8 December 2003

Greetings from Milan, where we (Chris James and Amy Royden) are here for the Ninth meeting of the Conference of the Parties to the U.N. Framework Convention on Climate Change (COP-9). This is the beginning of the 2nd week of the meeting, which includes a high-level segment 10-11 December. Chris is very happy to be here after spending two days waiting out a snowstorm!

Background

Before we dive into the hot issues at the meeting (or lack of), some background. The U.N. Framework Convention on Climate Change (UNFCCC) was signed in 1992 at the Earth Summit in Rio de Janeiro, and it was ratified by the United States. The UNFCCC has entered into force since the required number of nations have ratified it. The major "commitment" in the UNFCCC was the goal to stabilize emissions at 1990 levels by the year 2000. The United States (and other countries) failed to meet that goal, but this was a goal and not a mandatory commitment. The UNFCCC also aims to stabilize atmospheric concentrations of greenhouse gases (GHGs) to avoid dangerous anthropogenic interference with the climate. In 1997, the UNFCCC parties agreed to the Kyoto Protocol to the UNFCCC, under which developed country parties agreed to reduce their emissions to 5 percent below 1990 levels by 2008-2012 (they agreed on a range of dates to average out year to year fluctuations in emissions). Each country with a commitment agreed to a different percentage reduction; the U.S. agreed to reduce its emissions 7 percent below 1990 levels. Unlike the UNFCCC, there are sanctions for not meeting this commitment. However, the U.S. has not ratified the Protocol, and President Bush announced two years ago that the United States had no intention of ratifying the Protocol. Without the U.S. participating, the world's leading emitter of greenhouse gases (GHGs) is no longer part of the Protocol. This also means that in order to the Protocol to enter into force, Russia must ratify it under the complicated scheme of the Protocol.

So the major issue for the last year has been, will Russia ratify and when will it ratify? Originally it was hoped that Russia would ratify in time for this meeting to be the first Meeting of the Parties to Protocol, but that didn't happen. President Putin announced earlier this year that Russia would ratify. However, in September Russia hosted a World Climate Conference at which a number of Russian officials cast doubt on Russia's ratification, saying it would harm the Russian economy. (Putin has announced a goal of doubling Russia's economic growth.) Putin even said that global warming might be good for Russia – no need to wear fur coats any more! Part of this may be negotiating tactics: Russia only has to stabilize its emissions at 1990 levels, and because of the collapse of its economy it should be well below this level and thus have emission allowances to sell. But since the U.S. – always assumed to be the prime buyer of Russian allowances – has pulled out, Russia may be trying to extract promises of a high price for its allowances.

Recap of last week and preview of this week

This Russian indecisiveness continues, and so while not on the agenda, Russian ratification is a big issue at COP-9. Last week a Russian adviser told the *New York Times* that Putin had informed European businessmen that Russia would not ratify the

Protocol. (WWF Russia noted that the Russian adviser was not a spokesman for Putin.) However, later in the week the Russian deputy economy minister said that no decisions had been made about ratification "apart from the fact that we are moving towards ratification." What does this mean? Likely that there is still debate within the Russian government about ratification, but until we hear from Putin, the jury is out. More on this below, in the report on today's events.

As for the United States, the delegation has hosted and will be hosting several side events touting U.S. research into climate change and the amount of money devoted to climate science and research into technological solutions. The environmental groups have labelled this as the U.S. "CRAP policy" – continued research and procrastination.

Major issues under consideration include:

- Whether the COP will adopt a decision on the Third Assessment Report (TAR), the scientific assessment of the state of science on climate change and its economic and social ramifications. The subsidiary bodies to the COP have been working for over a year to translate the scientific findings of the TAR into a political decision.
- The rules on sequestration projects (sinks) under the Clean Development Mechanism (CDM). Developed countries provide funding to the CDM for GHG reduction projects in developing countries. Sinks are controversial; environmental groups want to exclude projects that involve planting alien species or genetically modified organisms and to ensure that biodiversity concerns are addressed.
- Adaptation – helping countries (mainly developing countries) deal with the effects of climate change. For example, delegates need to finalize rules for the Special Climate Change Fund, one of the funds established at COP-7 for adaptation projects in developing countries.
- What's missing from the official agenda? Discussions about the second commitment period (beyond 2012). If Kyoto was negotiated a decade before the beginning of the first commitment period, then it is time to start discussing 2013 and beyond.

