



**Women's Foreign Policy Group  
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*Myths and Realities of Climate Change*

**Peggy Blumenthal:** Hi, I'm Peggy Blumenthal, Executive Vice President of the Institute of International Education (IIE). I'm delighted to welcome you all. Today it seems like things are settling down a little bit and we're very glad that you were able to come here. The Institute of International Education has collaborated with the Women's Foreign Policy Group for many sessions and we're always delighted to have you here in New York. There are always wonderful speakers and the participants in the room are usually equally knowledgeable about many of these topics, so I'm sure we'll have a lively discussion.

Let me just say a few words to those of you who do not know IIE. We are a private, not-for-profit organization. We've been around for almost 90 years. We're going to celebrate our 90<sup>th</sup> anniversary in two years. We run the Fulbright Program for the U.S. Government. Some of the alumni of that program and other programs that we manage are around the room. We have a great interest in environmental issues. We've managed a number of programs for USAID that deal with environmental issues. I'm particularly thrilled that our speaker today is from AIG because we have a very long relationship with AIG. Brenda Young, a member of our staff, has been working on a program that provides scholarships for children of AIG employees to study anywhere in the world. This program has been going on for 30 years. This coming September, we're going to be honoring the President of AIG, Martin Sullivan, for his corporate leadership and for AIG's good citizenship. Now let me turn it over to Pat who will introduce the speaker.

**Patricia Ellis:** Thank you for your hospitality once again. We've had an ongoing partnership; the collaboration has been wonderful. We've had many exciting programs here on many different international issues, including programs with authors, a series on Islam, and of course we always do many programs on the United Nations. Most recently we had a UN Study Visit. We had a wonderful set of briefings with UN officials, and many of them also come to our programs. Today we have the Namibian Ambassador to the UN joining us, as well as others here from the UN. We have some diplomats, one is the Consul General of Austria. We have someone from the Russian Mission to the UN and if I've missed someone, please forgive me – I wasn't up there at check in. I'm very excited about our program today. I would like to welcome all of our members and friends. At every event we always have new people and we would also like to extend a warm welcome to our colleagues from the International Institute of Education.

I am President of the Women's Foreign Policy Group. We promote women's leadership and women's voices on pressing international issues of the day, such as climate change. Our program today will be the last program in New York for the summer, but we'll be starting up again in the fall with some terrific programs we're working on with women authors and leaders, so stand by. I would like to encourage you to go to our new website. It's very user-friendly and you can get all types of information on our programs and membership. We also have something interesting – a new guide to women leaders around the world. The exciting news is that there are more and more of them. Women diplomats are serving in all different capacities, including as foreign ministers, etc.

We're really excited about our program today. Climate change is definitely a hot topic issue of the day. It seems to have engaged major capitals, the UN and the public. It wasn't so long ago that this wasn't the case. Our speaker, who has been working on climate change for many years, can vouch for that because she's been working hard on this issue and working hard to get attention for it. Now she is going to share the expertise she has gained as a result of having worked on this for so long. She'll give us the perspective from the scientific point of view. Alice is the Director of Environment and Climate Change in the Corporate Affairs division of AIG. She is an economist; she was Vice President of Chicago Climate Exchange. She's been a consultant for the Environmental Protection Agency and for various countries, such as Australia and UN agencies. She speaks all over the country and all over the world. I know she's going to be speaking in China in October. We're really, really lucky to have her.

I chose the generic topic "The Myths and Realities of Climate Change" because there are so many questions and so much recent news. As a former journalist, I was checking the wire stories and there are many stories every day from all parts of the world, about things going on domestically, about the appointment of envoys for climate change, about meetings going to be held at the UN, and about regional meetings. I mean, there's just so much on a daily basis. So I think this will be just the beginning of a conversation that we hope to have on this issue from various perspectives. We're extremely lucky to have Alice LeBlanc here with us. I would like to thank her for coming and thank you all for coming and ask you to help me in welcoming Alice LeBlanc. (Applause).

**Alice LeBlanc:** I'm very happy to be here. This is a very different type of audience for me. I probably give a talk once a week at least, but usually it's to risk managers – those are people who handle insurance accounts at large corporations – as well as to insurance brokers, re-insurers and so on. This group however is more interested in the international aspects of this issue. It's a very interesting and different audience for me.

