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Transcript

The Art and the Science of International Climate Change

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Tom Burke:

Good afternoon, ladies and gentlemen. My name is Tom Burke. I'm the chair for this session this afternoon. We are on very constrained time, so I'm not going to beat about the bush at all, simply to introduce Chris and let him talk, just to say two things. One, operational, please switch off your phones. As I was saying to Chris before we came down, I was once giving a seminar at UCL on climate change to a group of students and my phone rang and it was Chris calling me. So I got a lesson in not being interrupted. So please turn your phone off.

And the second thing is just to say that this is the third speech that Chris has given in a series of speeches setting out the sort of, what you might call 'the Huhne doctrine' on climate change. But the first time actually we've had, that I can recall, a minister setting out a series of major statements to sort of set out a whole pathway forward on the issue. So without any further ado, Chris.

Chris Huhne MP:

I am delighted to be here today, and to give the last of a series of three speeches about climate change. Three weeks ago, I spoke about the economics of climate change. The case for green growth. Two weeks ago, I spoke about the geopolitics of climate change. About how it threatens our security in ways we haven't yet grasped.

Today, I will talk about the science of climate change, and what it tells us about the timetable we have. And the global negotiations, and how long it will take to reach an agreement. It is the tale of two timetables: the scientific, and the political. But first, let us remember how we got here.

The basics

Nearly two centuries ago, a French mathematician and physicist named Joseph Fourier wondered why the Earth was warm enough to support life. We are the best part of 100 million miles away from the sun. The planet ought to be much colder. Fourier considered a new possibility: that the atmosphere that we breathe also traps heat. In 1827, he described the greenhouse effect.

Let me put that into perspective. Our understanding of the greenhouse effect has been around longer than the periodic table. It predates the study of genetics and the theory of evolution. It's not only well-understood – it essential to life. Energy from the sun passes through the atmosphere and

warms the earth. The earth radiates heat, which is absorbed by the trace gases in the atmosphere. The warming is fed back, and amplified. Without it, our planet would be some 33 degrees colder.

Over millennia, global temperatures and weather patterns vary. A natural equilibrium keeps it all in balance. Given enough time, Nature is largely self-correcting.

Changes

But since Fourier made his discovery, things have changed. Much of the planet has industrialised. Its population has soared. We have moved from small scale agriculture to large scale industry. We have swapped horses for horsepower. And we are emitting more greenhouse gas than ever before. The amount of carbon dioxide in our atmosphere is rising. Concentrations of CO₂ have grown by 40 percent since pre-industrial times. Two thirds of that increase has happened in the last 50 years.

With all this extra greenhouse gas floating about, we would expect the Earth's surface to get warmer. And so it has: by about 0.8 degrees in the last century. Much of this warming has occurred in the last 50 years. From 1960, temperatures have risen at an average rate of 0.13 degrees per decade. The ten warmest years on record were all from 1998 onwards.

So the basic science is clear. It tells us these three things: greenhouse gases warm the planet. Global emissions continue to climb. And the world is warming up. It is a compelling picture, and one supported by a growing body of evidence. Arctic sea ice is melting. Since 1900, global sea levels have risen by more than eight inches. Severe droughts are now twice as common as they were in 1970. Research suggests human action doubled the risk of the 2003 European heatwave. And climate change made the autumn 2000 floods in the UK about twice as likely. Every major scientific institution in the world concurs: the Royal Society, the US National Academy of Sciences, the *Academie des sciences*. Change on this scale cannot be explained by anything else.

There is no computer model of world temperature and climate that can explain what has happened without greenhouse-gas induced global warming. None. Unless we act to curb greenhouse gas emissions, continued warming is not a matter of speculation. It is inevitable. And scientists fear it will accelerate.

Thresholds

As temperatures rise, so does the risk of crossing dangerous thresholds in the climate system – leading to sudden, irreversible change. The Amazon rainforest holds about 10% of all the carbon stored in ecosystems. If it dries out, scientists fear it could release more carbon than it absorbs. Warmer temperatures and more frequent droughts would kill more trees, releasing more carbon. Arctic ice helps to regulate global temperature by reflecting sunlight back into space. As it melts, it exposes dark ocean beneath, which absorbs more heat, melting more ice and amplifying the warming.

The dangers

We cannot risk setting off these climate chain reactions. Let us be clear: the kind of world where global warming hits three or four degrees is not the kind of world we want to live in. It is not about sunbathing in the Scottish Highlands. It will likely be a nastier, more brutal world. Climate change above 2 degrees is called catastrophic for a reason.

