



WORLD
RESOURCES
INSTITUTE

Environmental
Stories to Watch
in 2005

REMARKS BY JONATHAN LASH ON DECEMBER 21, 2004
NATIONAL PRESS CLUB BRIEFING FOR JOURNALISTS



ENVIRONMENTAL STORIES TO WATCH IN 2005

Remarks by Jonathan Lash on December 21, 2004

National Press Club Briefing for Journalists

PREFACE

Last year WRI invited members of the press to join us at the National Press Club and talk about some interesting stories and trends to watch for 2004. One of the key stories we identified was the fate of the Kyoto Protocol, specifically how its ratification hinged on whether Europe chose to “make a deal with Russia,” offering accession to the World Trade Organization and a good deal for the sale of Russian gas to Europe in exchange for Russian ratification of the Protocol. The WTO deal went through, under pressure from French President Jacques Chirac and British Prime Minister Tony Blair. Russian ratification followed shortly after, and the Kyoto Protocol is due to take effect in early 2005.

Another trend we suggested was the rapid growth of renewable energy, particularly wind energy. Wind has continued to be the fastest growing form of energy in the world, with growth in excess of 26% annually. Farmers in North Dakota and Minnesota are very actively farming the wind these days. California’s wind power alone can now save the equivalent of 4.8 million barrels of oil per year. The cost of generating a kilowatt of electricity from wind continues to decline, from \$1 in 1978 to five cents in 1998 — and it’s expected to drop even further.

A third trend we discussed was the use of market based tools to solve environmental problems. I talked about the formation of the Chicago Climate Exchange, an opportunity for organizations like WRI and companies like Ford and Dupont, all of which have voluntarily committed to make reductions, to trade carbon credits with each other. Even though there is no mandatory carbon emissions cap in the U.S.

and, therefore, no scarcity of carbon credits, the trading has still behaved as if it were a real market. The price of credits on the Exchange shot up after Russia ratified the Kyoto Protocol, even though the companies are all U.S. companies and the U.S. has withdrawn from the Kyoto Protocol. The Exchange is interesting because it's a numerical way to track what companies think of the future of climate control in the United States.

I want to begin this year by focusing first and foremost on a set of climate issues. Let me put these in context. The Framework Convention on Climate Change is the umbrella convention that 186 nations have ratified, including the U.S., which ratified it in 1991. It seeks to prevent the amount of carbon dioxide in the atmosphere from rising to a "dangerous" level. The Senate voted 96-0 in favor of it and the first President Bush signed it. The Framework Convention took effect in 1994 when the requisite number of countries ratified it. It's a useful time to look at what kind of progress we have made or haven't made and what might be happening when science, business concerns, state action, and public notice coincide.

WHAT HAPPENS NOW THAT THE KYOTO PROTOCOL IS RATIFIED?

On February 16, the Kyoto Protocol, a protocol under the Framework Convention on Climate Change, comes into effect. That means all of Europe, Russia, Japan, Canada, Mexico will be within one system for dealing with climate change, from which the United States is excluded.

This winter, the European Union will initiate a carbon credits trading mechanism that allows companies within the 25 nations of the EU to buy credits in order to meet required targets for reducing green house gasses. How does it work? Company A goes to Company B and says we'd like to buy credits because we can't make reductions on our own. Company B makes more reductions than it has to and sells its credits. The EU trading mechanism is expected to rapidly grow into a \$13 billion trading market that the U.S. will be excluded from. About 12,700 industrial organizations in 25 nations will participate.

In July, Great Britain will host the G8 Summit. Prime Minister Tony Blair has said he intends to make climate change a focus of the summit, both in terms of the science and the politics, but also in terms of the moral case for climate change. With significant agreement among the G8 that addressing issues of global poverty is important, Blair intends to make the case that it is impossible to address global poverty without also addressing the questions of climate change which will affect poor countries first and most intensely. It's interesting to note that when the U.S. withdrew from the Kyoto Protocol it said it was convinced that Europe wasn't serious about implementing the Kyoto Protocol.

In December 2004, there was a major international conference in Buenos Aires of all the parties to the Framework Convention on Climate Change, which includes the United States. A major topic of discussion was what should come next now that the Kyoto Protocol has been ratified by the requisite number of countries and the European Union, Russia, Canada and Japan will begin implementing it. The hope at that conference was that the United States, China, and India would enter into the discussion about the long-term future as a basis for getting past the disagreement over the Kyoto Protocol. The position of the United States in Buenos Aires was that we have no interest in any such discussions and we oppose the creation of any forum for any such discussions.

