standards of financial management.
- Agree robust monitoring, reporting and verification arrangements to ensure action is happening on the ground and contributors are delivering on their financial commitments.

2.8 The road to a global deal

The UK is working hard with our international partners to ensure our priorities are reflected in the final negotiations.

The UK negotiates as part of the European Union (EU) and is therefore working with our European partners to develop a strong joint position in time for Copenhagen. As a member of the EU, the UK is part of the largest single market in the world, giving us an important opportunity to act on sufficient scale to influence low carbon development across the global economy. The UK played a leading role in developing the EU's 20/20 Package which forms the bedrock of the EU's negotiating position in the climate talks and is committed to working with our EU partners to reach an ambitious outcome at Copenhagen.

Through the EU, the UK is playing its full part in the formal negotiations under the UN Framework Convention on Climate Change (UNFCCC). This is the key international forum with the wide legitimacy and scope to conclude a global agreement; the UK is fully committed to the UNFCCC process.

The international community agreed at Bali in 2007 to seek to conclude a global climate agreement within two years – the process which culminates at Copenhagen this December. Already this year negotiators from across the world have held two formal sessions to prepare the ground for the Copenhagen summit. The UK will be working intensively to make progress towards a deal through further negotiating sessions in August, September and November, culminating at COP15 (the Conference of the Parties) at Copenhagen in December.

The UN Process Explained: from Bali to Copenhagen

The United Nations Framework Convention on Climate Change (UNFCCC) was agreed at the Earth Summit in Rio de Janeiro in 1992 and was signed by 189 countries. The convention's central aim is to stabilise greenhouse gases in the atmosphere at a level that would avoid 'dangerous climate change'. The Kyoto Protocol to the convention was subsequently agreed in 1997, setting out legally binding emissions reduction targets for developed countries.

In December 2005 Parties to the Kyoto Protocol agreed to start negotiations on the targets for developed countries with a view to avoid a gap between the first and second commitment period (which is due to start at 2012). At the landmark meeting of UNFCCC Parties in Bali in December 2007, all countries also agreed to start formal negotiations under the Bali Action Plan.

Both developed and developing countries signed up to the Bali Roadmap, consisting of the Bali Action Plan and the negotiations under the Kyoto Protocol, for negotiations on an agreement to take the world beyond the first commitment period of the Kyoto Protocol – due to end in 2012 and also to enhance the implementation of the Convention.

The Bali Roadmap set out a clear and comprehensive agenda for negotiations and a timetable ending in 2009. Over 2009, five major meetings are being held under the UNFCCC, culminating in a meeting in December in Copenhagen at which parties to the Convention will be aiming to deliver a comprehensive global agreement to put the world on a global emissions trajectory that avoids dangerous climate change.

To complement the formal UN negotiations, the UK will continue to press for ambitious action in all the key international fora during 2009. We intend to work through these fora to build understanding of other countries' positions and develop greater clarity about the deal to be done in the final negotiations at Copenhagen.

The key meetings during the year include:

Group of Eight (G8): The members of the G8 are Canada, France, Germany, Italy, Japan, Russia, the United Kingdom and the United States. They meet once a year at Heads of State/Government level. In the past, the G8 has proven to be a successful forum for driving forward action on climate change. In 2005 under the UK presidency, climate change was raised to the top of the G8 agenda. This year the G8 Presidency is held by Italy and the summit in July will offer a key opportunity for developed countries to add further momentum to the negotiations. http://www.g8italia2009.it

The UK's work overseas

We will only succeed at Copenhagen if we can build the political conditions for an agreement of sufficient urgency and ambition. Each country needs, like the UK, to see an overriding national interest in an effective global effort, and to be ready to play its part in delivering that effort.

The FCO, through its network of 261 diplomatic and consular missions around the world, is helping to establish the political conditions we need. Promoting a 'High Growth Low Carbon Economy' has since 2007 been one of the FCO's four strategic priorities.

The understanding provided by the FCO network of local political and economic circumstances is shaping our engagement with key partners, making us better able to build the new coalitions of high ambition that will drive the low carbon transition.

