

ENVIRONMENTAL STORIES TO WATCH *in 2009*



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BIG BUST FOR BAD WOOD?

HOW GREEN A STIMULUS?

WILL CONGRESS ANSWER THE 600 BILLION TON QUESTION?

CHINA: PRIORITY OR PROBLEM?

Environmental Stories to Watch in 2009

Remarks by Jonathan Lash on December 17, 2008
at a briefing for journalists at The Newseum, Washington, DC



ENVIRONMENTAL INVESTIGATIVE AGENCY

This is the sixth year that WRI has invited members of the press to join us in a conversation about what we think will be the environmental stories to watch in the coming year. As in past years, we do not intend to predict what will happen in 2009, but rather to offer an overview of what we believe will be the big environmental stories, as well as some context about how to think about them.

This year I want to talk about four stories; then I will take questions.

- Will the economic stimulus be green?
- What are the prospects of Congress passing climate legislation?
- How will the U.S. work with China?
- Will we see a new weapon for protecting global forests and stopping illegal logging?

A video of this presentation and copies of previous *Environmental Stories to Watch* publications can be accessed online at www.wri.org.

HOW GREEN A STIMULUS?

The financial crisis is the focus of everyone's attention these days. It has even prevailed over partisanship and created occasional bipartisan pragmatism in Washington. This will produce a series of actions to stimulate the economy.

People are angry. They see a failure of government to perform its fundamental role of protecting the interests of people who cannot protect themselves, and they want government to act. The Reagan era is over, and the notion that government is not a solution but a problem has passed. Government is going to intervene in a set of serious problems facing the nation. The question is what form that intervention takes.



HOW ARE THINGS ON WEST COAST/FILICOR

I've worked on environmental issues in Washington off and on for about thirty years, and it isn't usually the left that passes environmental legislation. It hasn't necessarily always been the left that even most strongly supported environmental legislation. Environmental legislation has come from the middle. That's going to be an important issue in 2009.

A key question from an environmental point of view is how much of the stimulus will push traditional public works and how much of it will fund the low-carbon, high-

efficiency economy of the future? There is enormous pressure to pass a package that will stimulate the economy quickly. When the President-elect promised a stimulus package in a recent radio address, he spoke first about a massive investment to make federal buildings more energy efficient, but then moved quickly to talk about more traditional “red meat” road and bridge projects for the highway lobby.

Right now in Washington there’s really only one party — the “jobs and recovery” party. Expect a lot of lobbying in the weeks leading up to the inauguration, even though for several of those weeks Congress will be out of session. The highway lobby has always been an effective player when it comes to this kind of dealing.

Watch whether there will be significant appropriations for building the smart, extended energy grid of the future.

Watch whether there will be new money for a set of tax incentives for renewable energy and the creation of renewable projects.

Immediately after the stimulus bill leaves Congress and goes to the President for his signature, watch the beginning of the debate on the transportation bill, or as it is usually called, the highway bill. It will be interesting to see which name congressional leaders use. If it’s the latter, we will lose the opportunity for major investments in clean technology and efficiency. If it’s the former, it’s a clear signal that we’ve shifted.

Environmentalists are calling for a move away from the traditional project-based process, in which members of Congress ask for funding for particular projects in their district, to a performance-based formula that might look at jobs created per dollar. Or even better, fuel efficiency improvements per dollar. Or even better, carbon reductions per dollar.

We may see early movement on an energy bill that goes far beyond what is thought possible in the short-term stimulus package. Exit polls from the November election found a large majority of voters in this country in favor of clean energy. Over 80 percent said they wanted to see investments in clean energy. If you looked at the campaign websites of the new Senators who are taking office, all mentioned a commitment to clean energy and improved energy security. Only two mentioned climate change.