Since Patricia gave me the topic of "Myths and Realities," I'm going to start by talking about what I think are two realities of climate change and then I'm going to go into a modified version of a presentation that I normally give called "Climate Change A-Z." I'll start with some of the science and some of the basics about where the emissions are coming from and what needs to be done to reduce them and then we'll talk about the UN Framework Convention on Climate Change, which many of you may already know about and also about the European Union Emissions Trading System. We'll talk about what's going on in the U.S. where a lot is going on now. There's finally been a sea-change I believe in the political viewpoint of this in the U.S. I'll end with a couple of topics that I think are very important, and those are the role of forests and agriculture in solving the problem and the three big countries that really matter: the U.S., China, and India, and also I would add Brazil and Indonesia to that list because of their deforestation. Finally, I'll talk about what's going to happen post-2012. That may be a topic for discussion.

There are two realities that I would start with. My company is AIG, a large, global financial insurance and investment company that operates in about 130 countries and we have about \$115 billion in revenues. We're a very large, very big corporation. A little over a year ago we came out with a corporate position on climate change. The reality is that there is an overwhelming scientific consensus that climate change is real, that it's happening now, and that it is highly likely that it is caused by human activities, such as the burning of fossil fuels and tropical deforestation. Secondly, this is an overarching environmental problem. It's probably the biggest and most serious environmental problem that mankind has ever faced. There are potentially going to be very serious consequences if we don't do something to reduce human anthropogenic greenhouse gas emissions.

I'm going to start with the very basics: what is global warming? It's an increase in the earth's temperature caused by high levels of heat-trapping greenhouse gases. It leads to other changes in the earth's climate system. Heat-trapping greenhouse gases occur naturally. The largest one is actually water vapor. The second is carbon dioxide, which trees breathe in. A lot of the emissions are natural and have been in balance for a long time. But over the past 430,000 years – we know this from ice core samples – the level of CO<sub>2</sub>, (which is the main anthropogenic greenhouse gas) has varied from 180 to 280 parts per million. But since the late 1800's this has increased to 380 parts per million, with the most rapid increase occurring in the last few decades and the highest rate of increase occurring over the past ten years. So we've gone from 180 to 280 and now we're up to 380 and it's going up very rapidly.

So why are they increasing? Mainly as I mentioned before, due to the burning of fossil fuels, coal, oil and gas, which are the basis of our economy and the global economy. Another big factor is tropical deforestation. Those are really the two main sources of anthropogenic emissions. The first greatest greenhouse gas is carbon dioxide. The second is methane, which comes from tropical deforestation, landfills, from fossil fuel production and from certain agricultural activities. After that it's nitrous oxide, which is also primarily an agricultural fertilizer and also comes from some industrial chemical processes. And then there are some specialty chemicals. Once they're in the atmosphere, they stay there for a long time. So the emissions have grown rapidly since about 1850, and especially since 1950. There's just a tremendous increase in the emissions of fossil fuels burning in the U.S. and in the world. For example, in 1950 it looked like there was about a billion tons of carbon going up and today we're approaching about eight billion tons, so that's how much we've grown since 1850.

Tropical deforestation accounts for more than 20% of global CO<sub>2</sub> emissions and this mainly comes from Brazil and Indonesia. This is about as much as the U.S. emits and this is something that I don't feel has been recognized enough. Reducing those emissions will produce many environmental benefits: water-related benefits, erosion, habitat protection, biodiversity. Global greenhouse gas emissions now are at approximately 45 billion tons. All of the gases are converted to a CO<sub>2</sub> equivalent. By 2050 with business as usual, the expected amount will be about 70 billion tons of CO<sub>2</sub> equivalent. So the world is not slowing down the emissions that are causing the problem on its own.

Just to give you some idea of where these emissions come from, in the U.S., a third of the emissions come from the generation of electric power and the burning of coal. Coal is the most intensive fossil fuel in terms of greenhouse gases. It has more CO<sub>2</sub> per unit of energy than oil and natural gas. It's coal, oil, then gas in terms of the intensity of emissions. The transportation sector is about 28% of U.S. emissions; this includes automobiles, airplanes, shipping. Industrial stationary sources such as steel and cement are 19%. This is followed by residential and