So the news from the international discussions is discouraging, except for the fact that the countries that have ratified the Kyoto Protocol are clearly going to go ahead. It means those who want to address the climate change issue in the United States must address it outside the context of international negotiations for the time being. My hope is that there will be increasing discussion of what is possible outside the context of international negotiations and that that will eventually lead to a new round of negotiations, not next year or the year after, but probably sometime within the next five years.

THE ACCELERATING DRUMBEAT OF SCIENTIFIC FINDINGS ABOUT GLOBAL WARMING

The release in November 2004 of the Arctic Climate Impact Assessment drew worldwide attention because it showed arctic sea ice retreating twice as fast as scientists expected. The Arctic isn't a big tourism destination, and few of us believe our well-being depends on polar bears. However, the fact that the ice is retreating twice as fast as expected has significant implications for what we understand about the models used to predict the effects of climate change. The Arctic study was followed by a European study of the probability of extreme heat waves that will cause significant death and illness in Europe.

2005 will probably be a year of even greater acceleration of scientific findings. In the Winter, there will be an announcement of the CO₂ concentration numbers. Each year there is a set of observations of the amount of carbon dioxide in the atmosphere. The build up of CO₂ in the atmosphere is what drives the increase in global average temperature. The build up has normally been running at a little over one and a half parts per million. Occasionally it will go above 2 parts per million. The last two years, for the first time in recorded history, the build up has gone above 2 parts per million for two consecutive years. This year, it seems likely that it the build up will go beyond 3 parts per million this year. That simply means that the CO₂ build up curve is getting steeper, at a rate beyond that that was expected by scientists and that we'll reach the very high concentrations that scientists believe will cause a rapid response from the climate system sooner than expected.

Then in June, the storm season will begin again in the Northern Hemisphere. Last year Japan was struck by a record 10 typhoons. The United States, as we're all aware, had a series of serious named storms which hit us. And everyone is wondering what will happen in this storm season.

ADDRESSING CLIMATE CHANGE BEYOND THE BELTWAY

We accept that there will be very little action on climate change in Washington. There is, however, a great deal of action on climate change outside of Washington at the state level and in the private sector that will continue in 2005. I want to review a few hopeful indicators.

More than 24 U.S. states have acted individually to reduce carbon dioxide emissions by imposing a mandatory cap on the amount of CO₂ released or by imposing offset requirements for new carbon emitting power plants. This means that if a company wants to build a new power plant that uses fossil fuels, the company must make an investment in something like a reforestation project or other energy efficiency project in order to offset the CO₂ emissions.

States are also forming sequestration committees to look at measures for capturing CO₂ emitted by industrial or other activities. Some committees are looking at the possibilities of capturing CO₂ and re-injecting it underground as a means of preventing the build up in the atmosphere. Others are looking at agricultural methods for capturing CO₂.

Twenty three states are developing climate action plans that will include measures from improved traffic flows to energy efficiencies. Five others have plans in progress. Thirty six states have measured their total greenhouse gas emissions, usually as a first step towards the implementation of some kind of mandatory measure to make reductions.

Finally, there are states — 20 in all — that have adopted portfolio standards, or requirements that a certain percentage of their electrical power come from renewable options. New York is trying to achieve 25% by 2013. Colorado has set a target of 15% by 2013; California, a 20% target by 2017. In each of these states, because of these portfolio standards, there is a rapidly growing market for renewable energy. It's an important sign for businesses.

Companies also are taking voluntary actions to reduce their greenhouse gas emissions. WRI works with a group of 12 companies that among them represent about 10% of the industrial energy demand in the U.S. that are committed to purchasing renewable power. The group recently announced a new purchase of 62 megawatts, which brings the total purchased to 174 megawatts. That's the equivalent in terms of CO₂ emissions reductions of taking about 150,000 cars off the road. This group is now the largest purchaser of landfill gas to make electricity, the largest user of wind power in the country, the largest user of hydrogen based fuel cells, and the largest user of biomass renewables in the country.

These companies are making these purchases first and foremost because they're finding it is a way to stabilize their energy costs. Since you don't have to buy wind in order to generate wind power, there is no underlying fuel cost that will raise the cost of electricity from wind, and they can get long term stable contracts. Secondly, the companies anticipate they will be required to reduce emissions in the future and making these purchases is an enormously useful way of learning about purchasing green power.

Another WRI project with a group of companies in the Northeast, including General Electric and Citigroup, is looking at measures they could take to reduce emissions and explore market opportunities they might avail themselves of. Citigroup has set some remarkable new efficiency measures and General Electric is making a commitment to the development and sale of wind turbines.