Warmer air carries more water. Humidity means storms, hurricanes, flash floods. Understanding these risks means setting aside ideology and being clear-eyed about the dangers. Forget the political posturing, and listen to the people who are paid to think about risk. In 2009, the Association of British Insurers said – and I quote – ‘our assessment of climate change convinces us that the threat is real and is with us now’. Last month, more than 70 European companies, including Ikea and Coca Cola, asked the European Union to aim for more ambitious carbon cuts.

Scientists tell us we must act. Businesses tell us we must act. Even militaries tell us we must act. We have a democratic responsibility to answer the call. Government governs with the consent of the people. That consent is given only in exchange for basic assurances: that government will provide and protect. Climate change threatens our ability to do both. Government cannot sit idle. If it were any other threat to our very existence, we would act. We would not shirk from our duty to provide our people with clean water, or enough food, or protection from invasion. A stable climate is no different.

The deadline

Luckily, there is a growing political consensus, as we saw in Cancun; and a plan. We need to keep global warming to within 2 degrees of pre-industrial levels to avoid the worst effects of climate change. That doesn't sound

ambitious. The kind of timescales used in climate science - looking ahead to 2050, or back to the 19th century - can give the impression that this is all quite distant.

Nothing could be further from the truth. Unfortunately, in our complex climate system, there is a delayed reaction between emissions and warming. We could turn off the engine today, but the flywheel is still spinning. It will not come to rest for some time. Temperatures have risen by 0.8 degrees already. Even if we completely stopped all emissions, today, they would still rise by about half a degree. That takes us more than halfway toward our limit. Next time someone mentions the 2 degree limit, remember that we are already 1.3 degrees along the way.

So this is not an abstract discussion. There will come a time when it is too late to turn this thing around. That time is rapidly approaching. If we do nothing now, it will cost us more to do something later – environmentally, economically, and politically. Sticking to our 2 degree limit means global emissions must peak by 2020 at the latest. To avoid radical upheaval, we need to shift the world economy onto a low-carbon path by the middle of the decade. What does this mean?

This Parliament will end in 2015. If we have not achieved a global deal by then, we will struggle to peak emissions by 2020. It will be more expensive, more divisive, and more difficult. This is the last Parliament with a chance to avoid catastrophic climate change.

The gap

The good news is that we have already started. Every major economy in the world has targets that will curb carbon emissions. The US plans to cut its emissions by 17 percent. China wants to reduce the carbon intensity of its economy by between 40 and 45 percent. Brazil has targets to reduce its emissions by at least a third below projected levels.

These countries – along with all major economies – are making progress on the practical programmes to deliver their commitments. The bad news is that – although it is significant – it is not enough. We have rather a long way to go. Current global pledges will only get us halfway to a safer path.

If every pledge made at Copenhagen was implemented in full, we would still be some 5 Gigatonnes short of our target. To give you a sense of scale, that's the equivalent of total global emissions from cars, trucks and buses in 2005. Over the next ten years, emissions must rise less than they did between 2009

and 2010. So there is a gap between the scientific reality and the political response. How can we close it?

Finding a fair and just answer to that question is the one of the sternest tests of diplomacy we have ever faced. Therein lies the art of international climate change: the co-operation and negotiation that will lead us to a safer, cleaner future.

The solution

We must do three things. First, we need to walk the walk. We need to change the investment landscape, locking in low-carbon energy and infrastructure. That means demonstrating we can build a thriving low carbon economy here in the UK – and more widely in the EU. It also means demonstrating the advantage of low-carbon growth. Not just in developed but also in developing countries, which can leapfrog our old technologies and take advantage of new ones. The best way to get electricity to a village in India might not be to connect to an old grid, but with solar power and decentralised storage. We must show that the pathway to prosperity for all the world's people does not lie with pollution.

Second, we need to rebuild public and political support for action at home and abroad. That means using soft diplomacy to shift the politics and build coalitions. Explaining the case for action not just on environmental grounds, but on economic and security grounds as well. Using targeted financial and practical support to help developing countries build cleaner, more climate resilient economies.

And third, we need to come together to forge a new agreement on global emissions. That means further developing the global legal framework over the next few years. And working with major economies to build the political conditions that must be met before a deal can be signed.

These three tasks must be carried out with clarity of purpose and strength of ambition. We cannot afford to ignore any one approach, or favour another. We must pursue each with vigour.

Working from home

The first step is to get our own house in order. So we are already cutting carbon out of our economy. My department's 2050 Pathways project helps people engage with what our energy future will look like. The Green Deal, our

pioneering programme, will improve the energy efficiency of Britain's homes and businesses.