The FCO's diplomatic campaigns, for example on Low Carbon Prosperity, Climate Security and Climate Equity, are bringing new voices into the debate, building a foundation for faster and stronger action:

- momentum is building rapidly behind the proposition that a low carbon recovery that aligns the requirements of economic security, energy security and climate security offers the only sure way out of the current economic crisis;
- the intolerable risks that climate change poses to collective and national security feature increasingly in the domestic debates of key allies, adding new urgency to the response;
- there is growing recognition that the voice of the poorest and most vulnerable countries needs to be more clearly heard in the international debate.

In addition the FCO network has been instrumental in building consensus across the EU that it is in Europe's economic interest to be an early mover on carbon; in accelerating the deployment of carbon capture and storage in the major coal burning economies; and in promoting local assessments of the economic implications of climate change as a basis for policy.

A strong and well targeted diplomacy of climate change is not an optional extra, tacked onto traditional foreign policy. It is an essential precondition for success on climate – and for the capacity of our foreign policy to maintain the external conditions on which the UK's security and prosperity depend.

Major Economies' Forum (MEF): President Barack Obama announced the launch of the Major Economies Forum on Energy and Climate on March 28, 2009. The Forum is intended to help generate the political leadership necessary to achieve a successful outcome at Copenhagen. The major economies participating in the Major Economies Forum are: Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Korea, Mexico, Russia, South Africa, the United Kingdom, and the United States. They will meet at Heads of Government level in Italy in July.
http://www.state.gov/g/oes/climate/mem/

G20: The G20 brings together Finance Ministers and central bank governors. The UK holds the Presidency this year, and meetings will be an opportunity for both developed and developing countries to work together on climate financing issues, in support of the broader UNFCCC process. In Washington last year the G20 met for the first time at Heads of State/Government level. They subsequently met again in April for the London Summit and will meet for a third time in Pittsburgh in September. http://www.g20.org

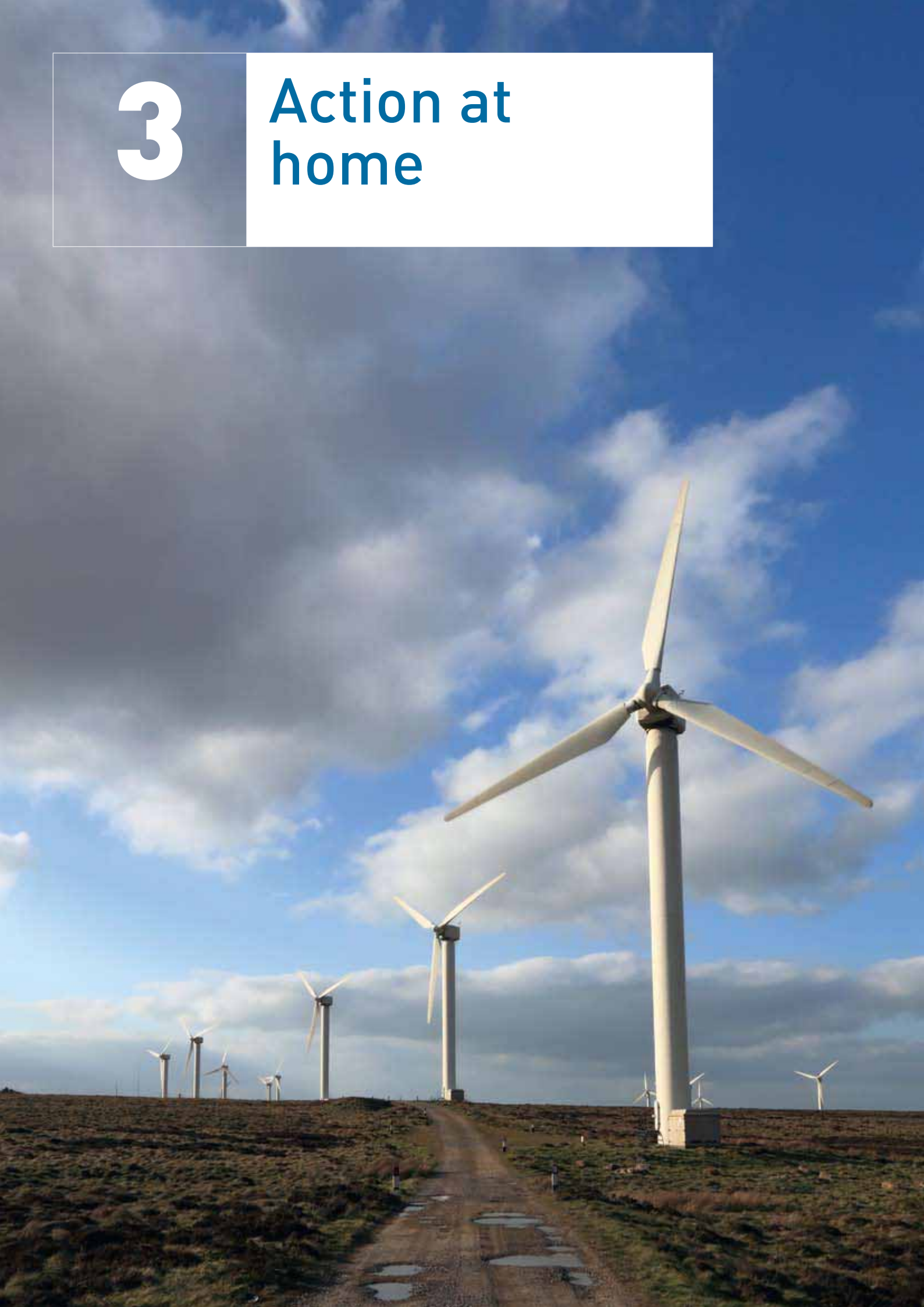
UN High Level Event: The UN Secretary General's Climate Change High Level Event will be an opportunity to bring a wider group of countries together at Heads of State and Government level on climate change, including the most vulnerable countries.