commercial sources, such as home heating oil and natural gas in homes and buildings which accounts for 12%. Agriculture is about 7%. Before there was a scientific consensus about this issue, AIG based its knowledge on the findings of the Intergovernmental Panel of Climate Change, which was established by the UN and World Metrological Organization back in the 1980's. Every five years they come out with a report. I think a couple thousand scientists from over a hundred nations contribute to it. They look at practically every peer-reviewed journal article that has been published in the world and they comb through them and come up with a scientific consensus. The last one came out early this year and in my opinion it absolutely nailed the science. It's one of the factors that has influenced the change in the United States because it said climate change is unequivocal, that climate change is happening and that it's highly likely that it's caused by human activities. The other segment we looked at was the joint statement by the eleven leading national academies of science in the world, including the U.S., China, UK, France, Italy, India and Brazil. This statement supports the findings of the IPCC and urges all nations to take immediate actions to try to reduce the human-induced greenhouse gas emissions.

So under business as usual, this level that I mentioned before – the parts per million of CO<sub>2</sub> in the atmosphere that's now up to 380 – is expected to be somewhere between 550 and 950 by the end of this century. Now the scientific consensus seems to be that somewhere around 450 to 500 is absolutely the maximum that we can have without really dire consequences. So we're at 380, you don't want to go above 450 and with business as usual we'll be somewhere between 550 and 950 by the end of the century. I think you can see that the window for action is pretty small. For example, over the last century the sea surface temperature increased by I think about one degree Fahrenheit. It's expected to rise by about seven degrees Fahrenheit over this century. The sea level rose between four and eight inches over the last century and this century. It's expected to rise by about fourteen inches and that's without the melting of the West Antarctic and large parts of the Greenland ice sheets. If those ice sheets melt, the sea level could go up by about seven meters. The reason is that some ice floats – it's like an ice cube in a glass. If it melts it doesn't really raise the level of the water in the glass. A lot of the ice that has been melting is the floating ice in the Arctic, but the ice in Greenland and the West Antarctic ice sheets are essentially on a land base. If they melt, it's essentially like putting a new ice cube in the glass because they will go into the ocean and significantly raise the sea level.

We're now seeing the impacts of global warming. I mentioned the land surface temperature has gone up a little over one degree Fahrenheit in the last century and it is expected to go up seven degrees Fahrenheit this century. And the sea level rose, I also already mentioned, by four to eight inches in the last century and is expected to rise by about fourteen inches in the next century. Another impact is ocean acidification because the ocean absorbs the CO<sub>2</sub>. This is very bad for marine life. The widespread retreat of mountain glaciers, and this is in the Al Gore movie, is occurring rapidly. If you live in Austria- the Alps- or Nepal you can see it. There's also a decline in snow cover, and all of this has a big impact on water supply. I just overheard a conversation the other day about the Three Gorges Dam, which you've all heard of, in China. They were saying that within just a few years there may not be enough water in the Yangtze River to generate electric power from that dam. There are drought conditions in China that are being attributed to climate change, and even in the western part of the U.S., so it's very serious. The water supply in the western U.S. is expected to be heavily impacted. There's also a decline in arctic sea ice. There's been less arctic sea ice since the 1970's, and it's predicted that polar bears will be extinct within a few decades. We're expecting more heat waves, like the ones in Europe a few years ago. There's melting of the permafrost around the arctic, that's documented. There are billions of tons of peat and methane, which equates to a lot of greenhouse gases when it comes up, and it's starting to come up as the permafrost melts. That's a feedback mechanism that will

only accelerate the problem. So we expect to see more wildfire, drought, northward moving diseases vectors, and ecosystem damage. So anyway, this is not really a good picture.

In response to that, the UN Framework Convention on Climate Change established an international governmental framework for cooperation on the issue. In 1996 the Kyoto Protocol came out of that convention and in 2005 it entered into force, meaning that enough countries had ratified it that it entered into force. It's been ratified, or accepted, by 149 nations, and all developed countries except the U.S. and Australia have ratified it. Under the Kyoto Protocol, the developed countries commit to a quantified greenhouse gas emission reduction over the time period 2008-2012 so it really starts next year. The target for all of the developed countries is about 5% below 1990 levels but it's differentiated by country. The European Union's target I believe is 8% below, but it varies from country to country. They've announced an additional goal of 20% reduction by 2020 below 1990 levels and 60 to 80% by 2050. That's only 43 years away and that's a huge reduction if you think about the emission coming from all the burning fossil fuel which is prevalent throughout the economy.