Our reform of the electricity market will rebuild our energy economy, securing the next generation of clean energy infrastructure. The renewable heat incentive and carbon capture and storage projects are breaking new ground.

And the Green Investment Bank will channel substantial private investment into low-carbon technology. We are also committing to deep carbon cuts. Earlier this year, we set the Fourth Carbon Budget, for the period from 2023 – 2027. It is the most ambitious act of environmental business planning in our history. In fifteen years' time, our net emissions will be half what they were in 1990. No other country has binding targets that far ahead – or that ambitious.

Cross-border action

All this will help. But it will not be enough. The UK emits less than 2% of the world's CO₂. So the second step is to work together, across borders and across sectors, to build a low-carbon coalition. Partly, this is about advocacy. About using our influence and our experience to bring others into the realm of high ambition. Taking the case for action to security communities. Working through UK business leaders, championing the case abroad for ambitious action and a clear legal framework.

Together with our partners across Europe, we are pushing to raise the European emissions reduction target. It is a hard sell, but the tides are moving in our favour. We look forward to an ambitious and professional Danish presidency of the EU, where I hope to make a real push for a higher target. We are also arguing for ambition in the G8, the G20, and the Major Economies Forum. And we will be a powerful advocate for change when we host the third Clean Energy Ministerial here in London in 2012.

Working with our partners also means delivering on our promises outside the negotiations. Using financial support and soft diplomacy to help countries reduce their emissions, protect the poorest and most vulnerable from the impacts of climate change, and build up the foundations for a global deal.

In a time of austerity, we have pledged £2.9 billion of international climate finance. This will help developing countries reduce poverty through low-carbon growth, adapt to climate change, and tackle deforestation.

In Bangladesh we will help 15 million more people to protect themselves against the effects of climate change and natural disasters by building

embankments and shelters, promoting climate resilient crops, and improving access to safe drinking water.

The Clean Technology Fund, which is part-funded by UK Fast-Start finance, helping to catalyse clean energy production on a large scale in the developing world. It's expected to provide 18 million people with low-carbon, affordable transport, provide over 12 megawatts of clean electricity – and thousands of jobs. We have helped half a million households in Nepal to make a living from forestry, raising income by 60 percent and saving 1.2 million tonnes of CO2 every year.

We support the Climate and Development Knowledge Network to help developing countries access the data they need to build climate resilience, adopt low-carbon growth and tackle poverty. And we are supporting the World Bank's Partnership for Market Readiness, to help developing countries set up their own carbon trading systems to cut emissions.

Global deal

The third step is to work together as a people – and a planet. This is a whole-world problem. It demands a whole-world solution. Without it, we face a future with poisoned political relations and carbon tariffs. Climate change is a new kind of foreign policy problem. It demands multilateral solutions, but the dividing lines are blurry. There are no neat ideological splits. Relations between the developed and developing world are hugely complicated, and domestic politics are hugely variable.

This is a complex, multi-year process. It deals with issues that cut to the very heart of national sovereignty. That is why the global process is so important. It provides a place where decision makers' minds can be focussed on the bigger picture. Countries know they must do something. But no-one wants to go first. No-one wants to be out in front, exposing their economy to competitive risks.

Yes, we can cut carbon out of our own economy. Yes, we can come to regional agreements and make pledges on emissions. But it is increasingly clear that only a binding global deal, ambitious and far-sighted, can deliver the carbon emission cuts we need – and provide assurance against competition. The alternative is not an alternative; a voluntary agreement is a false promise. It will not send a clear policy signal.

Incoherent climate regimes will not provide the clarity or certainty that investors crave. It will be seen as a retreat.

Only an overarching legal framework can ensure the compliance and certainty that will underpin the low-carbon transition. And the only way to build that framework is through the United Nations.

Negotiations

The annual cycle of UNFCCC meetings is in danger of slipping into a damaging rhythm. Expectations begin to build; we begin to manage them. The negotiations themselves are tough. Progress is made, but no final deal is reached. Commentators either praise or bury the process, according to taste. The circus packs up, and climate change slips back off the front pages for another year. Governments, NGOs and businesses have ramped up each UN meeting as being the be all and end all of tackling climate change. This has held us back in the push for a global treaty – and has undermined the domestic case for action.

The chorus of doubters grows louder by the year. ‘Nothing real is ever achieved’, they cry. ‘A treaty is never going to happen. We should focus our energies elsewhere.’ We need to shatter these dangerous illusions. We no longer have time to indulge them. The UNFCCC is not the end; it is the means to the end.

