Thank you. I appreciate the warm welcome here in your global village.

This university is renowned for its large international student body. I am told that at one point there were even more nations represented here at LSE than in the United Nations.

So facing you is facing the world of tomorrow.

What audience would be more fitting for this lecture on the prospects for a new ambitious international response to climate change. And what would be more fitting than to give this lecture at this new “Grantham Research Institute on Climate Change and the Environment” - spearheaded by Lord Nicholas Stern.

This centre will connect the leading communities of researchers and policymakers in the UK, in Europe and across the globe. And it will do so on a set of issues that will shape your generations approach to life – for better and for worse.

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For better, because the low carbon societies of tomorrow will help us deal with the re-source shortages that we will face in the coming decades – and provide economic and environmental benefits to all.

For worse, because no matter how hard we work to limit carbon emissions, the climate IS already changing.

From record glacier melts in Greenland, in the Alps, in the Himalayas and on top of Kilimanjaro, to weird weather across the globe – with changing precipitation patterns resulting in respectively drought and flooding.

People already feel the impacts of climate change. Not all climate change is induced by humans. But according to science the manmade contribution is the deciding factor. And some of us are more affected than others.

This August, I visited the village Nioro du Sahel in Mali. There, at the brim of the harsh Sahel desert in Western Africa – climate induced changes were very real.
Over the past decade the Sahel has expanded some 50 kilometres south. The livelihood of local farmers has been stifled by lack of water - then literally washed away. Nomads are pushing south to find gracle land for their herds – occupying farmland, igniting conflicts. And the young and the strong are leaving. Heading for the big cities, where unemployment already is well above 50 pct.

To me and to the villagers of Nioro du Sahel the case for climate action is perfectly clear:

We owe it to the millions around the globe who are threatened on their basic livelihood by climate change to address the challenge. And we owe it to our children and our grandchildren – and to generations to come to take care of our responsibility.

Unfortunately this moral imperative has proven insufficient to deliver the necessary action internationally. But, I do believe that the compelling political and economic business case for climate action will.

The Stern Report estimated that by 2050, between 150 million and 200 million people will be climate refugees – as they fall victim to stronger typhoons, hurricanes, flooding and destabilizing droughts.

If we let inaction prevail, we allow migration of climate refugees across borders to stress both fragile governments and development in the most vulnerable regions of the world. And it is more than likely that many will migrate from South to North – for better chances in life. Consequently, countries and regions will be at risk of descending into struggles over shortage of water; of food; of energy. So Climate change is also about security, including energy security and energy supply.

Henry Kissinger and Harvard Professor Martin Feldstein have recently argued that the tripling in oil prices since 2001 has led to the largest transfer of wealth in human history. According to Kissinger and Feldstein the 13 OPEC members alone are expected to earn more than 1 trillion US dollars this year from oil sales. This year!

Inevitably, this will bring with it major political consequences. We are increasingly dependent on energy supply from regimes in volatile regions. And we are funding these regimes. In the case of the United States, they fund this transfer to a certain extend with money from in China. Not a winner strategy.

So: Energy security and stable energy prices is a key priority for the United States – and for China. No matter what, the answer cannot merely be: Drill baby, drill – as New York Times columnist Thomas Friedman has put it.
Clearly, oil-consuming nations are in a position to shape the global economic and political balance. And the challenge will become even bigger.

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The United Nations estimates that over the next 42 years the World’s population will grow by almost 50 percent.

Well within your lifetime – and hopefully within mine – we will be nine billion people on this Planet. That corresponds to adding all the people of China, India, Indonesia, and the United States to our current world population: That is how many we will be in 2050.

All nine billion will want food, heating, cooling, commodities and transportation. So the demand for resources is bound to increase – tremendously!

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The World Energy Outlook (ref. IEA) projects that 62 percent of the total increase in world energy demand will come from developing countries between 2000 and 2030. The energy demand of China and India alone will more than double from 2005 to 2030 in a business as usual scenario.

Ladies and gentlemen: It takes no Nobel Laureate to figure out that oil and energy prices are bound to remain high – even if we diversify energy supply and work hard to increase energy efficiency.

Even if there were no climate crisis, we would still need to launch a transition to much more energy and resource efficient economies, based to a large extend on low-carbon energy sources.

In the advanced economies we will have to overhaul our energy infrastructures. Developing economies will invest heavily in a variety of energy technologies.

The related challenges of climate change, population growth and resource and energy shortage will be a defining struggle of the 21st century. But they also present a great opportunity to first movers.