One of the interesting parts of the Kyoto Protocol is something called international emissions trading. This is actually modeled on a program in the United States, the sulfur dioxide (SO<sub>2</sub>) trading program which exists among the coal-fired power plants in the United States. The concept is that each country that has a quantitative target gets an allowance, they are actually called Assigned Amount Units. They are given to each country. France would get so many, Russia would get so many, Japan would get so many. They represent the commitment that the country has made under the Kyoto Protocol. Each country has to monitor its emissions so at the end of the period they have what they have actually emitted and the number of allowances equal to their target. They have to give back allowances equal to what their actual emissions are. So if their emissions are below the allowances they get they'll have allowances left over. They can sell those. If France is below its target it can sell its excess to Germany, which is maybe above its target. That way the overall cap is met and it encourages the country to reduce more at less cost. So we meet the overall cap in the most effective way.

In addition to the allowances in this system, credits can be generated from projects in developing countries. There is a very rigorous UN process for certifying and ratifying the projects as to create the credits which can then be introduced into the trading system. That's called the Clean Development Mechanism, and personally I think there are problems with it and problems with the whole concept. But I also think that in some ways it's a temporary measure until developing countries can be brought in more fully to the system.

Now in addition to the International Emissions Trading, the European Union has set something up called the European Union Emissions Trading System (EU ETS). It gets sort of complicated but it's a parallel system that they're setting up to help the countries in Europe implement their national targets under the Framework Convention on Climate Change. Within the EU ETS, the allowances essentially go down to the level of the big emitters, such as electric utilities and industrial stationary sources. They have targets, so it goes from the national level to the big emitters and they can trade and also invest in projects in India, China or Namibia and gain credits to meet their compliance obligations. So there was a pilot system in the EU ETS that was set up as a trial run for what's going to start next year, and that's been going on since 2005. Now out of that has come an emerging global carbon market. Many people have said that these allowances and credits that are being traded are one day going to be the biggest commodity market in the world. Last year the value of carbon trading was \$30 billion. It's anticipated to be \$150 billion by 2012 – that's a forecast by Deutsche Bank. And that's not considering that the U.S. may come

in, in which case it will be much more. I heard someone from Barclays quoted as saying it's probably going to be a trillion dollar market within the next ten years. So it's going to be a huge deal. Right now there are four exchanges within the European Union – electric, clearinghouse functions that trade these allowances and credits. There are billions of dollars invested in carbon funds, which means investors putting money into funds to generate projects in developing countries.

Now, what's happening in the U.S. I think there really has been a sea change as I said before. I think the IPCC report had something to do with it. I think the legislation of the state of California passed has something to do with it. California's economy is like the eighth largest economy in the world and they now have a cap on greenhouse gas emissions which will go down to 60% to 80% below... let's see, it's either 1990 or 2000 levels by the year 2050. So they are very much in line with what the Europeans are doing in terms of their goals for reducing emissions in the state of California. Now when a state that big does something like that, the federal government is going to pay attention. There's also a regional greenhouse gas initiative in the Northeast. It's now up to nine or ten or more states, including New York. It also is putting in a cap and trade system on the electric power sector in those states. There are several other states, like New Jersey, New Hampshire, Massachusetts, and I believe Oregon, that have also enacted caps on greenhouse gas emissions. This piecemeal action just simply isn't going to work in the U.S. because of interstate commerce and other things. It's clear that the federal government must step in and do something. Another factor, I think, is the change in Congress with the new Democratic control of Congress. If you put it all together there are now eight, maybe more, proposed bills and legislation before both the House and Senate to cap greenhouse gas emissions in the United States and to establish an emissions trading system to do that.

AIG joined a group called USCAP, United States Climate Action Partnership, which consists of 31 members. It's 23 or 24 of the largest corporations in the United States. It includes ConocoPhillips, BP, Shell, Duke Energy, Florida Power and Light, AIG, DuPont, Alcoa, Siemens, GE, GM – all the big three automakers. It's really serious-huge U.S. corporations-and it's a coalition to make a legislative proposal that we're working on jointly. We're feeding it on to all these congressmen and to Congress to say "this is the voice of U.S. industry and this is what we want to see in terms of legislation." There's a commitment and the targets are already set. If the targets go down to 60% to 80% below by 2050, that's a consensus that's already been reached as an economy-wide target by this group of U.S. industry. That, to me, is very big stuff. It means the U.S. is really getting geared up to jump into this. Do you have a question?