Yes, it is difficult. There are few international agreements quite as complex as this. Yes, we will continue to make progress in stages, not in a single defining moment. We cannot expect to bring 194 countries to an understanding in two weeks, or even two months.

So how do we reconcile incremental progress with the immovable deadline for action? The answer is to zoom out and look at the big picture. We are not at the beginning of this process.

Consider the Montreal Protocol: work did not stop when the agreement was signed. On funding, technology and information, the UN is still helping developing countries reach their targets. The initial text provided a basic platform for action; revisions tightened targets. Similarly, the climate negotiations did not start at Copenhagen.

They did not start at Kyoto. We decided to collectively limit our emissions nearly twenty years ago. It was in 1992, at the Earth Summit in Rio, that the United Nations Framework Convention on Climate Change was conceived.

The first review of commitments made in Rio led to the Berlin Mandate in 1995; two years later, the negotiations concluded with the Kyoto Protocol, which capped the emissions of industrialised countries. But the political will for a treaty was weak.

Copenhagen is held up as the grim peak of this political failure. Yet the pledges made in 2009 could, if met fully, could take us 60 percent of the way to our goal for 2020. Last year, the Cancun Agreements restored a sense of progress, bringing promises made in Copenhagen within the UN Framework. Taking significant steps on forestry, finance, and the review process.

Each of these steps take us closer to a global deal. But they are not simply milestones. They are also protecting our planet – right now. Thanks to the pledges made at or in the run up to Copenhagen, climate legislation in 16 of the world's largest economies has moved steadily forward. In a few months, we will meet at Durban for the seventeenth Conference of the Parties. What can we hope to achieve?

A comprehensive treaty framework looks unlikely. That will have to wait. From 2013, there will be new political leadership in the world's major economies. We hope to have put the global recession behind us. The stars may be more closely aligned in favour of a binding legal deal. In the meantime, there is much to be done. There are three things we must look to in South Africa.

Durban – and beyond

First, we must reinforce the fragile momentum that gathered at Cancun. That means doing the tough and gritty negotiating that lays the foundations for a binding deal. We are establishing the architecture of a future global climate regime. The green fund, systems and rules for measuring and verifying emissions, mechanisms to support technology development and so on are not mere trimming, but are load bearing structures in a global deal. Without them, it will remain elusive.

Second, we must take the commitments made at Cancun and bring them forcefully and visibly to life. We have pledges that will get us more than halfway toward a cost-effective trajectory to 2 degrees. In the short term, we must focus on their delivery. We must put the rules in place to ensure the commitments are robust, and the reductions they deliver are rigorous and quantified. And we need to look further ahead, understanding what we need to do in the short and medium term to build on these pledges.

And third, we must begin to strip away the thorns from the toughest issue of all: the legal form of a future climate deal. Legal form has become a defining question in the politics of international climate change. The successor to the Kyoto Protocol, whatever form it takes, will be our second chance to get it right. We cannot afford another.

This is going to require imagination and flexibility on all sides. The EU has said it will consider extending the Kyoto Protocol, and I stand by that. But we must find ways of bringing the rest of the world into a legal framework. And we need a route map to a single treaty solution in the future. For although the scientific evidence continues to grow, climate change is getting less political attention now than it did two years ago.

There is a vacuum, and the forces of low ambition are looking to fill it. It is time to reaffirm our political commitment to a global solution.

Ambition

I stand for high ambition, and high achievement. That means an immovable commitment a global, legally binding treaty to limit emissions – and concrete, measurable actions to deliver it. Nothing else can do, or will do.

We must summon the courage to commit to ambition without reserve. We must draw on our strengths and confront our weaknesses. We must agree a climate deal that is fair, firm, and final. Abandoning ambition in the face of short-term economic or political pressures would be a dereliction of duty.

It would mean ripping up that chapter of the social contract which holds that government should exist to protect the people. Winston Churchill – the patron saint of the Coalition, as he was both a Liberal and Conservative – once said that ‘an appeaser is someone that feeds a crocodile, hoping that it will eat him last’.

Giving in to the forces of low ambition would be an act of climate appeasement. This is our Munich moment. Every country must commit itself in full to meeting this common but differentiated challenge. Yes, we are all starting from different positions. History matters. But at one stage or another, we must fix a point in time. We cannot wait for every country to become equal, because that would mean waiting for an eternity.