<u>Highlights of today</u>

- The World Wildlife Fund hosted a side event to talk about Russian efforts to address climate change and prospects for Russian ratification. We thought we might hear from Russian parliamentarians, but instead we heard from WWF's Russian representative, the National Carbon Union (a group of large businesses interested in climate change, including some very large GHG emitters), and the National Carbon Sequestration Fund. The point of the event seemed to be that, despite reports in the press, the prospects for ratification in Russia are good, most businesses support ratification, and there are lots of great GHG reduction projects in Russia waiting for investors. The Duma elections decreased both the number of those opposed to Kyoto and those who support. It appears that most of the opposition to, or lack of support for, the Protocol, stems from lack of information or misinformation. Apparently the Protocol has been widely discussed in the media lately, but there is lots of misinformation.

- The Pew Center on Global Climate Change hosted a side event on climate change-related activities at the state, Congressional and business level in the United States. Ken Colburn gave an excellent presentation reviewing states' actions, including regional efforts. Tim Profeta of Senator Lieberman's office and Floyd Deschampes of Senator McCain's office talked about the Climate Stewardship Act, noting that it garnered more than 40 votes of support in the Senate and that the senators plan to reintroduce the legislation in spring 2004. Eileen Claussen of the Pew Center said she expected that the next time the Act came up for a vote, she expected more senators to support it, but she wouldn't predict whether it would pass the Senate. Finally, a representative of Whirlpool talked about his company's efforts to reduce GHG emissions, especially the emissions generated by use of its products.

Well, that's all for now folks. Buona sera!

Amy Royden and Chris James

9 December 2003

The halls are abuzz with activity as the staff-level delegates try to finish up their work before the ministers arrive tomorrow for the beginning of the ministerial-level roundtables. Not sure if it's all the body heat and activity or lights and computers, but some of the rooms here feel like saunas. Or is the Italian government trying to show the delegates what global warming feels like? Meanwhile outside we face temperatures of 30-40 degrees Fahrenheit.

UK and the US: more than an ocean separates us

The divide between the United Kingdom (UK) and U.S. views on climate change was starkly highlighted today at the briefing we attended by the UK's climate modeling and meteorological office, the Hadley Centre. Bottom line of the presentations by the UK scientists – we have clear evidence that the globe is warming, humans have contributed to this warming, and we need to take action now to reduce emissions in order to have an effect by the end of the century. We are already committed to an additional 1 degree Centigrade of warming by the end of the century even if we drastically reduce greenhouse (GHG) emissions as of today – this is because we will continue to experience warming from the long-lived GHGs already in the atmosphere. The UK's Minister of Environment, Elliott Morley, openly criticized the U.S. position that more research is needed. More research is always welcome, he said, but the research to date makes clear that we are facing threats now and we need to concentrate on dealing with this problem. Saying that there is doubt about the linkages between GHG emissions and warming (as U.S. Assistant Secretary of State Dobriansky wrote in a *Financial Times* editorial on 1 December) is putting off the difficult decisions we must not defer.

At the U.S. climate change technology program , the U.S. delegation faced a raft of tough questions about the program. For example, none of the programs assure immediate or even short-term results, while there is technology on the shelf today that can reduce GHG emissions. For example, hydrogen vehicles offer only modest additional GHG benefits over hybrid vehicles, yet hybrid vehicles are available today while hydrogen and fuel cells are targeted for vehicles in 2015. And the U.S. administration's plans for Future Gen, a fossil-fuel powered power plant that captures and sequesters carbon, will be of little use to developing countries that struggle to fund even the placement of utility poles.