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This complex challenge will play a key role in determining the future world leadership. And leadership in this field is indeed up for grabs.

Fortunately, we are beginning to see movement in a number of countries – each for their own reasons. But the collective pace remains too slow.
Scientists tell us that climate change is accelerating – that changes are happening faster than expected only a few years ago.

The window is closing for stabilizing the global temperature below what scientists tell us may be the tipping point. The Chairman of the IPCC – Dr. Pachauri – says we have less than ten years to turn our boat around. We are facing an unprecedented global challenge, calling for an unprecedented global response.

The world community set a deadline for agreeing on a global response plan in Bali last year. The deadline is the United Nations Climate Change Conference in Copenhagen in December next year.

At COP15 the world must agree on a truly global and ambitious climate change agreement that meets the emission reduction targets defined by science. We have 14 months to lay this complicated puzzle – and many pieces are still missing.

One of the central pieces is our own Climate and Energy Package within the EU.

The European Union has been the first major player to take steps to develop a low-carbon economy. In many ways the EU has provided a test bed for tackling climate change.

Member countries are parties to the Kyoto Protocol. Collectively we have established a well functioning system for trading emission quotas within the EU. And the European climate leadership was reinforced with the most ambitious reduction targets so far – delivered by the European Council in March 2007.

At this historic Council meeting Heads of States agreed that the European Union will reduce its emissions to 20 percent below 1990-levels by 2020. And we will go to 30 percent below 1990-levels by 2020 – if other developed countries agree to comparable reductions as part of a global agreement.

Leadership is never easy. Defining the framework for our common emission reduction efforts in the years 2012 to 2020 is no exception. We are currently engaged in very difficult negotiations on the EU Climate and Energy Package. It is crucial for Europe and for the world that we complete our internal negotiations. And that we do so before the end of the French Presidency – before the end of this year.

If we do not bring our own house in order, the European Union will not be able to lead the negotiations for an ambitious global agreement. And the World is watching. If we fail to agree on how we can deliver on our 2020 targets, we will not only lose credibility; we will also feed the sceptics around the globe, who state, that significant reductions in the short term are next to impossible.
Colleagues and negotiators involved have to understand this: The success of our global negotiations next year depends on the success of our own internal negotiations.

The founding idea of the European Union was to unite member states around economic development, thereby stabilizing a war-torn region. Creating a European low-carbon economy is a natural next step for the European project – with technological development, job creation and market opportunities. It holds great potential for the United Kingdom, for Denmark and for the EU as a whole.

That is why it is so crucial that we do not get bogged down in internal discussions on burden sharing. We must deliver on our internal deadline. We must reach agreement on the Climate and Energy package this year.

Let me turn now to the international negotiations and the road to Copenhagen next year.

At the UN Climate Conference in Poland this year, Ministers will lay the ground for final negotiations in 2009. We must agree on a thorough work plan for 2009. Because: Right after New Years we must shift gear and engage in concrete negotiations. Around the globe the highest political level must give the negotiations priority to ensure that we move at full throttle.

2009 must be the year where we agree on an ambitious long-term reduction target.

The European Union has announced a global objective of staying below a global warming level of two degrees centigrade. Science tells us that this is needed to avoid the unmanageable – and manage the unavoidable.

International consensus is materialising on a 50 percent global reduction target by 2050. But the choice of base year is crucial. We need 50 percent with 1990 as base year. We can choose whichever point of departure we want. But that will not diminish the size of the challenge.

If we follow science the bottom line is clear: We have to halve global emissions before 2050 – compared to 1990.

An ambitious long-term target is needed to steer efforts in years to come. But it is not enough. It is all too easy for the politicians of today to commit to targets in a distant future when we are no longer in office. Limiting ourselves to a long-term reduction goal would indeed be like leaving the bill for a life well spent for the kids to pay. And science tells us that global emissions need to peak within the next ten years. Therefore, we must also
reach agreement on a global mid-term target for 2020. In accordance with the IPCC pre-
scriptions, we expect all developed countries to take on reductions by 2020 in the range of
25 to 40 percent below 1990 levels.

But, right now the world is waiting for the United States to move. And rightly so. The United
States is one of the World’s most advanced economies. She has the technology, the eco-

nomic capacity and the manpower to cut back emissions significantly.

I am well aware that the industrial backbone of the United States was formed in an era of
low oil prices. This obviously makes to change more dramatic and harder in the short term.
With oil prices high as they are American industry is facing tough times – that might have
been avoided with a different approach to energy and industrial policy.

In the first six months of 2008, the “Detroit 3” – General Motors, Ford and Chrysler – have
all witnessed staggering declines in their sales figures. They have lost market shares, as
gas prices have soared.