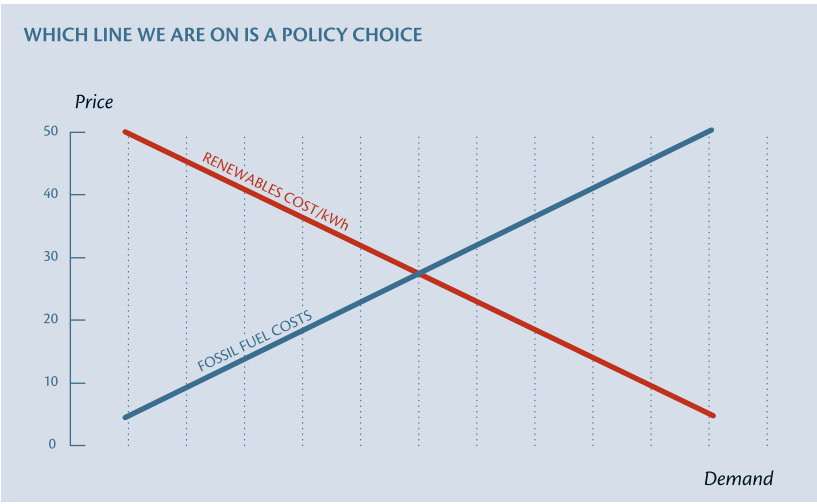
The innovation pipeline for clean technologies is clogged. Some 5,000 wind projects that were underway six months ago have stopped moving forward. They have been stopped for three reasons. First, credit is locked up. Nobody can get financing. Second, energy prices have dropped and nobody is sure what the payback will be. And third, the tax credits, a major incentive that Congress finally reauthorized, are

no use to businesses that have losses. Watch whether Congress is going to turn tax credits into tax rebates or some other form that more directly finances the activities of clean energy investors.

The chart below intentionally doesn't have any numbers on it, it is an oversimplification, but we absolutely know that when the economy recovers demand for energy will increase, and the price of fossil fuels led by oil will go back up. It declined because demand collapsed because the world economy collapsed. We also know that the price for clean energy technologies like wind, central station solar, and geothermal is going down as demand increases because they are new technologies where scale reduces costs. For fossil technologies more demand means we purchase more fuel at higher cost. For renewables the fuel is free.

So which curve do we want to be on the next ten years? The free fuel curve or the one that costs us more the more we use it? And this choice is a policy choice, not an economic choice and is therefore going to be made by Congress.

Interestingly, since most of the cost of a new fossil-fired project is in future fuel use and since none of the costs of a renewable project is future fuel use (the costs of a renewable project stem from equipment and installation) which creates more jobs? It turns out that new renewable projects create five or six times more jobs than new fossil-fired projects do.





DENNIS SCHWARTZ/FLICR

WILL CONGRESS ANSWER THE 6 BILLION TON QUESTION?

The economic stimulus is important, but its effects will last only a few years. If you were thinking of making a few billion dollars worth of investments in clean technology, you would be thinking about the markets into which you would be selling energy or technology in the next ten years. It would be important to know whether those markets will place a premium on clean energy and penalize the fossil fuels that emit the carbon dioxide that causes global warming. Uncertainty about the carbon path is a powerful disincentive to clean technology investments.

There is broad agreement that the U.S. will enact climate change legislation, but not much clarity about when or how fast it will cut emissions. The details of the legislation will shape tomorrow's markets. Working with leaders of companies like GE, Dupont, Dow, and Alcoa, I've been impressed by the extent to which they say that markets will be shaped by governmental action. In order to be leaders in the markets of the future, these businesses need to know what the price of carbon is going to be.

We have a six billion ton carbon question. U.S. carbon emissions are now up to about 7.1 billion tons annually. There's broad agreement that over the next four decades we need to reduce our emissions by 80 percent or more, which is almost six billion tons. Here too, policy will define future markets. It is worth watching whether the Congressional debate addresses both cost and opportunity.

Working on these issues today is like living in three parallel universes – a universe of the necessary, a universe of the possible, and a universe of the probable.

The universe of the necessary is defined by the science. I'm not going to go into too many details about the latest climate reports. But, if you follow the science, you would have a strong sense that something is moving really fast that people don't get yet. Much of what we thought we knew five years ago about climate change has been superseded. The temperature is increasing faster than computer models predicted. The impacts are occurring sooner. Old predictions of what might happen are off base. We don't really know what is going to happen, but all the signs suggest that the impacts are going to be significant. All the impacts we are seeing today are the product of 0.8 degrees centigrade of warming. Even with heroic efforts we are unlikely to be able to stop warming at less than 2 degrees centigrade. The necessary universe tells us we have to act really quickly and we must take significant action.