At some point, we must draw a line and say: this starts now. This starts here. From today, for the first time, humankind will work together as one in defence of our most precious inheritance. From today, we acknowledge that we are

held to a higher responsibility. One that transcends profit and loss, and peace and war, and trade and aid.

From today, we commit to work not to the prejudices of the past, but in service of a greater and more lasting good. The planet earth, and the life it sustains.

Thank you very much.

Tom Burke:

Chris, thank you very much for that extraordinarily forceful presentation of the what, the why, and the how on climate change. Particularly for the clarity of it, and I above all liked the assault on the tyranny of now. The idea that if we don't have a perfect solution immediately, somehow we've failed. That was such an important step forward in the debate.

So please now over to you. We have about 25 minutes, so please be very quick and brief in your points or questions and we'll try and get as many of you as we can in. Please would you say your name and your affiliation. There are some people who are coming around with microphones, so please wait for the microphone. But what I'll do is I'll pick somebody and indicate the next person as well so we can roll over as fast as possible. Thank you.

Question 1:

Chris Huhne, you pointed out that in order to get to an international deal and the fact that the emerging markets developing world is where much of the emissions growth is occurring... The need for clean infrastructure development there is one of the big challenges on an international deal, the climate finance side, and so from that perspective the UK team is very welcome. What chance do you see getting the issue of climate solved in the Cup in South Africa, and in terms of getting tangible pilots up and running to demonstrate clean infrastructure development there?

Chris Huhne MP:

I think that you're absolutely right to highlight the role of finance as being key, and the stand-off that there's been. And I was on the advisory group on finance, the stand-off that there's been between those who don't want to include any private, some of the developing countries, those that obviously want to see private finances playing an important role, has been key. And we

have to show tangibly that the framework that we put in place really can deliver and can deliver at different levels of income, different pathways of development.

There are a number of countries which are actually doing tremendously good things on climate change at all levels of income. Places like Ethiopia, Costa Rica, Colombia... and not to mention obviously some of our European partners as well. And the key thing is to really crystallise the show, that there is a prospect of tangible progress. We've had the climate change capital initiative in London to try and highlight the importance of private flows in delivering, and we will continue very strongly to back that.

But you're absolutely right, to actually get projects going on the ground, which we're already doing quite a lot, where we can show very clearly real progress for development, is I think crucial.

Question 2:

I wanted to raise a technical point. I'd rather like to see the government placing more emphasis on ways in which we could actually change things fairly quickly. And one of the ways which we could do so, of course, is to limit the production of black carbon. The black carbon issue has been curiously neglected by a lot of people, because it means we know that one of the reasons why things are warming up as they are is the so-called Asian Brown Cloud. We know that it carries the implication that we're wasting a lot of energy by using the wrong kinds of energy.

And this is something that could have an effect with a relatively short period of time. It could produce, for example, changes within two or three years, rather than, if necessary, in a century. Therefore I would love to see both the government's policy clearer on this point and also someone should whisper the word to those concerned with overseas aid, because a lot of overseas aid could be directed to this end, which has so many advantages across the board.

Chris Huhne MP:

Very good point, and I think I'll just make two points on that. I think that already, actually, the DFID programme is aware of these sorts of issues. And obviously has to tread a delicate balance, but we have been attempting to shift the debate within the World Bank and the other multilateral institutions in that sort of direction. But on the specific issue on the black carbon, we will

certainly look at that and see whether we can make further progress on that particular issue.

There is another wider debate, specifically on short-term points, which I think a lot of people in the Green Room tended to shy away from. And that is of course if we are facing a serious timetable issue, then there is also the whole question of geo-engineering, where there's increasing attention.

And I think the feeling has often been that we shouldn't be looking at those sorts of short-term fixes, because it will avoid people taking the necessary decisions for the longer run. And I broadly agree with that, because clearly geo-engineering solutions, as we understand them today anyway, could only provide a sticking plaster and not a fundamental solution to the problem. But it may be that there will be a transitional point at which we have to look at some of those as well.

Question 3:

Interested that you just raised the subject of geo-engineering. In this room last autumn, I asked you a question about geo-engineering and you gave me very short shrift, dismissing it summarily as being seminar science.

Chris Huhne MP:

It is at the moment. But then seminar science, you know... Not every project is nuclear fusion. Sometimes seminar science does actually get into reality.

Question 3:

The point of the question was really just to expand on the comments you just made. I wonder whether, in the course of the last year, although you've set out a very positive roadmap going forward, you have also highlighted the challenges and the difficulties. And there is by no means a certain conclusion that these will work out in the way that you would like them to.