WRI Event

WRI and World Business Council on Sustainable Development co-sponsored an event entitled "Beyond Accounting" to coincide with WRI's expected release of a new document on GHG protocols. Business and NGO panelists focused on:
-steps involved to set GHG targets: absolute v. intensity, direct v. indirect emissions, rolling v. fixed average, short v. long term commitments
-company specific goals and how they were measured
-reporting and review: emphasis on transparency, inventory completeness and frequency.

While one speaker made note that this was a very complex subject, for air officials well versed in establishing PSD increments and determining baseline for NOx consumption, this is pretty straightforward by comparison.
The continued absence of any creditable US national program was again apparent, with its negative effects on American business. One company pointed out that its reason for participating in a voluntary program is that only 29% of its emissions are covered under Kyoto. Another replied that any voluntary efforts by it were meaningless since 80% of its GHG emissions were covered by the Kyoto protocol and it made better business sense to focus on certainty. All mentioned the significant opportunities that still exist from pursuing energy efficiency programs.

Two main issues left to wrap up before ministerials

In the official work on agenda items, delegates are trying to wrap up major issues before the ministerial-level roundtables begin tomorrow. We learned of progress on two of the main sticking points, rules for using sinks projects (sequestration projects) in the Clean Development Mechanism (CDM), and the budget for the UNFCCC Secretariat.

As described in yesterday's report, developed countries provide funding to the CDM for projects in developing countries and get credit for the GHG emissions reductions (or sequestrations) created by projects funded by the CDM. One of the most contentious issues has been the inclusion of sinks (sequestration) projects in the CDM. Evidently, the delegates have worked out all almost all of the rules for these projects. One issue, additionality (whether the sequestration benefits would have happened anyway, or are they additional), will be punted to the CDM's executive board. But there remains to two very political issues, projects with genetically modified organisms (GMOs) or alien/invasive species. The EU thinks sinks projects that include GMOs should be excluded from the CDM, while countries that are large producers of GMOs (Canada and Argentina, for example) oppose GMO exclusion. Environmental groups support the EU position. Research is being conducted into developing fast-growing genetically-modified trees (which would then sequester more carbon in a shorter period of time) and genetically-modified trees that are more resistant to drought and pests. The EU thinks these are a risk to biodiversity. Similar arguments are raised with regard to alien/invasive species. Eucalyptus trees are fast-growing and thus a project developer looking for quick carbon sequestration results would be tempted to plant them even in areas where they are not native. According to environmental groups, alien/invasive species are the 2nd largest cause of habitat destruction in the world.

The other issue – the budget for the Secretariat – appears to be resolved. The parties agreed to a 2004-2005 budget for the Secretariat that is 6 percent above 2002-2003 levels. Normally the budget wouldn't be a contentious issue, but the Secretariat had proposed a 29 percent increase over 2002-2003 funding, which caused the primary funders (Japan, the EU and the US) major heartburn. The US also objected to having any of its funding be applied to activities supporting the Kyoto Protocol. The 6 percent increase in funding is in effect a decrease. the Secretariat's funding is in dollars but it must purchase items in Euros (it's based in Bonn) and, as you all may have heard, the dollar has fallen to a record low against the Euro. In addition, as the

parties make decisions for additional work, the work of the Secretariat increases. Does this latter problem sound familiar?

Preview of ministerial roundtables on Wednesday and Thursday

Three roundtables have been scheduled for the ministers. The first, which meets tomorrow, will focus on sustainable development. But wait, why are they talking about sustainable development at a climate change meeting? Wasn't there a World Summit on Sustainable Development last year in Johannesburg? Yes, there was. But never mind. Like transport in air pollution discussions, sustainable development can come up in almost any international meeting. Here the hot topic is likely to be adaptation – how to help developing countries prepare for inevitable climate change and to expedite funding for this purpose.