The universe of the possible is telling us that we can take action to stabilize our climate to stave off the worst effects. The innovation pipelines at the companies that I work with are swollen with new technologies — projects that would enable us to reduce emissions if we choose to use them. Our technical schools are full of young engineers who are studying clean technology. Business schools are full of young people who want to sell clean energy or buy and sell carbon credits. The future of their employment opportunities depends on policy that's going to be made in Washington in the near future.

So where do we stand in the universe of the probable? WRI has been charting climate legislation proposals in the Congress for the last two years.

There is a consensus developing among a remarkable range of political leaders that we have to take action and that action has to be significant. There's just one problem. Most of these bills have never been voted on and none of them have come close to passing. While there is an emerging consensus that there will be deep cuts in carbon emissions in the next four decades, the battle is what will happen in the next ten years. This is the key issue to watch as Congress begins to move.

The President-elect, who had called during his campaign for strong national cap-and-trade legislation to reduce carbon emissions, reiterated his commitment in a statement to the Governor's Global Climate Summit, hosted by Governor Schwarzenegger in November of 2008. A White House commitment to secure climate legislation will be decisive. President Obama has appointed an extraordinary team to help him move his commitment forward.

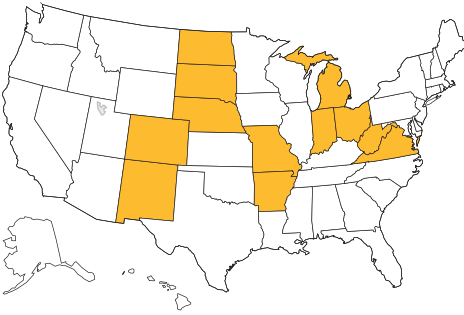
The United States Climate Action Partnership (USCAP), a group of companies and environmental groups that WRI played a key role in organizing changed the political landscape two years ago when it called for Congress to pass mandatory, economy-wide cap-and-trade legislation to reduce GHG emissions 80 percent by 2050. Now in the midst of an economic crisis, USCAP is back, with more companies and stronger recommendations.

If Congress doesn't act on climate legislation, the EPA is under enormous pressure (following the Supreme Court decision *Massachusetts v. EPA*) to start implementing the Clean Air Act to regulate greenhouse gasses. EPA regulations would be less flexible and less predictable than legislation. It's another reason to believe that there may be legislation.

The only climate legislation voted on in the last Congress was the Lieberman-Warner bill. The bill did not survive a cloture vote. Most importantly, a group of Democratic senators who voted to move the bill ahead said they would not have voted for the bill on final passage because it created too many uncertainties for jobs and industry in their states. Now numbering sixteen, this group will not vote for a climate bill without assurance that industry and jobs are going to be protected. Nothing will pass in the Senate without meeting the concerns of this group of moderates.

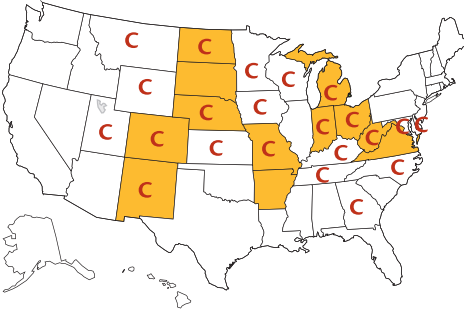
The first bill to be introduced will likely be Senator Boxer's bill. She's chair of the Environment and Public Works Committee. When it is introduced, watch for how the "Gang of 16" Democrats are pulled into the process of shaping the legislation and whether the bill meets their concerns.