I wonder whether now, almost a year on, geo-engineering has slightly moved up the government's priority scale.

Chris Huhne MP:

I don't think... I think that, as I said, there may be a point in terms of the transition where we have to look at geo-engineering as a transitional set of

solutions. But the only geo-engineering solutions I've seen would contain enormous potential risks if there was any failure if we haven't dealt with the underlying problems.

And therefore, none of what I've said in any way is diminished by the prospect that there is continuing research on geo-engineering, clearly. And a number of governments are continuing to fund that and will continue to fund that. But it's absolutely crucial not to think that this is a substitute for action on the basic issues that I've described.

It may be a temporary bit of sticking plaster while those fundamental actions take hold. But we have to get on with the main business.

Tom Burke:

It's always struck me, Chris, that the people who are keen on geo-engineering need to explain how it is they think we're going to get people who can't agree to do something they know how to do to agree to do something they don't know how to do.

Chris Huhne MP:

Well it's often easier, actually, to get people to agree to things that none of us know how to do.

Question 4:

Thanks for the speech. You talked about the need for a longer term, a single top-down legally binding treaty which we probably also agree with. But in the interim, we need staging posts. As you know, the G77 and China has been pushing very hard for some sort of continuation of the Kyoto Protocols. So to build upon what we've already got. That is the top-down, legally binding treaty. Okay, not everyone is in it, but a larger number of us are in it and G77 and China made it very clear that the EU being in it with them and perhaps a few other countries, Switzerland, Norway and others, would do the trick in the short-term. It would bank what we've already got before we move forward to the future. I just wondered what you thought of the G77 approach.

Chris Huhne MP:

Well, I think if we were to emerge from Durban with an agreement that we were going to have a second commitment period of the Kyoto Protocol, but that effectively, only signatories [inaudible] would be bound to curb emissions under the Kyoto second commitment period would be the European Union. I think that would be seen as a tremendous failure. And yet we have already seen Japan say very, very clearly that it will not sign up unless there are legally binding commitments from developing countries like China which is now the world's biggest emitter.

So Japan will not sign up to a second commitment period unless the framework is fundamentally changed. Nor, I suspect, as a result will Australia, New Zealand, Canada, or Russia. So the only people who would then in those circumstances be signing would be the European Union. You have to ask yourself what value added would that bring given that the European Union already has our own target set within European Union law which is actually tougher than United Nations law, and has a clearer enforcement procedure. What value added would there be, or would it be a purely totemic agreement?

So I see two potential pathways for Durban, which might actually realistically give us something extra. By the way, that sort of scenario would mean that the world emissions that would actually be legally bound in a second commitment period would be about 12 percent of global emissions. I mean, that leaves 88 percent outside the framework. Not a great deal.

I think that we need to work on two other possibilities for Durban. One is that we are getting countries that are progressive within the G77 group to make commitments on legally binding emissions targets. And expand the geographical spread in that way. The other alternative is that we all agree that we're going to put the mitigation commitments in an equivalent convention track and make the legally binding parts – things like measurement, reporting, verification and so forth – that's another possibility.

But I think the idea that somehow by rubbing the lamp and saying we're going to have a second commitment period, come hell or high water, but as it happens the only people who are going to be signed up are people who've already got better legally binding commitments through their own law anyway, seems to me to be not a success.

Question 5:

I very much welcomed your use of the words 'soft diplomacy' to addressing the multilateral problem that we address, that we face. And the use of soft diplomacy has been very powerful. For the last three years, the British Council has had a very systematic programme of activity around climate change. That has come to an end. So how, bearing in mind the removal of the British Council from the equation, how do you best think that the UK can now project its influence across global society to bring about the solutions required?

Chris Huhne MP:

Well I think we've got a quite important role through the Foreign Office, through posts and through working with our European partners in post to move opinion. There are a number of good examples of where that's happened in the past, where just pointing rigorously to what the scientific conclusions are makes it clear domestically what the political consequences of not acting are.

There are a lot of other things that we're doing. We have a study underway which is being led by the Met Office, which is working with our counterparts in the G20. The G20 is responsible for about 80-plus of world carbon emissions. That study is designed to make a lot clearer what the local impacts of climate change are in each of the G20.

So I suspect, I think a lot of people suspect in this area, that it rather suffers from the same problem that people have when you, you know, you produce public adverts about road safety. That, yes okay, people have car crashes and get killed on the roads, but it never happens to us. And I think in a similar way there are a lot of people around the world who say, okay well we all agree maybe there's real climate change, but it doesn't actually happen to us. And so getting a crunch year appreciation of what it actually means in different parts of the world to different people and the threats concerned I think could play a powerful potential motivator.