The UK will be working with other countries during the course of all these meetings to develop bold proposals and to build alliances that will support a comprehensive and ambitious global deal on climate change.

THE ROAD TO COPENHAGEN – KEY INTERNATIONAL MEETINGS OVER THE NEXT 6 MONTHS

Date	Event and location
July 8th-9th	G8 Summit, L'Aquila
July 9th	Major Economies Forum, Heads of Government meeting L'Aquila
August 10th-14th	3rd UNFCCC intersessional, Bonn
September 22nd	UN Secretary General's Climate Change High Level Event
September 24th-26th	G20 Summit, Pittsburgh
September 28th-October 9th	4th UNFCCC intersessional Bangkok
October 29th–30th	EU Council
November 2nd-6th	5th UNFCCC intersessional, Barcelona
Dec 7th-18th	COP15, Copenhagen

3 Action at home



3.1 Our record

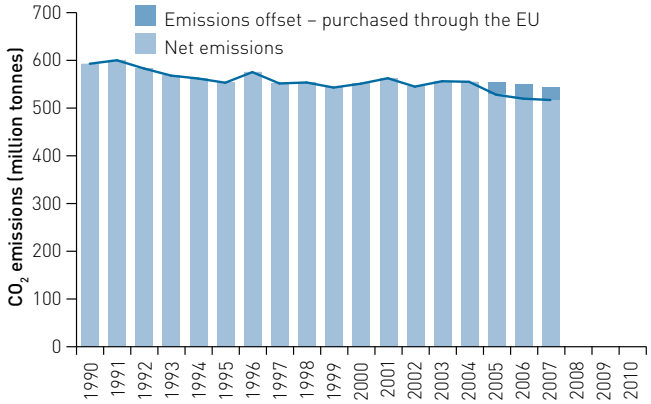
The UK needs to make its own contribution to the international effort to tackle climate change and make the transition to a low carbon economy. This section sets out how we are acting at home to achieve this.

The Government will shortly publish a White Paper on energy and climate change to outline a low-carbon future that is fair, prosperous and energy-secure. The White Paper will show how we will meet the UK's ambitious climate change targets, and meet the obligation imposed by the ground-breaking 2008 Climate Change Act to set out policies and proposals for meeting the UK's first three carbon budgets.