The next two roundtables meet Thursday. The first will be on technology transfer and will be hosted by U.S. Assistant Secretary of State Dobriansky. Developed countries have yet to adequately (in the view of developing countries) meet their commitments in the UNFCCC to facilitate technology transfer to the developing countries. A sticking point has been intellectual property rights and ownership of technology, as well as funding. During the last roundtable, parties will assess their progress towards meeting their commitments, primarily those to reduce emissions and provide funding. With respect to emission reductions, since most developed countries don't appear on track, there could be a lot of finger pointing by developing countries. Parsing diplomatese for veiled critiques can be fun, and if the ministers really let loose, who knows what colorful language will resonate the halls.

Ciao

Chris James and Amy Royden

10 December 2003

Today brings both the arrival of the ministerial heads of delegation, including U.S. Assistant Secretary of State Paula Dobriansky, and three U.S. senators – Senators James Inhofe, Larry Craig, and Craig Thomas. The senators held a press conference this morning, and Senator Inhofe called global warming a hoax (something he also said at a Senate hearing earlier this year). We will see how the press covers their presence here and what the Senators say, and pass any tidbits of interest along.

First ministerial roundtable

The first ministerial roundtable dealt with climate change, adaptation, mitigation and sustainable development. Morocco spoke for the G-77/China (which represents most developing countries), saying that reports from the Intergovernmental Panel on Climate Change (IPCC) show that the adverse effects of climate change have become a reality, especially for vulnerable least-developed countries, and the group is worried that adaptation and mitigation efforts will not succeed, especially since emissions from developed countries continue to rise. Morocco, as well as a number of other ministers, urged ratification of the Kyoto Protocol and moving forward from words to actions.

No one directly criticized the U.S., but France came awfully close. France's minister said that

> some claim that the Kyoto Protocol is detrimental to economic growth, but true economic growth is sustainable and not the kind that threatens generations to come. Some say that we need to wait for new technology to replace existing technology, like oil replaced coal, and this change will happen automatically. But how long should we wait? Given the increasing number of extreme climate events, a wait and see attitude is reprehensible. Like human rights records, countries will be judged soon by their environmental records, and no one has the right to threaten what belongs to us all – our planet.

Italy, speaking for the European Union, also gave a more indirect critique of the U.S. position, saying that the IPCC scientific reports are a response to those who say we need more research; for example, because the IPCC report says that climate change could be more severe than we anticipate, some effects are irreversible, and we can't delay acting because it will take years for the climate system to respond.

Plenary on Transport Sector

The Secretariat convened a panel related to transport greenhouse gas (GHG) emissions. Among the speakers were Emil Frankel, US Department of Transportation undersecretary, and Jonathan Pershing, World Resources Institute. Discussion focused on: technology, fuels and lifestyle choices. Secretary Frankel pointed out the Administration's view that there are limits to the amount of lifestyle changes and their ability to stabilize and reduce over time GHG emissions. He further highlighted the preference for the privacy of the automobile and the example of TCMs [transportation

control measures] in State SIPs as examples of how limited improvements can be made.

Pershing provided a critique of a pure technology approach. Technology exists today to reduce GHG and other air pollutant emissions substantially, but it hasn't achieved a high degree of penetration. Dr Pershing articulated that both technology and governmental policies are needed to help achieve significant progress.

Q&A involved representatives from Toyota and European Union (EU) auto association, along with British Petroleum (BP) and biodiesel fuels. Among the points made were that the EU will achieve a 25% reduction in GHG intensity from autos for the period 1998-2008 [from 165 gr/km to 140 gr/km]. Fuel switching is important. Beijing, for example, has 900 natural gas buses and expects to have 3000 in a few years. All of New Delhi's public transport buses are natural gas. The biodiesel representative emphasized the need for 4 policy areas that need to be treated equally from a tax perspective: energy efficiency, conservation, clean vehicles and clean fuels. An aviation representative pointed out the progress they have made from a strict technology approach, improving engine efficiency 70% since 1960.