But I think as the EU, as traditionally the most progressive part of the globe on these issues, we have a role to live up to, to work together to shift opinion. And I think that we have a very good and very active and very professional foreign service and with our partner foreign services in Europe, I think we can do a lot.

Tom Burke:

It is interesting that there was a number of our most distinguished artists and authors, wrote to the *Guardian* to criticise the British Council for, in a sense, underselling one of our great cultural strengths. I thought that was an important intervention in the debate.

Chris Huhne MP:

And it's curious, because the British Council is quite often obviously associated with arts and culture, but funnily enough in many ways, you would think one of the greatest – I am not a scientist – but one of the greatest British traditions is actually in science. And I suspect one of the reasons why as a society we have a pretty broad consensus across all of the main parties on this issue is precisely because there is still, with all the usual lack of deference that we show to everybody, but there is still a fundamental respect for scientific work and research that continues on.

Question 6:

Two brief points. The first is what you see as the opportunities for children and young people to influence future international climate change negotiations. And the second, what are the opportunities around, and there are opportunities, to join up international agendas, to actually achieve some of the carbon reduction commitments? Thinking about issues like obesity, for example.

Chris Huhne MP:

Well on children, I think children have an absolutely crucial role, and one of the things that is often most effective in starting people talking about climate change is when kids come home from school having actually done a project and understood about what's happening to the threats to different species because of deforestation or whatever it happens to be. And they start talking at home, and then it comes back. I just feel this is a constituency, where I've seen what some of my local primary schools have done on this and then seen the way it's fed through back to adult opinion.

You get grandparents saying, 'Oh yeah, my little John aged 8 just came back talking about a project that he'd done,' and it actually makes it real. In a very fundamental sense of course, we've got to be thinking about those children's

future, because I will be long gone when some of the worst consequences of climate change actually happen. But they won't be, and therefore this whole agenda is inevitably one of those key issues where we have to think not just about our own short-term interests, but about the interests of the next generation and the generation after that. And children very demonstrably bring that home.

Question 7:

Thank you very much, especially for your international list approach, thinking not only narrowly for the UK, but for an initiative for the whole of humanity. You have said quite rightly that the science is equivocal. There's no problem there. But we have seen in Copenhagen and other places that there is fringe science financed by very powerful multinationals which influence the policies of certain influential governments and these are climate change denials, of course.

Any hope that in Durban there could be a strategy to counter these? Because they are very effective. Thank you.

Chris Huhne MP:

Well, I certainly would not want to mess with the fundamental basis of scientific progress which is that people do peer-reviewed research in learned journals and just get on with it. And the reality is that that process has led us, as you can see from the overwhelming views of the major scientific organisations globally, that has led us to a situation where there is a very broad degree of scientific consensus about what is actually going on, and there is no comprehensive alternative explanation. I think that the bulk of that science is not feeding through into media appreciation.

It's quite interesting that the BBC Trust recently did ask for a review of how it reports science, because the instinctive reaction of any journalist is to say if somebody is putting forward something, then you quote somebody else in exchange. And taken to extremes, that would mean if somebody is putting forward the view that the Earth is round, then you will have somebody else saying, well maybe it's not.

There is a point at which you actually have to be able to scale the response within a media report to what the weight of the evidence actually is. I don't think media organisations are doing that. I think there's still far too much on

the one hand, on the other hand. A natural part of media reporting, when in fact the conclusions from the science are much, much clearer than that.

But I certainly wouldn't want to... I think that it would be very dangerous for governments to try and get involved either in other than talking about the problem and reporting, or even more, getting involved in trying to fix the science. I think the absolutely key is to let the science speak for itself, which it is doing. And to make sure that when those who have very strong economic interests in failing to act highlight particular elements of scepticism, we don't let that run away with the fundamental approach which is that we have to insure ourselves and insure our future against these sorts of events.

Question 8:

Thank you. You mentioned about the great scientific tradition in the country, and earlier on in your talk you alluded to decentralised electricity in India and other countries, Bangladesh and other developing markets may have. But a lot of those challenges are very, very unique and may not be very well understood over here. So don't you think there's an opportunity for the British universities and industry to sort of collaborate? What policy is your government planning on research collaboration?

Question 9:

Going back to environmental or climate change diplomacy. Can you please expand on the efforts you're making to have the major emitters, either increase their commitment or actually commit? Specifically the US, India and China for example.