The UK has been one of the most active countries in cutting emissions, playing a major role in negotiating the Kyoto Protocol and undertaking to make substantial cuts. We are now the only country on track to achieve almost double the reduction we committed to at Kyoto.

In 2008 net UK emissions were more than 20% below 1990 levels compared to our actual commitment to reduce greenhouse gases to 12.5% below 1990 levels by 2008-12. Current projections suggest that this figure could reach 23% below 1990 levels by 2010. Similarly, the EU is currently on track to meet its Kyoto targets.

The Level of UK Emissions Since 1990[45]



Our savings against our 'business as usual' emissions have since 1990, come from energy efficiency improvements; lower carbon fuels and from lower emissions of non-CO_2 greenhouse gases – for example methane:

- **Energy efficiency improvements** to businesses, households and the public sector. Key policies include the EU Emissions Trading System, the Carbon Emissions Reduction Target[46], the Climate Change Levy[47] and Climate Change Agreements[48], the work of the Energy Saving Trust and Carbon Trust and UK building standards.
- **Greater use of lower or zero carbon fuels** such as gas and renewables with a shift away from more carbon intensive fuels such as coal. Key policies include the EU Emissions Trading System, the Renewables Obligation and innovation support through bodies such as the Technology Strategy Board. These changes and improvements in energy efficiency have reduced carbon emissions per unit of electricity generated by over a quarter since 1990.
- **Lower emissions of non-CO_2 greenhouse gases** through reductions in the amount of biodegradable waste going into landfill and an increase in landfill gas collected and burned for energy. Key policies include landfill tax and other industry regulation. Methane emissions and nitrous oxide emissions have fallen by 53% and 47% respectively since 1990[49].

WORKING WITH AND THROUGH THE EU

One of the most effective ways for the UK to establish a framework to move to a low carbon economy is to work with and through our partners in the EU. The UK played a leading role in developing the EU's Climate and Energy Package which forms the basis of the EU's negotiating position in the climate talks.

The EU Climate and Energy Package

On 12th December 2008, European leaders agreed a new EU climate and energy package. The package, which was approved by the European Parliament on 17 December and will cover all 27 Member States, is the most far-reaching legislative effort attempted on climate change so far. Also known as the "20-20-20 deal", the new legislation requires the EU to:

- Cut its greenhouse gas emissions by 20% below 1990 levels by 2020 (or by 30% provided that other developed countries commit to comparable emissions reductions and economically more advanced countries contribute adequately according to their responsibilities and respective capabilities),
- Source 20% of energy from renewable energy sources by 2020.
- A voluntary target to reduce energy consumption by 20% on what it would otherwise have been in 2020 was also agreed.

3.2 Our strategy for the future

The Government's further action will be governed by the target Parliament set in the Climate Change Act 2008, to achieve an 80% emissions reduction target for 2050 (compared with 1990 levels).

The Climate Change Act

The Climate Change Act became law in the UK in November 2008 and makes us the first country in the world to have a long term framework for cutting greenhouse emissions by at least 80% by 2050, with a system of legally binding 'carbon budgets' capping emissions over successive five-year periods. The Act established a new independent body, the Committee on Climate Change, to provide expert advice to Government on the level of carbon budgets and to report annually on progress towards meeting them.

In May the first three carbon budgets, covering the periods 2008-2012, 2013-2017 and 2018-2022 came into force. They require reductions in greenhouse gases of just over 22%, 28% and 34% respectively, compared to 1990 levels. The budgets are consistent with the UK's share of the EU's target to reduce greenhouse gas emissions to at least 20% below 1990 levels by 2020. We intend to tighten the budgets further once a global deal to reduce emissions in the period after 2012 is reached, and after agreement on how the resulting EU target is shared between Member States. We will ask the Committee on Climate Change to review its recommendations first, and will take account of their advice in amending the budgets.

If the EU raises its reduction target to 30% in light of a successful deal at Copenhagen, the UK Government will only then buy international 'carbon credits' through the carbon market to help meet the budgets. We have set a *zero limit* on the use of credits outside the EU Emissions Trading System (ETS) for the first carbon budget period.