**Question:** Yes, that 60% to 80% below – is that below 1990 levels?

**Ms. LeBlanc:** I'm not sure if it's 1990 in the USCAP, it may be 2000. It's essentially a huge drop. You can go on the website, it's [uscap.org](http://uscap.org), and get the exact number. It's on the same level of magnitude as what's happening in Europe and California.

**Question:** Is this a change for the corporate world? There has been the perception that a lot of the opposition to certain of the Kyoto proposals were coming from certain segments of the corporate world.

**Ms. LeBlanc:** The coal industry is the last holdout, although USCAP is about to accept a coal company as a member, which is something. The utility companies now understand that regulation is going to happen, that it's a reality. So they want to be at the table to help shape it and get their viewpoint in. The fact is that we have four large utilities and I think we are going to let three or

four in. Companies are knocking at the door of USCAP. The membership has been limited to 35 until the group can make a decision as to whether or not to admit more members because it gets unwieldy to reach a consensus.

Other than that, I had mentioned issues before that I thought there would be a discussion on. One is forest because there are movements afoot. There is a Coalition of Rainforest Nations-I think they are called-that have actually petitioned the UN to let them come in under the Kyoto Protocol and take some sort of national limit on their deforestation emissions, and then to commit to reducing or holding constant those emissions. If they do better than that they could generate credits which they could sell. In my mind this would be a tremendous thing because it would create a real financial incentive to protect forests and to make a huge contribution to solving the problem of climate change.

The really big issues are the U.S., China, and India. China by some accounts has already overtaken the U.S. in greenhouse gas emissions. Certainly it's projected to do so next year if it hasn't already done so. Somehow China must be brought to the table with the U.S. and India, the other country that has the potential to have explosive growth. Both China and India have huge coal deposits so they are going to be fueling their growth with burning coal.

**Patricia Ellis:** Thank you so much. I was interested in the whole question of coordination. There seem to be so many groups and players interested: we have international, we have regional, we have national, we have corporations. Who and where should things be coordinated? What kind of partnerships are really essential and what's working now? Also, who is really leading the fight against climate change? You mentioned Europe a number of times and I am wondering if you could talk about their efforts. And lastly, how do we deal with countries like China? I don't know if you have the answer, but it's not just China. It's anywhere where economic growth is the priority and there is an awareness but it may be hard to deal with. One last thing, cost. What kind of costs are there going to be?

**Ms. LeBlanc:** The big question is how do we get China and India to really come in and make some kind of commitment. The Chinese certainly recognize that this is a problem. They just recently announced a climate change plan where they took intensity targets, meaning that they would reduce CO<sub>2</sub> per unit of output, or CO<sub>2</sub> per GDP. So, reduce the intensity of their GDP output. If they continue to grow so rapidly that's not going to necessarily solve the problem. They see the effect of climate change on agriculture already occurring and they are very, very concerned about it. If you saw the Al Gore movie you saw the flooding in Beijing and Shanghai and the water supply issues. So it's in everyone's interest to solve the problem.

**Patricia Ellis:** It's not only China either, there are many countries.

**Ms. LeBlanc:** In terms of cost, my background is really in emissions trading. I helped set up the SO<sub>2</sub> program in the U.S. The thing about emissions trading is that it's worked beautifully, and the U.S. SO<sub>2</sub> system is a much simpler system. It's worked beautifully in that there has never been an incidence of noncompliance in that program, which started in 1995. There have been virtually no lawsuits which is unheard of in major U.S. environmental regulation. It has really driven the lowest cost solution. So in terms of cost it's hard to say what the costs are going to be. The experience of the SO<sub>2</sub> is that whatever you think the costs are going to be, this economic mechanism provides financial incentives for companies to find the least cost way to do this. It's a tremendous driver in reducing cost. So I am personally optimistic about technology, that we will find something, and that if there is a financial driver to find it it's going to be found more quickly.

**Patricia Ellis:** What about this issue of coordination, what is the best way to proceed from your vantage point, with all the different players?

**Ms. LeBlanc:** I think we will see legislation coming out of the U.S., probably in about three years. Ultimately I think that each country is the entity that really has the enforcement power. So the coordination of the federal regulation in the U.S. will automatically bring the companies and the NGO's under its umbrellas. Even if the U.S. develops its own emissions trading system it is going to reach out to the EU trading system and there will be a linkage that will occur. What happens post 2012? That's what I was hoping to hear from this group about. I know there are efforts underway to coordinate negotiations and discussions.