The current economic turmoil of the United States is not only caused by rising energy pric-
es. But there is no doubt that for the U.S., going green is a key to a prosperous future. In-
creasing the share of renewable energy in the U.S. energy mix as well as increasing ef-
forts to save energy and enhance energy efficiency would not only strengthen the competi-
tiveness of the U.S. economy. Reforming the energy sector would also mean millions of
green collar jobs – service jobs that can not be outsourced.

Washington may not have grasped the potential of the green wave yet. But I am pleased
to observe the many initiatives at regional, state and local level in the United States.

Cities like New York are launching ambitious plans to bring down emissions. States like
Texas and Colorado are putting up wind turbines at a stunning pace. Nascent regional
carbon trading schemes are appearing.

Major U.S. businesses like Wal-Mart and G.E. are working intensely to increase their en-
ergy efficiency. And NGOs and other civil society across the United States are calling for
action.

Really: I think that America is just waiting for their President and for Congress to wake up
and smell the coffee.

As a European Conservative I must say that it has been puzzling to watch the United
States take the back seat in the climate negotiations. I was brought up with a firm belief
that when the World needed leadership – from the World Wars and the Cold War to the
fight against terrorism – we have counted on the United States for leadership. That leader-
ship has been severely lacking in the climate negotiations.

But, I am reassured that we will see movement come January, by the climate policy sig-
nals from both U.S. presidential candidates. And they should be reassured by studies that
show that the U.S. can cut back emissions significantly at low or even no costs – even with existing technologies.

With a change in the U.S. position, we also expect emerging economies like China and India to step up their efforts.

Last year China surpassed the United States as the single largest emitter of greenhouse gases. And recent data suggest that in a few months, India will be the third largest emitter. Two out of the top three global carbon emitters will be developing economies.

There is a painful truth to this: The most severe emission increases will be from large developing economies. It is therefore vital that developing countries contribute to the next agreement. It will simply be impossible to stabilize the planet at a safe emissions level without them.

China has set a national target for energy intensity. Half way in her present five-year plan, China has a strong focus on delivering on their national target of a 20 percent improvement of energy intensity by 2010.

We encourage China to pursue energy conservation efforts at all levels of government. And we ask China to go further. As a first step, we ask China to consider internationalising national efforts as a contribution to a new global agreement.

Let me be perfectly clear: We have no right to infringe on the growth perspectives of the developing countries. The 500 million Indians who are currently without electricity have absolutely the same right to this commodity as you and I do. But, we need the partnership and commitment of the developing countries as we move forward. Or, we will not be able to solve the problem – and the developing countries will suffer the most.

Fortunately, countries like South Africa and China are taking concrete steps – and are capable of strengthening their efforts even further. As we move to close the deal next year, we must focus on what each and every country and economy is capable of providing – realizing that we will all feel the impacts if we do nothing.

In the existing climate change regime developing countries are all treated alike. But after a decade of global growth, it should be clear to all that the group of developing countries is a highly diverse group.

Treating countries like Singapore and Saudi Arabia on par with Mali and Burkina Faso is just not fair.
We must ask for contributions from all countries - in accordance with their specific capabilities. Developed countries must reduce now. Among developing countries, some will have to stabilise. Others have to deviate from business as usual. And the poorest and least developed in our midst must receive support and pledge to embark on a sustainable development path.

For the Least Developed Countries adaptation is the core concern. These economies are vulnerable. Primary sectors such as agriculture are directly affected by changing weather patterns. The scarce financial and human resources will be stretched in order to cope and survive the toils of climate change.

The least developed countries can only embark on a sustainable development path if we help finance adaptation and capacity-building. We must help these countries help themselves. And we must reach an agreement that ensures faster technological transfer. Here, we need to develop novel financial mechanisms.

Let me elaborate on the possible financial instruments in a Copenhagen Agreement.

Finance is an integral part of the agreement itself. A tool box of financing instruments is needed in order to activate private investments from companies and households; Investments which must go hand-in-hand with adequate public funding.

The two most essential tools in the current tool box are the carbon market and the clean development mechanism. We need to figure out how best to reform the clean development mechanism – and to agree on additional mechanisms needed.

We believe that the carbon market has the potential to become the main vehicle for financing emission reductions also in a new agreement. Countries will build carbon markets with different coverage and ambition levels that vary with their different levels of development. But the carbon market is not the panacea of climate change finance.

There is a need to introduce other tools for activating private and public investments. This can be achieved in part through national policies that engage the private sector; in part through innovative arrangements such as a levy on bunker fuels for planes and ships.