The lifestyle section highlighted out evidence from Paris and London that showed if each resident eliminated two driving trips per week, emissions can decrease 15%…but if it is so easy, why don't more people do it? The answer to that is a subjective issue. Some people are not aware, while others have false perceptions that use of public transport, bicycles or walking will make them late. [Chris can vouch for the benefits of walking between the hotel and the Fiera. By metro it is 45 minutes, walking took 30 and judging by the long queues, not to mention who knows where you would find a parking place, driving would take probably 30-40 minutes at least. Amy decided 45 minutes in the metro was better than 30 minutes in the cold and rain.] Pershing again provided a critique of the pure lifestyle change approach, citing research and data that shows that the richer people are, the more they drive. Pershing emphasized the need for both "soft approaches" and having firm government policies, especially on pricing, to force behavior change.

<u>The EU GHG registry and U.S. registries</u>

Two sessions were held on registries. While there are some apparent nomenclature differences between the EU and the California (CA) registry, for example, participants indicated that the CA certification program was in fact consistent with that from the EU. The EU system will serve as the platform for the 2005 launch of GHG trading. The International Standards Organization (ISO) is developing ISO standard 14064 on carbon dioxide reporting to help assure consistency.

The CA program has been discussed in the Global Warming Committee conference calls. Diane Wittenburg also emphasized that new Governor Schwarzenegger has recommitted his office to the CA climate change initiative and has outlined several specific actions, covering both short and long term periods. These include: development of a "hydrogen highway" from Baja California to British Columbia; electrification of ports [covering the same geographical area], uniform appliance standards that are more stringent than the existing Department of Energy standards and establishment of a GHG reduction target.

In Q&A, participants expressed some concern that disparate U.S. states efforts could result in inconsistent trading platforms and currency. Connecticut mentioned its experience within the Ozone Transport Region in developing NOx trading programs, where issues such as flow control, discounting and vintage were among the complexities ironed out. While GHG trading is non-trivial, much of the experience developed through NOx trading will stand us in good stead as GHG trading schemes are explored.

Participants also mentioned supportive efforts such as BP's selling of carbon neutral petrol [gasoline] in Australia. Part of the petrol cost goes to offset efforts such as renewable power. Shareholder actions, such as the recent ones by American Electric Power and General Electric shareholders, drew quite a bit of attention and interest, as did the U.N. investors summit with pension fund managers.

Agreement reached by SBSTA on sinks text

The Subsidiary Body for Scientific and Technological Advice (SBSTA) (one of two subsidiary bodies to the COP) agreed on text that specifies how afforestation (planting trees on land that was never forest) and reforestation (replacing trees on previously forested land) projects in the Clean Development Mechanism (CDM) will be evaluated and credited; this text will be sent up to the COP for adoption. One representative of an environmental group informed us that, while the text isn't perfect, it would be a good model for states to follow in considering how to treat reforestation and afforestation projects in any state greenhouse gas (GHG) accounting scheme. The text recognizes that reforestation and afforestation projects are different than energy efficiency or renewable energy projects; most notably, the text contains a complicated accounting protocol that takes into account the temporary nature of tree planting (or "nonpermanence"), something that many environmental groups have always had concern with. It also requires monitoring and verification to assure the continued sequestration benefits of these projects (e.g., that the projects are continuing to sequester carbon, and what amount).

On the contentious political issue of genetically modified organisms (GMOs) and potentially invasive alien species, the text does not exclude projects with GMOs or potentially invasive alien species. Rather, there is text in the preamble that casts a negative light on these projects; and text in the preamble normally carries lesser weight that text in the decisions sections.

For further information, see http://unfccc.int/resource/docs/2003/sbsta/l27.pdf.

Miscellaneous notes, including further insight into Russian thinking

Last night we attended a reception hosted by Baker & McKenzie, where we talked to several interesting people. We learned from one of the early lead negotiators of the UN framework convention on climate change [UNFCCC 1992] that one reason for Russia's reluctance to ratify stems not from any concern that it would fail to meet its target for the first commitment period, but rather that its growing emissions pose problems for subsequent commitment periods. Russia has projected that its emissions will be above 1990 levels after 2012 (the first commitment period is 2008-2012, and

Russia's commitment for that period is to keep its emissions at 1990 levels). The European Union's position is that commitments after 2012 must be more stringent than those made in the first commitment period; a more stringent target for Russia would thus be reducing emissions below 1990 levels, which it cannot achieve without buying emission reduction credits; while Russia likes being a seller of reduction credits, it does not want to be a buyer. Other attendees expressed wonderment that the American press was not covering the climate change issue more closely or with more rigor.