**Question:** If the goal is to spread the knowledge about climate change, one of the most challenging points is to reach out to the masses. Rural areas do not even know what things are critical so they, themselves, can be responsible. Political leaders, environmentalists, non-profit organizations are trying to work together to improve certain aspects of the environment that they are aware of, but it still has not reached the masses in the rural areas, the villages. What would be the best way to reach out to these people in the developing nations that are still fighting poverty and education and literacy?

**Ms. LeBlanc:** This is one of the reasons that I brought up forest and agriculture as what I see as really important areas to include in the climate change solution. Improved agricultural techniques can enhance soil productivity and absorb carbon in the soil, for example. It's both mitigation and adaptation. There is an example of a project like that in northwestern China that the group Environmental Defense has been working on with some of the poorest farmers and poorest people in China. They got some corporate money to initiate a series of projects that they have developed and they are trying to sell the carbon credits from these projects. It includes changing tillage practices. This is a region that is being affected by drought that is attributed to climate change. One is agro-forestry, which is planting trees in the crops which can enrich the soil and help with erosion. Another is a tillage practice-low-till or no-till-because carbon is released when soil is tilled. Another is collecting the methane from the animal waste and using it to generate electricity. The third is something called drip irrigation. These are very simple, low-cost ways to reduce greenhouse gas emissions and they are trying to quantify that and sell the credits and at the same time adapt because it's making the soil more productive in the face of drought conditions. That's a way in which the regulations that governments impose to force reductions in emissions can create value, can help alleviate poverty and improve agricultural productivity.

**Question:** I've covered a lot of the major conferences that the UN held in the 1990's when climate change was a major question. In 1994 at the Small Islands Development Conference, the private sector group that had the most visibility was the insurance industry. People came from many parts of the world. Those people were warning even then and backing up the small islands countries about sea level rising specifically and also about general climate change, and they did point out that there were some of countries that couldn't get any insurance whatsoever. How is your company and other large companies helping to give incentives for action to be taken that will help to mitigate this climate change or help cut emissions? Do you have policies that reward those who may be working hard and actually sharing results?

**Ms. LeBlanc:** This is the other part of the speech that I left out is what we are doing as a corporation. The focus of what we are doing is to try to help our customers (our customers include all of the major energy companies, coal companies and really globally, a lot of refineries)



reduce greenhouse gas emissions through our core businesses activities. Our core business activity is insurance. So we can insure renewable energy technologies which helps deploy them, it helps get them going. So that is one of the thrusts of what we are doing, new practices within our Global Marine and Energy Group to a new practice called Alternative Energy Practice which is a big marketing campaign to provide insurance to the technologies that are going to be needed to solve the problem. We have our global investment group which manages about 700 billion dollars in assets, so they are allocating new private equity to these technologies and to sustainable agriculture and forestry and to the activities that are going to be needed on a large scale to solve the problem. And then we have financial products which develop sophisticated derivative products, which is exactly what the emerging carbon market needs to facilitate the transactions. So as a corporation, that has really been the thrust of what we are doing. We also have an active microfinance group within AIG. We are really one of the leaders in that, and we are starting to explore ways that that might be able to tie into climate change.

**Question:** A follow up, are you alone in the industry?

**Ms. LeBlanc:** We've definitely been the leader in the U.S. because no other U.S. insurance company has come out with anything like this kind of public policy. Marsh, which is a broker, has. I know that some other U.S. companies are starting to think about it. The European insurance companies have been doing this for a long time, which I think is in a large part related to the political climate in Europe where they've signed onto Kyoto and have the regulations already in place through the EU trading system.

**Question:** I don't thoroughly understand this carbon emissions trading system, but it just seems that selling carbon emission credits to someone who hasn't met their emissions cap would just run counter purpose to what we are trying to achieve, which is lower carbon emissions. So I'm not understanding that and I'm wondering if there is not another financial incentive.

**Ms. LeBlanc:** As I said I think that the SO<sub>2</sub> system in the U.S. is a large scale example that's been very successful. There are a couple of a priori conditions you need. One is that what's important is the total loading into the atmosphere of the pollutant that you are trying to control. So it's not whether it comes from this source or that source, it's the total amount that goes up. For greenhouse gases by and large that's true. It doesn't matter where the CO<sub>2</sub> comes from, doesn't matter if it's concentrated in one spot. The idea is that the government sets the cap on the total loading. How that gets distributed among the polluting sources really doesn't matter so much. It's that the total cap is protected.