The EU ETS will play a major part in making the reductions to meet the 30% target and we would continue to expect that the majority of these reductions would take place within the EU.

The EU Emissions Trading System

The EU Emissions Trading System (EU ETS) was launched in 2005 and is the first multilateral carbon trading system of its scale, anywhere in the world. It puts a cap on emissions from large point sources such as electricity generation and heavy industry, creates a carbon price, and allows the companies involved to trade with each other so emissions cuts can be made where they are cheapest.

The EU ETS has already played a significant role in guiding business investment decisions and guarantees annual emission reductions of around 500 million tonnes of CO_2 by 2020 across the EU when compared to 2005 emissions. This would be equivalent to avoiding the entire CO_2 emissions emitted by the UK this year. These benefits will increase from 2013, as we have successfully argued for an annual reduction in the cap on emissions to 2020 and beyond. From 2013, the power sector will also have to pay for every tonne of carbon it emits, so increasing the incentives to reduce emissions.

The Government will drive forward further action across a range of key factors:

Power: In the period to 2050, a far greater proportion of the world's energy will come from low carbon sources with renewable energy, new nuclear power and clean fossil fuels through carbon capture and storage (CCS) forming the bedrock of that new energy. The UK's renewable energy target under the EU Climate and Energy package is to source 15 % of its energy from renewables by 2020. We have already tripled the amount of renewable electricity generation to 5% since 2001 and we are now the leading country in the world in terms of offshore wind operating capacity. Wind last year provided the electricity for two million homes[50]. We will shortly publish a UK Renewable Energy Strategy setting out how we will support industry to expand renewables in the UK.

Helping People to Make Better Use of Energy: Many opportunities to reduce emissions are unlikely to be taken up without policies to encourage long-term behaviour change, and to overcome other barriers that may prevent or deter individuals and businesses from taking cost-effective action to reduce their emissions, particularly on energy efficiency. Policies to help include the Carbon Emissions Reduction Target, which obliges electricity and gas supply companies to promote the uptake of low carbon and energy saving measures in people's homes, and England's Act on CO_2 campaign, which is designed to encourage people to reduce their own carbon emissions.

Transport: We must find cleaner ways to travel and transport our goods. The Government will shortly publish its strategy for delivering this, which will include improving the efficiency of conventional road vehicles and encouraging people and business to take up lower carbon choices; supporting the development and deployment of ultra-low carbon vehicles; developing low carbon fuels and getting new infrastructure in place; changing the way we use transport; and making better use of low carbon modes, like walking, cycling and public transport.

Businesses and public sector: Our businesses and public sector need to play their part in reducing emissions. To support businesses, the UK Government is incentivising organisations to act by, for example, including carbon intensive businesses in the EU Emissions Trading System and through the Climate Change Levy and Climate Change Agreements to drive energy efficiency improvements.

Act on CO_2

The UK Government's Act on CO_2 campaign aims to encourage people to take practical steps to help reduce their carbon footprint. Launched in summer 2007, the campaign has used advertising on TV and radio, in the press and online to raise awareness and provide guidance on the actions that people can take at home and in their day-to-day lives which will enable them to save energy and reduce their carbon emissions. Using an online 'carbon calculator', members of the public can work out their personal carbon footprint, following which they can contact the Act On CO_2 advice-line for advice on how to reduce its size. In 2009, the campaign will aim to continue this work, as well as offering more information about climate change and actions that members of the public can undertake as we build up to Copenhagen in December. http://campaigns.direct.gov.uk/actonco2/home.html

Help Wales reduce its carbon footprint

The Welsh Assembly has a Help Wales reduce its carbon footprint campaign and have produced a carbon calculator specifically designed for the people of Wales. To visit it and find out more visit: www.walescarbonfootprint.gov.uk.

3.3 Adaptation in the UK

The UK Climate Projections 2009, published on 18 June 2009[51], illustrate the extent of the changes the UK might face as a result of climate change: warmer, wetter winters and hotter, drier summers, with more drought, heat wave, flooding and sea level rise. The Projections emphasise the need for strong global deal at Copenhagen but also show that some climate change is now inevitable. The Government is taking action to adapt to climate change as a result of temperature increases we are already locked in to.