Note on recent UK research mentioned in yesterday's report

For those of you interested in more details about the climate science research conducted by the UK's Hadley Centre for Climate Prediction and Research, which was described in yesterday's report as contradicting U.S. contentions that the jury is still out on whether the globe is warming due to anthropogenic emissions, go to http://www.met-office.gov.uk/research/hadleycentre/

Cheers

Chris James and Amy Royden

11 December 2003

Today is the sixth anniversary of the adoption of the Kyoto Protocol. It's hard to believe that six years have passed and yet the Protocol has still not entered into force. On a positive note, the agreement reached this week on the procedures for afforestation and reforestation projects in the Clean Development Mechanism (CDM) completes the framework sketched out in the Kyoto Protocol. So all the parts of the Kyoto Protocol car are in place; proponents of the protocol are waiting for Russia to turn the ignition key.

Final two ministerial roundtables

Today we attended the final two ministerial roundtables, the last of the high-level discussions at the meeting. The COP President will present his summary of the roundtables on the last day of the COP, which is tomorrow.

Technology, including technology use and development and transfer of technologies

U.S. Assistant Secretary of State Paula Dobriansky co-chaired this roundtable. Though we heard from a staffer that many hours of blood, sweat and tears were poured into drafting these remarks, they didn't lay out a clear path forward. She asked, how can we promote more effective use and access to technology in all parts of the world? She posed other questions as well, such as how to foster public/private partnerships, what is the role of the government in these efforts, how can we effectively promote technology transfer, and how can we harness the power of the private sector in the developing world. But she provided no answers.

Her reference to the role of government and the private sector was interesting considering the tension surrounding what "technology transfer" means. The Framework Convention on Climate Change states that developed countries "shall take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other parties, particularly developing country parties, to enable them" to meet their commitments under the Convention. Does this mean that developed countries should give developing countries technology free of charge? Or on a reduced price basis? Or just encourage the private sector to market its technology in the developing world? The Minister of South Africa touched upon this in his remarks, when he said he had been asking himself, what is technology transfer? He didn't have an answer, but he said that it is clear this transfer has not occurred. He advocated creating an inventory of climate-friendly technology as a minimal first start.

Ireland, for the European Community, and Germany both mentioned the need to look at existing technologies, rather than just future technology. Diffusion of proven energy efficiency and renewable energy technology should be a priority. Germany said that hydrogen is a future solution, but we must lay the groundwork now for making this possible. Hydrogen must be produced with renewable energy; therefore we must build and install renewable energy now so that there will sufficient renewable in the future to generate hydrogen.

When Burundi's minister spoke, he did not talk about hydrogen or energy efficiency or renewable energy. He noted that his country lacks the technology to predict extreme weather events or to warn the population about these events, yet his people's survival depends upon knowing the weather. His comments made us realize that technology transfer can mean the transfer of basic weather and communication equipment to the least developed countries, and wouldn't that be a good place to start?

Assessment of progress to fulfill the promise and objectives of the climate change agreements

This session served to underline the difference between the U.S. and the rest of the world on the need to take action on climate change. Most delegates asked why we have failed to meet our commitments to take action on climate change, rather than talking about any need to do more research into climate change. Statements by several European countries are illustrative. The environment chair of the European Community summarized the problem well: if we had the political will, we could fight climate change. The Kyoto Protocol is the right framework and the only framework we have, and the European member states are fully committed to meeting their targets. They are affordable, as in many cases the benefits of decreased energy costs outweigh the costs of the measures. She pointed to three lessons learned: 1) the potential exists for the European Union (EU) and the world to reduce emissions, 2) this can be done at a low cost and with existing technology, and 3) the key is getting started and this depends on our political will. The Netherlands said that climate change is happening now, and those who doubt human interference with climate have not read the Third Assessment Report of the Intergovernmental Panel on Climate Change. In the next 10-20 years, we will lose our chance to avoid dangerous changes to the climate. Norway noted that the business and finance sectors are now realizing that we are living in a carbon-constrained world.