In fact, what emissions trading does is it creates a value for the reductions, a specified financial value that the market determines. Whenever there is a value for anything people watch it very carefully, they monitor it very carefully. So it actually fits in, it actually helps reach that cap because anyone that's reducing wants to make sure that their reductions get counted, and they also want to make sure that the factory next to them isn't cheating. So it really encourages a rigorous monitoring system, which is what you have to have.

**Question:** I'm curious to know if you are aware of any of the dialogue that might be happening more recently about whether countries-the U.S. in particular-really have any right to go to China and India, as similar large polluting countries, but which have had less of a leg up in getting farther along in their development. Is there any sense that somehow it's just not morally right to ask China and India to give up something that every other developing country had access to for years? And do you know how that might be addressed so that China and India won't feel as

though they are getting a disadvantage to the rest of the developing world?

**Question:** There has been a lot of criticism about the trading system especially with reference to the 90's. For example, Russia had a very good deal there. Their allowance was very big so they could meet it very easily. So the others could easily meet their cap by buying Russia's leftovers. There was a lot of criticism, so how do you feel about this? A second criticism was after the European Summit on Climate Change, there was an opinion from a Danish professor who said that the cost would be huge to achieve what Europe wanted to achieve and so that in the end they wouldn't be able to meet the goals they set.

**Ms. LeBlanc:** One way of looking at it is that the pollution problems that are resulting in China, even if you take global warming away, they're horrendous. You can't breathe, I was in Hong Kong last year and I couldn't breathe. I walked in tunnels, five minutes in the air and I was wheezing. Every day in the paper there was a headline about 700 villagers killed from toxic waste. Eighty percent of the rivers in China are so polluted that the water isn't fit for industrial use. Whatever they're doing, if we did it was a mistake when we did it and it's a mistake when they are doing it. I think this is the right thing for China to be doing. So the issue is how do we get them engaged, if they come into the trading system where do you set a cap? That's a political process to determine what is their target. It's my thought that the trading system itself will drive the lowest cost. That's what you want, to solve the problem in the least cost way. So if you can bring China in, the target setting is different from engaging them. In the end they know it's to everyone's benefit to solve the problem. The way I see it, we want to get China in here because the whole world needs to solve this problem. We have to figure out a way to do it. I think trading has some advantages, and we want to do it in the least costly way. If we can do it in the least costly way it costs China less, it costs everyone less. So I don't know what to say about that, but it's critical, it's necessary to solve this problem. I don't think we should be paying China to pollute.

The Russian hot air issue, that's a target allocation issue, it's a political issue. Russia cut that deal for themselves. Whether or not you have trading, if countries have targets they are going to have to set the targets somehow, so I don't see that as a trading issue. If you don't have trading then each country makes their target, and each country has to meet their target. You are going to have the same overall emissions with or without trading. The problem is in the target setting. You have that problem with or without trading. It's not the trading mechanism's problem, it's the target setting. If you read the Stern Report, you'll have a different opinion. He is to me an outlier, an endangered species, the client skeptic. I think he is an outlier in terms of his viewpoint. You can find other examples of economists that say the opposite.

**H.E. Kaire Mbuende, Ambassador of Namibia to the United Nations:** Thank you for a very interesting presentation. I've made it a point to attend almost every presentation on climate change. I was struck by the follow up on the question of China and India because it's not a question of China and India. The impact of greenhouse gas emissions and climate change is relevant to everyone.

Especially for us non-emitters, we get drought we get deforestation—I was at a meeting similar to this one where there was the argument that China and India need to develop, but also where the Indian representative said normally if someone throws poison in your garden he has to pay for it. For me, whether that poison comes from the rich man or the poor man it doesn't matter. Whether it comes from China or the U.S. it's still poison in my garden. That's really where we are coming from. We need a commitment from the Chinese, from the Indians, from everybody to protect the

environment and climate because it's really a collective responsibility. If we don't the consequences will be too drastic to contemplate, especially for those of us who don't participate in emission but who are on the receiving end of the consequences of that.

Coming to the question that you raise about coordination. We believe that as much as national initiatives are important and national commitments, this must be a truly multilateral agreement. We all have to agree. The agreement on levels of emissions shouldn't be a pact among the culprits. The victims should also be party to that. That's really where we are coming from on the negotiating table. That's why we disagree with the attempt to reach an agreement between the G8 and the major emitters. But not take into account the situation in Africa and all those who are suffering from the actions, they have to be part of the negotiations also.