Question 10:

I'm a clean tech entrepreneur, and our main issue is that of investment and lack of grants, etcetera, as you can possibly imagine. But the onus on sort of delivering solutions for climate change is on our shoulders, but we are not given the resources to deliver on this. This is one of the key issues that we have.

Chris Huhne MP:

Let me start from the back. We've just been through a tough public expenditure round, but for example, we've found within that public

expenditure round, a billion pounds. Which is, as a US senator once said, 'A billion here and a billion there and soon you're talking real money.' We found a billion pounds to fund the first commercial scale carbon capture and storage project, and we are doing actually an awful lot in terms of direct funding, but also in terms of setting a framework through the electricity market reform in which we can see very rapid development of some of the key technologies.

So I know in any given area that particularly amongst researchers that it is always fairly desirable to spend more money on the particular area that that researcher is enthusiastic about, and that's one of the great reasons why research is great because researchers are enthusiastic about their areas. But somebody out there has to manage scarce resources. And sadly that ends up usually being ministers and governments.

On the issue of the collaboration, sort of touching on that. There's a lot of collaboration in terms of research, increasingly between business and universities. And we have had quite a programme in this country over some time to encourage that. And one of the greatest encouragements, frankly, for it is the very large number of successful company start-ups that have come out of university lab benches and have now really flown. Whether it's Cambridge, Oxford, Surrey, Southampton which is nearest to my constituency, all of those universities have very substantial... I saw recently some very interesting work going on which is being funded by Siemens in Sheffield on the next generation of off-shore wind turbines. So there's a lot of that, and we want to see more of it. It's very effective.

And Ambassador, you asked about what we're doing about the big carbon emitters, and specifically and I think that's a very good question. What I think my, what I was trying to say in the speech is that there is a political time table. If you take particularly China and the US, because I think that those are the two key players, you can see a situation where China is already moving quite substantially, quite high ambition for example in the new five-year plan.

Enormous investments within China. Six of the large renewable companies in the world. They're building 28 low carbon nuclear power stations in the same time it will take to build one. They're building 16,000 kilometres of high speed rail in the time it's going to take us to go 163 kilometres from London to Birmingham. So I wouldn't want to fault my Chinese friends for a lack of vim. As I think the only thing I would say is that nobody can tell me what happened to the last person who protested at a Chinese planning inquiry.

But the Chinese are doing an awful lot. And I think they need to do more. We've got good low carbon pilots. We're working very closely with them on

that. So how do we then tackle... And I believe what's happening within China, and we may see that confirmed with the change of leadership next year, is that this process may well accelerate because if you get to a situation where first of all you are so big that you are the elephant in the room, you have to do something. That's point number one for the Chinese leadership.

And point number two is that if you get to a situation where you have so much invested in the success of these low carbon industries, that actually you want to lock that in globally, because that's where your markets are. And so for both of those reasons, I think that there is going to be a continued shift within Chinese politics and we will see around the change of leadership whether that then transforms itself into what I believe is in China's interests, which is to have a clear global framework. Because China is now so big and so important that is, in my view, going to be where it sees itself.

The US is more difficult, for those of us particularly here in Chatham House will know that progressive US presidents have been disappointed by the failure of the US Senate to ratify treaties for many, many decades. Probably not even starting with Woodrow Wilson and the League of Nations treaty, but certainly that will be one to remember.

But there is, I think, potentially a window of opportunity as we go again to the presidential elections next year. We will see obviously who emerges as president in the presidential elections and as a British government minister I'm certainly not getting involved in US politics. But I think you can foresee circumstances in which a president might decide that climate change was a rather important project for a second term, in the way that President Obama clearly did not decide that in his first term because he decided to prioritise healthcare, for reasons that I can understand. In this country we would understand because we've been the proud possessors of a National Health Service since the 1940s. But the US has not.

So I can understand the relative priorities they had and I would hope that there will be change. We may see in Congress, too, a shift which will allow us to make further progress. It will either be in the form of things which are called the Patriotic Energy Independence Bill, which is all about energy security and wind turbines and nuclear power and energy saving. But happens to actually meet climate change objectives as well. Or it will be a climate change bill. And that will probably reflect the composition of Congress after the elections. But I wouldn't give up on that.

Tom Burke:

I'm sorry we're going to have to close but there is another Churchill quote which is entirely appropriate in that context, which is that you can always count on the United States to do the right thing, but only after it's tried every other possibility.

I'm so sorry, but we have run out of time. Chris, thank you very much for a really enthralling talk.