A levy will set a price on emissions, activate private investments and enhance mitigation efforts. And it will generate finance for domestic and global purposes.

The need for predictable financing will be great. This can be delivered through a fund structure that can support the introduction of financial tools and finance concrete measures in both mitigation and adaptation.
Finally, here in one of the world’s chief financial centres, I wish to stress the importance of bringing business and industry from all parts of the World on board. The market has a key role to play.

Support from key industries will make it easier for governments to commit to an ambitious agreement in Copenhagen next year and will ensure a swift implementation across the globe.

My first sales pitch is this: The Stern Review underscored the risks of market instability, if economies are affected by extreme weather events, causing harm to roads, ports, refineries and other infrastructure.

The direct effects of severe weather were seen during hurricane Katrina on the Gulf Coast of the United States in 2006 and to a lesser extent during the latest hurricane Ike. The costs were massive.

My second sales pitch is this: A global agreement will provide certainty for investors.

Investments in green tech have increased significantly over the past couple of years. But uncertainty of profits and lack of predictability still discourages bold innovation.

In all modesty the Danish example shows that bold investments in green tech do pay off. Green tech is one of the fastest growing industries in Denmark and our third largest export area.

Over the past 30 years, Denmark has built a strong green tech industry. Since 1981, we have experienced a 75 pct. increase in GDP while maintaining almost stable energy consumption. And Danish companies now have first mover advantages in the growing green tech markets.

The Danish example proves that economic growth and an increasingly sustainable energy supply can go hand in hand – to the benefit of all and for significant profits to a growing industry.

My third sales pitch is even more cheerful: To visionary businesses green tech equal profits.

Today, European companies in the green tech sector have significant first-mover advantages. In 2005, the world market for environmental technologies was estimated at 1000 billion Euros – of which the EU took one third. The market is expected to grow to 1500 bil-
lion Euros in 2010. European firms need to stay at the cutting edge – for profits and to help the European Union meet its obligations in a global agreement.

The portfolio of green tech solutions is already abundant. And all countries should exploit the potential for low-cost reductions - to the best of their ability.

If deployed, existing technologies would already allow businesses and consumers to stay below the European Unions two degree target – and save money.

Solutions range from more efficient light bulbs, refrigerators and water heaters in our homes to improved fuel economy standards in our cars and trucks and improved efficiency in our power plants.

Solutions like these present many countries with an enormous reduction potential. They are low-hanging fruits for industries and consumers to pick – and save money.

- Governments must remove market barriers and speed up the adoption of low-carbon technologies. The faculty and students at the Grantham Institute here at LSE can assist in identifying these barriers and prescribe ways to achieve technology adoption.

You see: We are all in the same boat when it comes to climate change – governments, businesses and citizens.

Now, we must move from an era of words and launch a new era of action.

We need fresh thinking to guide us as we pursue the monumental challenge before us.

We need social scientists to work more on understanding the incentives behind behavioural change.

We need political scientists to work on the most effective policies to overhaul our energy infrastructure – and to identify new policy practices.

We need economists and business scholars to work on business models that will drive sustainable production - from global supply chains that span every region, to local transport systems that drive down reductions, right here in London.

- I am often asked, whether I an optimist or a pessimist when it comes to landing an ambitious agreement in Copenhagen next year. My answer is neither. I am a realist. But, I must admit that current affairs darken my mind.

In just a few months, the world has slipped into a deepening financial crisis, economic recession is spreading and the Doha negotiations have stalled completely. I am sure you agree that these changes are not entirely conducive to the climate negotiations.
On the other hand: The peoples of the World expect their politicians to act and to deliver on the 2009 deadline.

To land an agreement is probably not all that difficult. The challenge will be to land an ambitious agreement that will bring the World back on track – in line with what the IPCC tells us is necessary.

A good friend and colleague recently told me: Connie, don’t worry about whether the Copenhagen conference will be a success. All the climate conferences ever held have been successes.

The only problem is that with all the successful climate conferences, global emissions have continued to increase. We must do better. There is a window of opportunity now. We must take advantage of this and do what is necessary. Not just because of the climate crisis. But, because to take the climate challenge seriously also means taking the challenge of energy security, energy dependency, geopolitical security, international development and economic growth seriously.

Only if we act, will the world be able to provide sustainable growth to the billions of fellow citizens who have not received their fair share yet.

To take this conundrum of challenges seriously will not hamper growth. On the contrary, it is a prerequisite to growth – sustainable growth.

Thank you.