“GANG OF 16” DEMOCRATS

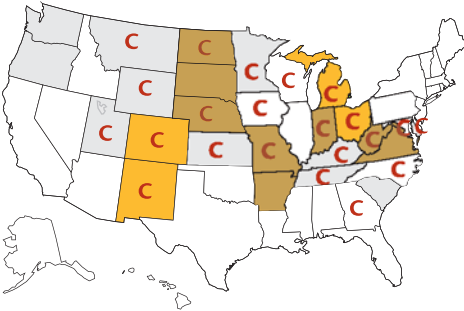


Kent Conrad & Byron Dorgan (ND)
 Tim Johnson (SD)
 Ben Nelson (NE)
 Carl Levin & Debbie Stabenow (MI)
 Evan Bayh (IN)
 Sherrod Brown (OH)
 Jim Webb (VA)
 Robert Byrd & Jay Rockefeller IV (WV)
 Claire McCaskill (MO)
 Blanche Lincoln & Mark Pryor (AR)
 Jeff Bingaman (NM)
 Michael Bennet (CO)

STATES WITH “C” WHERE COAL IS 60% OR MORE OF ELECTRICITY FUEL MIX



STATES SHADED ARE THOSE WITH THE LOWEST AVERAGE ELECTRICITY COSTS*



* refers to states whose residents pay 7 Cents or lower retail per Kilowatt hour (data from EIA)
 Data from Climate Analysis Indicators Tool (CAIT) <http://cait.wri.org/>



NATALIE BEHRING

CHINA – PRIORITY OR PROBLEM?

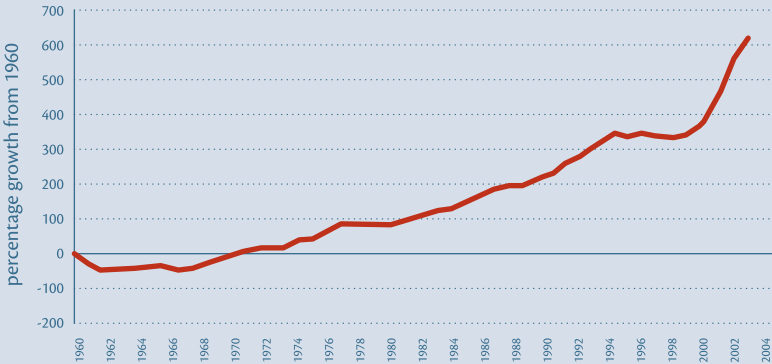
How will the U.S. deal with the possibility that other countries – most notably China – might not regulate carbon as soon as we do? The concern is that if we impose the cost of reducing CO₂ emissions on American industry and China does not, we will lose jobs to China at a time of financial crisis. One proposed solution is to include in our climate bill some sort of mechanism for making a trade adjustment at the border, to penalize countries that don't take action.

Watch how the U.S. engages with China. There is intense activity in China with regard to energy and climate change. If you had traveled to China five years ago and attempted to have a conversation with top government officials about climate change, you would have received a very simple line: “China is not going to impose costs on its economy to solve a problem you created... it’s your problem, you deal with it.”

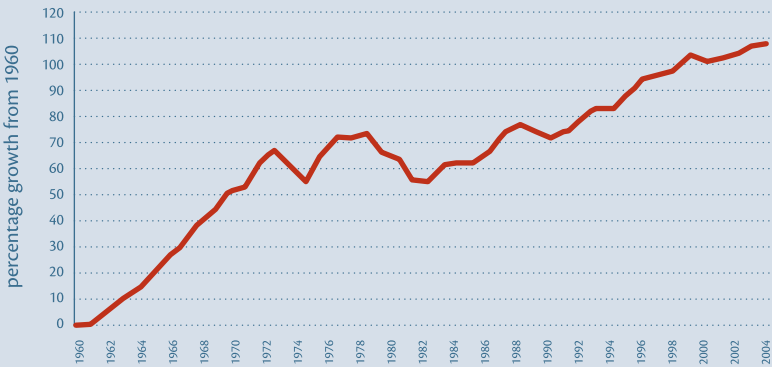
This is no longer the case. There is a massive intellectual focus in China among top officials on what they can do, how they can do it, when they can do it, what the costs are, and what the opportunities are. There also is an ongoing, real-time commitment to improving energy efficiency – 20 percent improvement by next year. The Chinese are developing their next five year plan to make much deeper cuts.

