



SUMMARY OF THE CONFERENCE ON EQUITY AND GLOBAL CLIMATE CHANGE 17-18 APRIL 2001

The Conference on Equity and Global Climate Change took place from 17-18 April 2001 in Washington, DC. It was organized by the Pew Center on Global Climate Change, an independent, non-profit and non-partisan organization that seeks to provide reliable information and develop innovative solutions to address global climate change. The meeting was attended by approximately 250 participants, including senior politicians and government officials, climate researchers and academics, and representatives of intergovernmental and non-governmental organizations, business and industry.

The conference aimed to explore how best to ensure fair and reasonable actions by all countries in addressing climate change in a manner that would reflect the significant differences between countries in terms of their capacity to respond to climate change, their historic and projected emissions, and their vulnerability to climate change impacts. Participants heard briefings and presentations by a number of key figures involved in the ongoing international climate change negotiations being conducted under the 1992 United Nations Framework Convention on Climate Change (UNFCCC). They also convened in panel discussions to address: approaches to equity; economic considerations; ethical, moral and cultural considerations; and fair and reasonable actions, including first steps such as negotiations aimed at setting rules under the Kyoto Protocol, as well as the path forward.

Discussions and conclusions from the meeting are expected to contribute to an ongoing international dialogue on equity issues aimed at producing a better understanding of equity concerns and solutions acceptable to all parties.

REPORT OF THE CONFERENCE

The Conference on Equity and Global Climate Change opened on Tuesday morning, 17 April. Eileen Claussen, President of the Pew Center on Global Climate Change, welcomed participants and said this meeting was taking place at an "urgent moment" in international climate negotiations. She suggested that success in negotiations hinged on the US and other countries' desire to make concrete progress, and emphasized that any solution must be environmentally sound, cost-effective and equitable. Highlighting the equity issue as the focus of this conference, she said differences in countries' situa-

tions make this a very complex and difficult issue, but that it is one that must be addressed if a solution is to be fair and therefore capable of securing broad-based support.

She drew attention to a paper on equity prepared by Michael Zammit Cutajar, Executive Secretary of the United Nations Framework Convention on Climate Change (UNFCCC), who was unable to attend this meeting. She said that in his paper, Cutajar points out that the UNFCCC is an internationally-agreed instrument that includes equity as one of its basic principles. The UNFCCC also contains the key principle of "common but differentiated responsibilities" among countries, and commits developed countries to take the lead in addressing climate change by modifying long-term emission trends and supporting developing countries with finance and technology transfer, including for adaptation. The paper also notes that developing countries have taken the position that their contribution depends on credible implementation of these commitments by developed countries. The paper states that the aims of the UNFCCC and its 1997 Kyoto Protocol are first steps in addressing climate change. The Protocol seeks emissions reductions by developed countries through quantitative caps. However, ultimately, it needs to evolve into a global paradigm that engages all countries, with key questions including when developing countries should make commitments and what form these commitments might take.

Eileen Claussen said these issues of equity would be addressed at this meeting by a number of keynote speakers, as well as in panel discussions focusing on approaches to equity, economic considerations, ethical moral and cultural considerations, and fair and reasonable actions, including first steps and the path forward. She said she viewed this conference as the beginning of an ongoing dialogue that she hoped would contribute to the development of climate solutions all stakeholders will consider fair.

KEYNOTE PRESENTATIONS

Participants attending the Conference on Equity and Global Climate Change heard keynote presentations from seven speakers relating to equity and to the ongoing international negotiations under the UNFCCC. They also engaged in discussions and question-and-answer sessions on issues raised by these speakers.

RAÚL ESTRADA-OYUELA (ARGENTINA): On Tuesday morning, 17 April, Raúl Estrada-Oyuela, Special Representative for International Environmental Affairs, Ministry of Foreign Affairs,

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Argentina, made a presentation assessing the state of climate change negotiations. He outlined commitments set out under the UNFCCC, including those entered into by industrialized countries to provide financial resources and transfer technologies to developing countries. He suggested that the current provision of funding for this was inadequate, and said the Global Environment Facility does not have sufficient resources.