About 350 companies worldwide, including many of the companies I just mentioned and others in the U.S., are now using a consistent measurement protocol developed jointly by WRI and the World Business Council for Sustainable Development to measure the amount of greenhouse gasses they emit. This is also the measurement protocol being used by the European Union for their trading mechanism. Why is a consistent measurement protocol important? It's the starting point for companies looking to find ways to reduce their greenhouse emissions. It's an important first step in the emerging trading mechanisms.

The big question all these indicators raises is whether or not these actions will really make an impact, given the federal government's lack of attention to the climate change issue.

First of all, when you add up all the things I mentioned, it actually adds up to millions of tons of carbon dioxide emissions avoided. On the scale of U.S. emissions that's a small change. But it's real. Secondly, it adds up to an enormous incentive for the markets to produce renewable energy and efficiency measures. Third, these measures represent very significant learning on the part of leading companies so that they increasingly believe that given a fair and flexible regulatory system they could meet reduction targets so long as there was a level playing field and they weren't disadvantaged compared to other companies.

I'm trying to draw as much hope as I can from these signals. Frankly, in terms of the urgency of the problem and the emerging science, it's way too little. And I don't want for one moment to suggest that what's happening in the U.S. is remotely adequate to my perception of the problem.

CHALLENGES FOR THE AUTOMOBILE INDUSTRY

This will be the beginning of a very interesting few years for the automobile industry. There have been bitter political fights over whether fuel economy standards should be tightened in the U.S., including strong opposition from the automobile industry. The industry, in fact, is suing California, charging that California's effort to control greenhouse gas emissions is really a backdoor effort to control fuel economy.

What's interesting is that in most of the world — where most of the growth will be in the future automobile markets — fuel economy standards are already more stringent than the U.S. The Chinese fuel economy standards, the first phase of which will take effect in 2005, are significantly tighter than the U.S. standard. The Chinese have imposed the standard because they don't want to become more dependent on oil imports than necessary. The EU has adopted a CO₂ standard that

will significantly limit emissions beginning in 2008. If that standard takes effect in 2008, it means the auto companies need to begin developing now the products they will sell at that time. Japan already has standards that are much tighter than the EU. Australia already has standards that are much tighter than U.S. standards.

This is a challenge for the automobile industry, particularly for U.S. companies that have long depended on the American market to drive their profitability and in particular on the sale of light trucks and SUVs. Now much of the rest of the world is demanding a different kind of performance. Can the auto companies meet the demands of several very different markets? This set of challenges also will be of interest to Wall Street investors looking at how the automobile companies are positioned in terms of their ability to meet this challenge.

Some months ago, WRI released a review of the 10 major auto companies worldwide including Ford, GM, Daimler Chrysler, VW, Peugeot, Toyota, Honda, Nissan, Renault, and BMW. We assessed the position of each company in terms of the efficiency of its fleet and its position on the three leading technologies that are candidates for significantly reducing CO₂ emissions: fuel cells, hybrids, and advanced diesels. Then we tried to examine the cost for each company of improving its position.

Not surprisingly, several of the leading Japanese companies look to be in very strong positions. Toyota has a very efficient fleet in terms of all of their sales globally and a very strong position on all three technologies. Although right now marketing the best hybrid car, Toyota has very strong diesel and fuel cell programs. A number of the European companies have very strong diesel programs. Honda has an extremely efficient fleet and quite good technology. GM and Ford have much less efficient fleets (because they have met the consumer demand in the U.S. for SUVs and light trucks as a primary source of profitability) and weaker positions on the technology (because they didn't invest as soon).

Ford is now selling a hybrid vehicle, but sales will not approach what Toyota and Honda are already achieving with vehicles that have been on the market for several years and expanding fleets. Ford also relies on technology licensed from Toyota. GM had chosen to focus on fuel cells, a long term strategy for vehicles that might be available in 10 or 15 years but for which there is no existing infrastructure. Fuel cells require hydrogen — you can't drive into your local service station and say fill it up with hydrogen. It's a very clean technology, but there are problems still to be solved with regard to storage of hydrogen and about where the hydrogen is going to come from. If hydrogen is made from coal, it doesn't solve the global warming problem. GM has been advertising sales of a hybrid in certain parts of the country, but that's a limited hybrid, a "hybrid light." It uses the electric part of the hybrid to run auxiliary systems, not the engine. GM has recently committed with Daimler Chrysler to develop a full hybrid that will be available in three years. That's an illustration of how far they lagged behind.