NATIONAL CO₂ EMISSIONS IN CHINA AND THE UNITED STATES, 1960–2005 (excludes land use change)

China



United States



During the Olympics, the Chinese government took a series of measures to eliminate pollution, including limiting driving in Beijing to alternate days. Officials are finding that there is huge public support for reducing emissions and they have allowed a very public debate on whether this alternate day driving scheme should be continued. The official press now offers a continuing discussion of traffic and pollution.

The U.S. and China are the axis of emissions.

China has recently surpassed the U.S. as the largest emitter. Between us we are responsible for more than 40 percent of CO₂ emissions. Both countries are dependent on coal and on imported foreign oil. Both nations have economies with high technological capacity and are driven by strong trends of entrepreneurship. Both countries would like to be selling into tomorrow's carbon constrained markets.

If the U.S. and China were to find agreement on climate change action, reflecting our mutual interests in defining and competing for tomorrow's markets and our capacity to make reductions, the world will move. If we do not find agreement, the world cannot go much further. It is about as clear as that.

Watch for *when* someone from the new administration travels to China. Watch for *who* goes to China and *what* they talk about. If an agreement between the U.S. and China on climate, technology, clean energy, and energy security begins to emerge, that's a really positive signal for what we can do together.

BIG BUST FOR BAD WOOD?

The last story I want to talk about is whether forests, and efforts to protect them, will get more attention in the coming year.

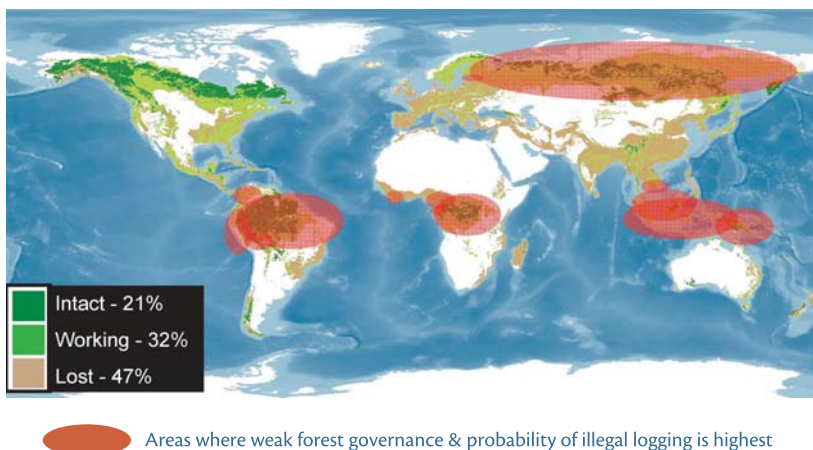
Forests are storehouses of biodiversity, providers of services such as wood, water supply, nutrient cycling, and sequestration of CO₂. Deforestation is responsible for between 15–20 percent of all greenhouse gas emissions globally, and international climate negotiations are focusing on how to control emissions from deforestation.

Something else interesting is going on. Last year, the U.S. Congress amended a one hundred year-old statute that had been designed to limit the trade in illegally taken species to now cover products containing wood. In many parts of the world, half of all the wood that's harvested is illegally harvested.

On the map below, areas of high concern for illegal logging are highlighted. They are also sources of forest-related emissions.

The revised Lacey Act may become a valuable tool to stop illegal exports of wood from countries with weak governance, so these countries do not lose revenues and their valuable forest habitats. When a load of logs or pulp arrives in some container ship to the Long Beach, California, seaport, there's no way to separate out the chip that came from the illegally harvested log. The Lacey Act says that if you can