On the current state of negotiations, Estrada suggested that failure at Part I of the Sixth Conference of the Parties (COP-6) to the UNFCCC in The Hague in November 2000 "was unnecessary." He said lack of success was due to the leadership taken at the meeting, and suggested that a number of EU ministers were "too optimistic" about what could be achieved under the Kyoto Protocol. He said the Protocol is a modest step toward mitigation and that it is clearly not the solution to climate change. However, he believed some at The Hague seemed to want to make it more far-reaching than it was originally intended. In addition, he highlighted the political uncertainty in the US at the time of COP-6 Part I. Regarding the Kyoto Protocol's target for developed countries of a 5.2% reduction in 1990 greenhouse gas emissions by 2008-2012, he said this group of countries collectively is currently meeting and even exceeding its obligations. This means individual Annex I Parties (industrialized countries and countries with economies in transition) can meet their specific targets if trading is permitted.

In the subsequent discussion, one participant asked about the prospects for formal negotiations scheduled to resume in July in Bonn. Raúl Estrada-Oyuela said it did not make sense to confront the US on its recent statements, as this would mean a repetition of recent comments that could crystallize into an entrenched position. Instead, he called for a careful, analytical approach. On a question regarding Argentina's earlier proposal to take on a voluntary target, Estrada said it was conditional on participation in joint implementation and emissions trading, but that it had yet to receive a comprehensive response from other Parties.

ROBERT HILL (AUSTRALIA): On Tuesday morning, 17 April, Robert Hill, Minister for the Environment and Heritage of Australia, presented his perspective on equity and international climate change negotiations. He stressed that Australia believes the target set for it under the Kyoto Protocol is fair. He noted that like other countries, Australia has already started working towards meeting this target through a domestic programme, without waiting for ratification of the Protocol. However, he stated that achieving the full abatement opportunities at the least cost will require an internationally binding commitment by all involved. He noted that Parties accepted targets under the Protocol without setting the rules affecting costs, so each country took on the targets based on what they believed those rules would be. Disagreement at The Hague surfaced because these rules were being discussed in detail. He suggested that it was not possible to have an effective Protocol without the US being involved. He added that if the US has not accepted the Protocol, he would want to explore with the US its views on alternative architecture.

In the ensuing discussion, one participant raised the issue of income inequality and distribution between developing and developed countries in the context of climate change negotiations. Robert Hill said everyone supports the right to development, although it must be less carbon intensive than in the past. In response to a question on the timing of enhanced developing country participation, Hill said the UNFCCC establishes that developed countries would take on the first commit-

ments, and Australia has not been prescriptive about when developing countries would be involved. He noted pressure in the US for developing country action, and suggested that if developing countries say they are already taking some steps to reduce the carbon intensity of their growth, it does not appear to be a major step for them to take on specific commitments.

ROBERT WATSON (IPCC): On Tuesday morning, 17 April, Robert Watson, Chair of the Intergovernmental Panel on Climate Change (IPCC), made a presentation on equity and climate change. He stated that global climate change is a threat to sustainable development, especially in developing countries, and could undermine global poverty alleviation efforts and have implications for food security, clean water, energy supply, environmental health and human settlements. He highlighted key findings of IPCC Working Group I in its latest report, including: more significant changes in climate than previously predicted, such as a projected increase in global surface temperature of 1.4-5.8°C from 1990 to 2100; global surface temperature increases of 0.6°C and a 31% increase in atmospheric CO₂ concentrations since the mid-nineteenth century; changes in rainfall patterns, increased frequency of El Niño phenomena, and sea-level rise of 10-20 cm between 1900 and 2000; and anthropogenic climate warming during the past 50 years.

On the impacts of, and vulnerability to, climate change, he highlighted the main findings of IPCC Working Group II, including projected climate change over the next century that could potentially lead to future large-scale and possibly irreversible alterations in terms of water resources, terrestrial ecosystems, and increased risks of floods. Other findings include an anticipated decline in future agricultural productivity in large parts of Asia and Africa, water shortages in a number of regions, harsher droughts in southern Europe, and more storm damage and coastal erosion on the eastern coast of the US. The increase of infectious diseases, such as malaria, was also anticipated.

He argued that developing countries are the most vulnerable to climate change and the poorest countries and persons would suffer inequities, particularly in relation to health and access to food. He explained that developing countries are less able to adapt due to the lack of technologies, know-how and education, and institutional and financial capacities. He highlighted achieving targets under the Protocol as the near-term challenge, while the longer-term goal was to establish atmospheric concentrations of greenhouse gases at a level that does not harm the climate system. He explained that the key challenge is to identify adaptation options that simultaneously address local and regional environmental/development issues and climate change.