See what is the level that we can absorb. It's not a question of what can Europe afford, or the U.S. afford to emit. You can talk about the economics of it, if it's affordable. But as it's happening, you can see the impact on the other side. If we had time, one could talk about the consequences of this. I come from a country in a high altitude in Africa, not tropical. Therefore it's cool, but it has started to get warm. We never had different kinds of mosquitoes, we are getting them now. Malaria is a new disease in that part, we are getting malaria now. So you can go on from one sector to another to see just the impact of that, the drought, and so on. That's why we are keenly following these discussions wherever they are taking place. Above all, with a view to have a truly multilateral agreement especially come 2012 the renegotiation of Kyoto Protocol. So that's really what we are aiming at.

**Patricia Ellis:** What are your expectations of the meeting during the UN General Assembly session on climate change?

**Ambassador Mbuende:** There is one now, and there will be one in September. First of all, it's really to raise political awareness. Initially, as you said, there was a dispute whether climate change was real and what were the contributing factors. I think there is now scientific consensus. As far as we are concerned there is scientific consensus. Of course there will be people who have different views. Human activity contributes more to global warming than climate variability that is taking place with its own cost and the combination of the two. But human activity plays a major role. I think there is a consensus.

I was talking to the special advisor of the Secretary General on Climate Change. When Secretary Ban Ki-Moon played a courtesy call on President Bush he included the item of climate change. They thought it was offensive that he wanted to discuss that. This was six months ago. Now President Bush wants to discuss climate change. So the landscape has changed, and the awareness. In the last six months so much has changed about climate change. Everybody wants to talk about it now, everybody is aware of it. The frustration is — what is it that we can do? Of course, there is the moral part where we say every individual has a responsibility in terms of what you do and so forth. But there is also the broader governance issue, broader agreements in terms of commitments. Then the private sector coming in with the various incentives such as the carbon trade and so forth. These are all, I think, different issues. As much as we would like to set certain targets we have to be realistic also in terms of what is achievable and what we can do. That's why the incentives such as carbon trading- you can think whatever you want about it- becomes important.

What is also interesting is a new movement in terms of new alternative sources of energy. That is now the new business actually. The projection is that it will be a trillion dollar business.

Therefore, it will outplay the importance of traditional sources of energy such as oil and coal and so forth. That's what the landscape is.

Our interest is really to get an agreement that involves everybody. For us it's not a national issue, it's a global issue. The gas emitted in the U.S. or China or whatever will have an impact on the small islands, that might disappear completely from the face of the world. It will have an impact on Africa. Therefore, it's really a collective responsibility.

**Question:** Just out of curiosity, this 450 ppm, do you have another idea in terms of what-- you know that's what I've always heard what the scientists say is the level that we can't surpass.

**Ambassador Mbuende:** Right. I think that is really the level that they say we can't surpass. The question is, can we reduce sufficiently to get there? That is really the question.

**LeBlanc:** That's my concern too. Can we do it quickly enough?

**Ambassador Mbuende:** We are looking at 2050. It may sound far but it's only 20, 30 years.

**Patricia Ellis:** Just to bring this full circle back-- thank you so much for your contribution, that's very helpful. I imagine that you will continually get the question of what we, as individuals, can do. We talked about the multilateral, the national level. You talked about how different states have laws, but even in this country recycling isn't mandatory, it's voluntary in many places. I'm wondering what your thoughts are about when this is going to change and how?

**Ms. LeBlanc:** One of the things that USCAP is looking at is not only the legislation that would hit the big emitters but also supplementary legislation that might impose standards on buildings to be more energy efficient and café standards, things that would force the vehicles to reduce emissions. I think that as this continues to unfold and as legislation gets more real there are a lot of things individuals can do: change your light bulbs to compact florescent light bulbs. If everyone did that, it's like a 20% reduction or something, it's huge. It's simple things you know: carpool, walk, ride a bike, take public transportation, don't buy SUV's, unplug things. Some of the environmental groups have excellent websites where you can go and see all of the things that you can do. Environmental Defense, you know I used to work there so I kind of favor them, but many of them have those websites.

**Patricia Ellis:**

This has been really wonderful chance to learn a lot and become more aware and have a good interchange. We will definitely continue the dialogue. Thank you so much.