STATE OF THE WORLD'S FORESTS



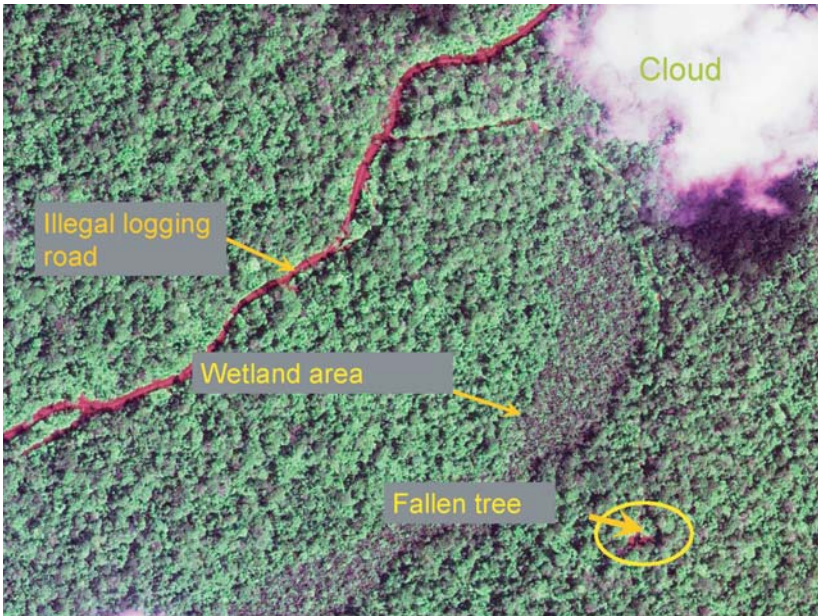
Source: WRI

show that the material came from a source (a mill, for example) that accepts illegally harvested logs, then you can prosecute.

For more than a decade, WRI has been marrying satellite imagery with on-the-ground monitoring to help forest-rich nations better manage their forest concessions. So, it is technically possible to track what's going on in forests.

Below is a map created by WRI. We can see the wetland and the road. But what's most interesting is that we can track a single tree that has been illegally harvested. We can see the open space where it used to be and we can see the path by which it was hauled to the road that leads to the mill, owned by a French company in this case, that says it doesn't accept illegally harvested wood. The road doesn't go anywhere else. This is how the government might prosecute a Lacey Act case.

Imagine what happens if environmental groups make the investment to track illegal logging with satellites, if they have partners on the ground verify the information, and then provide this information to the Justice Department, which sends the Coast Guard to swoop down on a container ship coming in to the Port of Long Beach and begins a Lacey Act prosecution. Because the U.S. is a major world market, wood buyers then say, "we're going to blacklist any company that is subject to prosecution under the Lacey Act."



The supply chain just became a real way to change what's going on in these forests. I find this really exciting because I think there could be a huge impact from just a few Lacey Act prosecutions, and I think they'll take place in the coming year.



Q&A WITH:

JONATHAN LASH

President, World Resources Institute

QUESTIONS FROM JOURNALISTS

Q: DO YOU THINK THAT THE U.S. CAN PASS DOMESTIC CLIMATE LEGISLATION BY THE TIME OF THE UNFCCC COP MEETING IN COPENHAGEN NEXT DECEMBER, IN TIME TO SIGN ON TO A FINAL DEAL WITH THE INTERNATIONAL COMMUNITY?

I think it is possible. I don't think Congress is going to be driven by the Copenhagen schedule. Historically, Congress has not been willing to respond to international pressures. I do think it is possible, though not likely, that climate legislation will pass both houses within the next twelve months. It depends on the President. And I do think it's possible that U.S. engagement in the international process and U.S. engagement with key nations, such as China, will build the basis for an agreement in Copenhagen.

Q: CAN YOU TALK A LITTLE BIT MORE ABOUT CONGRESSMAN WAXMAN'S ROLE AND HOW HE WILL MANAGE TO WRITE CLIMATE LEGISLATION GIVEN THE INCREASINGLY MODERATE CHAMBER THAT HE'S WORKING IN?

If there is a member of Congress who has expertise and history on environmental issues, it's Henry Waxman. He is a real legislator. He has had his name on important pieces of environmental legislation for over thirty years. I believe he will try to shape the strongest bill that can pass both in his committee and on the floor of the House.

Watch for four things when Congressman Waxman introduces a climate bill. First, look at the target, in particular the target for 2020. The tough issue for everyone is to determine how fast we can get moving. The President-elect reaffirmed his commitment to bringing U.S. emissions back to 1990 levels by 2020. That's about 14 percent below where we are now. If a bill goes further than that by 2020, you can consider it on the strong side. If the bill has weaker targets than 1990 levels by 2020, you would consider it on the weak side. The President-elect has defined a middle ground for short-term targets. Second, look at allocations. Who gets allocations for free? If we create a cap-and-trade system, in order to emit CO₂ a company will have to buy credits. The government owns the credits and can give some away for free. That is one way to reduce the costs for states in the middle of the country that are over 60 percent dependent on coal. Third, look for coverage. How much of the economy is subject to control in the bill? Does the bill address automobiles separately or are they within the cap? Does the bill address fuels? And fourth, is there some mechanism that allows government to intervene and lower prices if costs get above a certain level? If so, how stringent are the criteria for cost control?