So it doesn't appear that U.S. companies will be the drivers of change in the auto industry. Rather, they'll have to respond to changes and pressures. As those pressures mount, will auto companies become interested in regulatory legislation to help them level the playing field in their own markets, essentially regulation as a means of protecting their markets? There hasn't been a sign yet, but I wouldn't be surprised if before the European standards take effect in 2008 that there's some discussion of that.

One final observation. When there was a gasoline crisis back in the 70s, we experienced long gasoline lines. This year when oil prices suddenly shot up and gas prices went up over \$2 there weren't gas lines. But, you did find lines of people outside Toyota sales rooms looking to purchase Prius hybrids. And if you go on eBay, you'll find its quite expensive to buy a high place in line to buy the new Lexus hybrid. A sign of change, I would suggest.

WHAT CAN WE EXPECT ON CLIMATE CHANGE FROM THE ADMINISTRATION AND THE CONGRESS?

Certainly, the United States has just elected a conservative Congress as well as a president that has withdrawn the country from the Kyoto Protocol. And, as I mentioned before, we don't expect much action on climate change from the Administration.

However, I want to point out an interesting trend. Members of Congress introduce and sign on to legislation on issues if they believe the issues are of importance to their constituencies. If you just look at total numbers of climate change-related bills introduced into Congress, the trend looks as if the level of importance is rising. The number of climate change-related legislative proposals increased from 7 in the 105th Congress (1997–98) to 25 in the 106th Congress (1999–2000) to 80 in the 107th Congress (2003–2004).

So what is the Administration doing? There has been an extension of the tax credits for wind energy which are enormously important to the wind energy industry. There is federal research money going for a variety of projects ranging from underground sequestration of carbon dioxide to the development of fuel cells. But that money hasn't been sufficient to drive the kinds of programs I've described today.

One of the most useful steps the federal government could take would be the development of a reporting standard. There was a federal reporting program called 1605 under which companies could register their greenhouse gas emissions. There was general agreement that the regulation describing the reporting protocol wasn't adequate and that the Department of Energy should develop a new set of rules. Over the course of 4 years they have been unable to do so. So virtually all companies measuring and reporting their emissions are using the protocol developed by WRI and the World Business Council. That's an illustration of the fact that there just hasn't been much federal leadership in this area.

It does seem likely that the Energy Bill will be an Administration priority. The Energy Bill will be a very interesting place to watch whether any of the pressures we've discussed play out. Do renewables get better treatment in the final bill? Will there be efforts to either strengthen or limit different state programs, registries and so forth? Will the bill in some way address the need for a consistent greenhouse gas measurement protocol? How will it treat efficiency? Where will the subsidies be allocated? And, in particular, what will be the investment in research on sequestration technologies?

In a sense, underground sequestration of carbon dioxide is the "polio vaccine for climate change." If it could be done affordably and safely, it makes the problem immensely more tractable. It allows countries like China and the U.S. that have huge resources of coal to use that coal consistent with a climate strategy. But, the technology isn't proven yet. And, so far, it looks expensive. There will be an important report on the carbon sequestration technology coming out in 2005 from the Intergovernmental Panel on Climate Change. I would look for that report to effect the energy legislation.

UNDERSTANDING THE LINKS BETWEEN POVERTY, THE ENVIRONMENT, AND POOR GOVERNANCE

What do Newfoundland, the Philippines, the Caribbean, and China have in common? Each was the location of a significant natural disaster that caused considerable human misery. Underneath each had environmental causes and poor governance and poor management as the cause.

In Newfoundland, the Canadian Fisheries Ministry refused to pay attention to strong indicators that the cod population was about to collapse. It did. Fishing is still banned and an entire industry that supported Newfoundland has vanished, creating economic hardships for the people of that province.

In the Philippines, a typhoon struck, leading to massive mudslides that killed at least 1,800 people. Those mudslides were, of course, the immediate result of very heavy rains from the typhoon. But the real cause was massive clear cutting in the mountains above those areas — most of it illegal and poorly managed. The victims were almost all poor people and the disaster was completely avoidable with better forest management.

In China, you'll remember, several years ago there were massive floods along the Yellow River. Chinese officials have conceded those floods were largely the consequence of irresponsible logging practices in their mountains. They also believe it was because of weather change as a result of climate change.

Though the Caribbean was hit by several vicious hurricanes this past year, what I want to refer to is the rapid decline of the Caribbean reefs, which are the foundation of a multi billion dollar tourism industry. The destruction by the hurricanes, while terrible, can be repaired. The destruction of the reefs is disastrous and cannot be repaired —the result of a combination of poor management of human use, destruction fishing methods and, very likely, climate change.