The UK's new energy policy: creating a low carbon economy

The UK DEFRA [their equivalent of EPA, plus some of FDA] presented their white paper, in which the government has committed to a 60% reduction in greenhouse (GHG) emissions by 2050. Minister Morley made several points and continued to be provocative:
-Annex 1 countries [developed countries such as UK, US, Canada] must make deep and long term emissions reductions;
-UK agrees with the EU position that GHG emissions must be reduced to levels that result in stabilization of carbon dioxide concentrations of no more than 550 parts per million (ppm) [current concentrations are about 380ppm and rising 1.8 ppm per year] or no more than a 2 degrees Centigrade rise in temperature
-reductions are possible at low costs. GDP affects overall by 2050 are ½-2%, during which time GDP overall increases by 300%. Mr Morley added "US take note."
-UK focusing on four areas: energy efficiency, transportation, renewables and emissions trading.
A summary and full DEFRA report are available at
http://www.dti.gov.uk/energy/whitepaper

Adrian Gault presented findings based on their MARKAL models (NESCAUM states take note). The model clearly shows that GDP growth can be decoupled from

emissions. Model runs included sensitivity analyses on energy efficiency penetration, nuclear relicensing and degree of carbon constraint.

Gault reflected on statements that GHG reductions will harm economies. DEFRA has analysed these remarks and their basis. The analyses that show high costs assume no emissions trading and have a short adjustment period. DEFRA emphasized that costs can be lowered through use of longer term planning, pre-announcing policy directions and focus near-term efforts on energy efficiency.

Henry Derwent focused on development of new technologies. Chief points made were that technologies need price signals, chart a clear future course, establish firm emissions targets and enable efficient markets. He also noted that developing countries do not have to choose the same paths that developed have and can leapfrog over us, at even lower costs.

During the Q&A period, Morley acknowledged the efforts by several U.S. states but said "state action is not a substitute for national action", and that although the "U.K. and U.S. are friends, sometimes you have to tell friends they are wrong." He also mentioned that several meetings have been held with investor groups to discuss risks and that representatives from 15 states' pension funds attended the latest meeting.

Climate change and human health

The World Meteorological Organization (WMO), World Health Organization (WHO), and U.N. Environment Program (UNEP) announced the release of *Climate Change and Human Health – Risks and Responses* (executive summary available at www.who.int/phe/en/). The conclusion of the study is that climate change's effect on human health is likely to be negative and potentially large, and to be concentrated on vulnerable groups in poor countries. The good news is that the strategies that should be taken by public health officials now are the same ones they should take to adapt to climate change – improve access to clean water, fight malaria, etc.

The researchers examined climate's impact on human health, first, by looking at what pathways climate change affects human health (e.g., how heatwaves, extreme weather events, and increased precipitation translate into health effects) and then looked at other factors that influence human health and attempted to parse out how much influence climate change has versus other factors. The researchers found a direct link between climate and health. For example, in Peru the number of diarrhea cases admitted to the hospital matched temperature levels – on days with higher temperatures, more people were admitted for diarrhea problems. A study published in *Lancet* concluded that for each 1 degree Centigrade rise in temperature, the number of diarrhea cases goes up 8 percent in developing countries. The researchers used the results of these studies and many others to calculate the human health impact of climate change, and then calculated how many years of healthy life will be lost because of climate change and because of air pollution, which we thought would be of particular interest to STAPPA/ALAPCO members. In short, in developed countries, there will be almost no healthy years of life lost to climate change, but there will be because of air pollution, while in Africa four times as many years of healthy life will be lost to climate change as compared to air pollution.

The other report is entitled *Methods of Assessing Human Health Vulnerability and Public Health Adaptation to Climate Change* (available at http://www.euro.who.int/globalchange). It contains practical information for assessing the potential health impacts of climate variability and changes at regional, national and local levels. The report includes a framework for assessing vulnerability and adaptation, including methods of constructing plausible climate, population and socio-economic scenarios to project the potential impact of climate change on specific health outcomes.