Q: TOM FRIEDMAN'S RECENT BOOK MADE THE POINT THAT THERE IS HUGE POTENTIAL TO REDUCE CARBON EMISSIONS IN THE U.S. BY UPDATING AND MODERNIZING OUR ENERGY UTILITIES. DO YOU THINK THAT THIS MIGHT BE AN ELEMENT OF THE ECONOMIC STIMULUS PACKAGE?

It will be a major part – efficiency, renewables, and a bigger, smarter grid.

Q: COULD YOU DISCUSS THE WAY THAT THE NEW ADMINISTRATION'S CABINET APPOINTEES REFLECT U.S. POLICY GOING FORWARD? I'M SPECIFICALLY WONDERING ABOUT THE IMPACT OF THE ENERGY AND ENVIRONMENTAL APPOINTMENTS.

I think the most significant signal so far was the creation of a very strong position in the White House to coordinate energy and climate policy. The creation of this position represents a structural statement about both the importance the new administration is giving to the climate issue and their understanding that in order to have a successful policy we will have to “connect the dots.” President-elect Obama selected someone to manage that office who has tremendous experience and a very strong reputation of being able to get things done in Washington. Carol Browner is a great pick for that job.

I think that the choice of Steven Chu as Energy Secretary, who is a long-time expert on all these issues, who has actually been leading the research on clean technology is again, a very strong statement about what's important from this administration, as is the choice of John Holdren for Science Advisor and Jane Lubchenco for head of NOAA.

Q: IN THE EU RECENTLY THERE HAS BEEN INCREASING PRESSURE FROM LABOR AND BUSINESS TO LOWER GHG EMISSION REDUCTION TARGETS OUT OF CONCERN FOR WHAT THESE POLICIES MIGHT MEAN FOR JOBS AND THE ECONOMY. PLEASE COMMENT ON THAT AND DO YOU THINK THAT WE WILL BE SEEING SIMILAR CONCERNS RAISED BY BUSINESS IN THIS COUNTRY?

Jobs and economic recovery are everyone's focus right now and this is going to be a discussion of compelling importance. If the U.S. is to have climate and energy legislation, it will be climate and energy legislation that among other things is designed to invest in jobs, create the technology of tomorrow and build future markets.

In the end, the ultimate deal in the EU was actually not a serious step back. They had to address the concerns of coal-dependent countries that have lower standards of living. The delegates made a few adjustments but they did not step back from their fundamental commitment to reduce emissions. In this deal the EU also made a huge commitment to invest in carbon capture and storage and other new technologies. So ultimately, it did not end up being a big loss.

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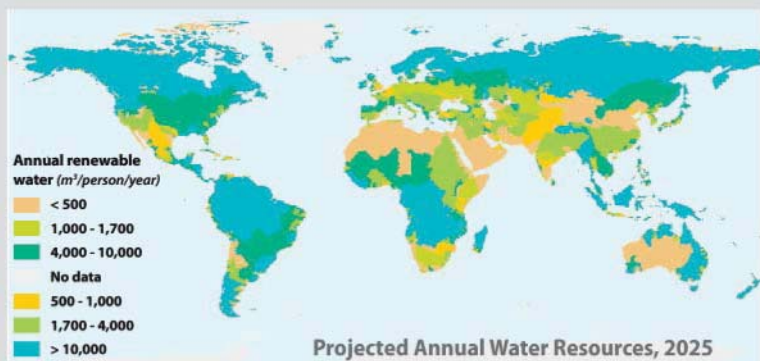
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Former Secretary-General, United Nations*



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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, Energy, and Transport.** 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.
- ◆ **Governance and Access.** Guarantee public access to information and decisions regarding natural resources and the environment.

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