The point I want to make is that there is a growing trend to understand the linkages among poverty, environment, and poor governance. That set of linkages will be explored this year when the Millennium Ecosystem Assessment report is issued. This is the first ever report on the state of the world's ecosystems. It has involved over 800 scientists, managed through the United Nations. The findings will be useful to look at and to think about in the same way you would the leading economic indicators. If there are 18 or 20 ways scored in which ecosystems support human well being, and most of those indicators are trending downward, it suggests we're not managing a set of resources very effectively to maximize well being.

ERADICATING POVERTY THROUGH PROFITS

A very familiar portrait of the world economic pyramid shows about 4 billion people at the bottom and about 1 billion at the top. Almost all multinational companies focus their marketing and their products on the very top of this pyramid on the premise that's where all the money is. The last trend I want to mention is one where that conclusion is being challenged.

Though the people on the base of the economic pyramid don't individually have very much money, collectively they have a great deal of money. And while the markets among the wealthiest people in the world are saturated and the subject of very heavy competition, the markets at the base of the economic pyramid have been ignored and are poorly served. So if a company is looking to grow, where would it turn? Is it possible to exploit those markets at the bottom of the pyramid for growth? And in doing so is a company exploiting and worsening the misery of the people who live there, or changing their lives?

There is increasing evidence that there is a real opportunity to link the tremendous power of the engine of private enterprise to the compelling moral goal of improving the lives of the poor. And, there is new thinking that companies can only successfully market products and services to the poor if, instead of selling those things they already make at the price they usually sell them, they create products and services to meet the needs of the poor and sell them at prices the poor can afford.

In December 2004 there was a conference in San Francisco on this notion of eradicating poverty through profit. About 1,100 people attended, evenly divided between business and civil society. 40 countries were represented. Over 100 companies, including Hewlett Packard, Microsoft, Visa, Vodaphone, and Citigroup, shared ideas and anecdotes illustrating that this conjunction of the interest in fighting poverty and expanding markets is possible. Let me share a few of the anecdotes.

A wonderful company called Jaipur Foot provides artificial limbs to Indian farmers. Indian farmers can't afford expensive Western-style prostheses. And, even if they could, such prostheses would be dysfunc-

tional for the farmers who work barefoot, need to squat and sit cross legged and who have to operate in conditions of high stress and heat. Jaipur Foot set out to solve that problem and now sells the most functional artificial foot ever developed and at under \$30 — changing the lives of hundreds of thousands of people.

Another illustration is the collective cell phones that have been made available to fisherman on the Indian coast. Now, they are able to phone ahead and find out where prices for their catch are highest. They avoid middlemen, who cheat them out of the value of their fish, and more than double their incomes.

There are hundreds of such examples you can find on our website www.digitaldividends.org or in a wonderful book called *The Fortune at the Bottom of the Pyramid*, by CK Prahalad, a business professor at the University of Michigan and an active member of WRI's board of directors.

What struck me at the San Francisco conference was not only one company after another talking about the bottom of the pyramid as where they see future opportunity, but, an economics minister from an African country saying he always thought “BOP” stood for balance of payments, an unpleasant problem he had to face, and how he thought poor people were a problem to be addressed with foreign aid. Now, this minister sees “BOP” as an economic opportunity he can pursue with benefits to his whole population. Perhaps this gives us a first illustration of a way of bringing the wealth that the developed nations have been blessed with to the poor and developing countries. We'll see.

World Resources Institute (WRI) is an environmental think tank that goes beyond research to find practical ways to protect the earth and improve people's lives.

Our mission is to move human society to live in ways that protect Earth's environment and its capacity to provide for the needs and aspirations of current and future generations.

Because people are inspired by ideas, empowered by knowledge, and moved to change by greater understanding, WRI provides — and helps other institutions provide — objective information and practical proposals for policy and institutional change that will foster environmentally sound, socially equitable development.

WRI organizes its work around four key goals:

- ◆ **People and ecosystems.** Reverse rapid degradation of ecosystems and assure their capacity to provide humans with needed goods and services.
- ◆ **Climate change.** Protect the global climate system from further harm due to emissions of greenhouse gases and help humanity and the natural world adapt to unavoidable climate change.
- ◆ **Markets and Enterprise.** Harness markets and enterprise to expand economic opportunity and protect the environment.
- ◆ **Access.** Guarantee public access to information and decisions regarding natural resources and the environment.

For more information about World Resources Institute, please visit www.wri.org.



WORLD
RESOURCES
INSTITUTE

10 G STREET, NE
WASHINGTON, DC 20002 USA
202-729-7600
WWW.WRI.ORG