More than a hundred providers of important public services will be required to report on their assessment of climate risks and their plans to respond to them. Each government department will produce an adaptation plan by spring 2010. In addition:

- We have more than doubled spending on managing the risks of flood and coastal erosion – reaching a total of £2.15 billion between April 2008 and March 2011[52].
- Since summer 2007, 85 flood defence schemes have been completed, protecting 58,000 homes[53].
- The Highways Agency have introduced new road surfaces and introduced improved drainage standards for new works and renewals so that we have better drainage allowing for increases in rainfall intensity of 20-30% and a road network that is less likely to be affected by higher future temperatures.

- A Heat-Health watch system now operates between 1 June and 15 September to help alert people to the health problems associated with high temperatures.

Taken together, the measures outlined in this section, and the forthcoming White Paper, demonstrate that the UK is playing its full part in the fight against climate change.

Conclusion

The prize on offer at Copenhagen is a big one: a new international agreement of sufficient scale to respond to a global challenge and drive the transformation of the world's economy towards low carbon development. All countries will need to show courage and ambition: in extending international co-operation into new spheres, such as technology; creating the right conditions for the private sector worldwide to make low carbon investments with confidence; and in building mutual trust between all participants in the agreement that commitments made at Copenhagen will be delivered.

That is why the UK is pushing for ambition and urgency at home and abroad.

At Bali in 2007, the international community set itself the challenge of reaching a new global deal at Copenhagen this year. We have seen intensive work involving over 190 countries under the UN Framework Convention on Climate Change and this needs to continue in the months ahead. Many difficult issues remain to be resolved in the negotiations: the scale and form of different countries' commitments to reduce emissions; how these commitments will be financed and monitored; and how to develop international institutions that are fit for purpose and in which all countries have confidence. The challenges facing negotiators and political leaders are formidable, but the UK believes an ambitious agreement can and must be achieved. Copenhagen is a key moment for

the international community to rise to the challenge it has set itself.

Over the next few months, the UK will be working closely with our EU partners and others to find solutions to these questions. This document sets out the UK's thinking on finance, technology, institutional reform and forestry and other issues – our contribution to concluding a successful agreement. We welcome the ideas that others are putting forward and look forward to making progress in the climate negotiations and the many international fora that are focusing their energies this year on the kind of settlement we need to see at Copenhagen. An open, imaginative debate leading to decisive action is essential to build a strong, transparent agreement in which all countries have confidence.

In the UK we are making our own contribution towards tackling climate change. The forthcoming Climate and Energy White Paper will set out the next stage in our plans for low carbon development – our contribution to addressing a shared global responsibility.

Citizens in all parts of the world have a stake in success at Copenhagen. Many parts of civil society including business, NGOs, youth organisations, representatives of all faiths, local leaders and community groups are making their voices heard in demanding that governments around the world raise their sights and work with others to conclude a comprehensive agreement. Many UK organisations and groups are at the forefront of this debate and have a big role to play in campaigning internationally to build sustained pressure for an ambitious agreement. The Government welcomes the contribution of all those working for an ambitious agreement at Copenhagen and is committed to building a strong partnership with them as we seek first to conclude a deal, and then ensure it is implemented. We believe it can be done and will do all we can to make it happen.

Everyone can play their part. Go to **www.actoncopenhagen.gov.uk** to find out more.

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FN1: countries listed in order of their upper 2020 target vs. 1990 levels

FN2: all targets include potential use of overseas credits through carbon market except for Japan

FN2: targets have also been proposed or are under consideration by Belarus, Iceland and Norway.

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[47] The Climate Change Levy (CCL) is a tax on energy delivered to non-domestic users in the UK. Its aim is to provide an incentive to increase energy efficiency and to reduce carbon emissions.

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Printed in the UK for The Stationery Office Limited
on behalf of the Controller of Her Majesty's Stationery Office
ID6152484 06/09

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