Progress on agenda items

One of the main priorities for developing countries at this meeting was to complete text so that the Special Climate Change Fund (SCCF), which provides funding for developing countries to adapt to climate change, could be operationalized. However, a subsidiary body to the conference of the parties (COP) was unable to agree on text, so bracketed text – rather than an agreed upon text – was sent up to the COP president. Evidently the OPEC countries, led by Nigeria, are insisting that SCCF funds be expressly available to compensate OPEC countries for the loss of fossil fuel revenue because of countries decreasing their use of fossil fuels to meet their Kyoto Protocol targets. Saudi Arabia presented estimates yesterday that this could amount to $19 billion per year.

On to the final day,

Chris James and Amy Royden

12 December 2003

Today COP-9 concluded without much fanfare, but with some forward progress and, as one environmental NGO stated, at least the Kyoto Protocol isn't dead. If one had hoped that by this meeting the Kyoto Protocol would be in force and the parties would have begun working on the next commitment period, then this meeting was a disappointment. The negative signals from Russia on ratification certainly didn't help. For the developing countries that are most vulnerable to climate change, this was a very disappointing meeting. The representative for Climate Action Network (CAN) – West Africa called this COP a failure: the Protocol has not been ratified, no concrete action was taken, and some parties have attempted to change a multilateral agreement into bilateral agreements (I believe this may be a reference to the U.S. concluding bilateral agreements promoting energy efficiency and renewable energy, but I am not sure). The representative for CAN – Southeast Asia put it eloquently: for vulnerable developing countries, lives are at stake, while for developed countries, it's lifestyles that are at stake. So one can see why saying the Kyoto Protocol will cost the U.S. too much doesn't strike developing countries as a convincing argument for why the U.S. shouldn't reduce it greenhouse gas (GHG) emissions.

Most parties (save the United States) reaffirmed their commitment to the Kyoto Protocol and called for moving forward with implementing the Protocol. The U.S. failed in its efforts to convince other countries that, rather than cap emissions, the correct approach to dealing with climate change is research into future technology. Instead, other countries mentioned the need to adopt current energy efficiency and renewable energy technology, and while they welcomed research into future technology, they made it clear that this was not a reason to not take action to reduce emissions now. So if one views this meeting as, is the Kyoto Protocol still alive, the answer is, yes. Not robust, but alive and kicking.

The next COP is tentatively scheduled for November 29 – December 10, 2004. Argentina has offered to host the meeting, but this is still under discussion because Argentina has already hosted a COP.

Personal note from Chris, who attended his first COP: While one indeed hoped for quite a bit more concrete actions to emerge here, the overall experience has been rewarding professionally and personally. The Hadley Centre presentation, which should be required viewing for U.S. Congressmen and Senators, was a particular highlight. Also from the United Kingdom (UK), our environmental friends there continue to concretely show that greenhouse (GHG) measures are available now, can achieve significant reductions and are affordable. In fact, their analysis did not even consider ancillary benefits such as reduction of ozone pre-cursors, reductions in $PM_{2.5}$ emissions and the associated benefits to public health. This research will provide further underpinning to existing state efforts and help those now engaged in developing their own action plans. Broad recognition of state efforts exists and this is differentiated from U.S. policy as a whole. I think there is a general lack of understanding of U.S. government; how state and local agencies have traditionally led on issues and then, after a "critical mass" occurs, national attention is given. We've seen this from the beginning on environmental policy. Certainly, state and local actions in the late 1960s helped lead to passage of the Clean Air Act. Later, state and local leadership on acid rain led to Title IV NOx and SOx caps. So, I have tried to be

a “good ambassador” to help educate folks on U.S. governmental processes as well as to absorb the wealth of information and engage in dialogue with colleagues.

We bid ciao to Milan. We won’t miss breathing the diesel fumes, but we will miss the delicious Italian cuisine.

Chris James and Amy Royden