In the ensuing discussion, participants discussed developing countries' commitments, the poverty dimension, mitigation scenarios, and scientific uncertainties. Robert Watson noted the need to curtail use of technologies and policies that harm the climate, and highlighted problems related to governance as a major threat to implementing mitigation activities.

JAN PRONK (COP-6 PRESIDENT): In his keynote presentation on Tuesday afternoon, 17 April, Jan Pronk, Dutch Minister of Housing, Spatial Planning and the Environment and COP-6 President, presented his assessment on the state of negotiations. He suggested that the process had not failed at The Hague, and said the next few months leading to formal negotiations in Bonn in July presented a second chance to maintain the momentum. He expressed confidence on prospects for success at the upcoming round of formal negotiations, and

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noted greater flexibility in some countries' negotiating positions. However, he indicated surprise at the recent US announcements. He drew attention to his new text containing negotiating proposals based on consultations and amendments submitted by countries since COP-6 Part I at The Hague. He remarked that the text is not a "take it or leave it" option but a "take and improve it," and invited the new US administration to send their suggestions as soon as possible.

He highlighted some of the misunderstandings surrounding the current negotiations, including those relating to scientific evidence, equity, energy efficiency, economics, and whether the Kyoto Protocol is the appropriate tool to achieve success. On scientific evidence, he highlighted the latest IPCC findings and the effects of climate change on poor countries, which are the most vulnerable. He said countries could discuss mechanisms and guidelines but should not contest scientific evidence, urging them to act on the basis of precaution and not to use scientific uncertainties as an excuse.

On equity, he said the Kyoto Protocol does not exempt developing countries from their responsibility to reduce greenhouse gas emissions and highlighted their commitments and actions under the principle of common but differentiated responsibilities. He called on developed countries to keep their promise to aid developing countries in building their capacities and to transfer technologies to help them reduce pollution levels. On energy efficiency, he said the Protocol broadens countries' basis for economic growth by providing more options for alternative sources of energy that foster energy efficiency and conservation.

On economics, he said it was a mistake to think that the Protocol would harm the US economy. He stated that any loss would be minimal and short term, but would help forge a sustainable economy in the future. He emphasized the Protocol's focus on technological innovation, private sector involvement and international trade, and the fact that it creates a level-playing field for all Parties by providing flexibility mechanisms and reasonable targets and timeframes. He added that the Protocol is flexible enough to allow countries to come up with new proposals and negotiate them instead of insisting in starting the process over again.

He concluded by insisting that the Protocol is not dead, and called on the international community to work together on the implementation of existing agreements. He said the results of these negotiations could have repercussions for negotiations in other fields, and noted that another failure in July would undermine their credibility with the international community and voters, as well as with future generations.

In the ensuing discussion, participants asked whether there was an alternative plan in case the US decided not to participate in discussions or offer alternative proposals. COP-6 President Pronk said the plan is to continue the process, although he stressed it was a decision of the countries to decide on further steps. On a possible alternative proposal from the US, he said that there was still some room for flexibility in negotiations, although targets set out under the Protocol should remain as agreed.

SVEND AUKEN (DENMARK): In his keynote presentation on Tuesday afternoon, 17 April, Svend Auken, Minister of Environment and Energy for Denmark, said the climate change negotiating process has been negatively impacted by the US administration's recent announcement that it did not support the Kyoto Protocol. He said this announcement reflected what the administration's future policy would be, and suggested countries now consider what next steps are appro-

priate. However, he noted that a process without the involvement of the US would not be as effective, since it possesses the technology and capacity to contribute significantly to global efforts.

He said the US administration's concerns that the Protocol relies on scientific uncertainties and that it would undermine its country's economy were not justified. He acknowledged that the Protocol is not perfect, but said it was more useful to proceed with a process that has already been developed than to start again, which would require at least five years' work with no guarantee of success. He urged countries to work together at COP-6 Part II to find solutions on disputed issues, achieve environmental integrity and continue to promote ratification.

In response to a participant's question about how to encourage a shift in the US position, Minister Auken said the EU hoped to reach a compromise, and would seek to achieve ratification and entry into force of the Protocol with or without the US by the time of the World Summit on Sustainable Development in 2002.

KLAUS TÖPFER (UNEP): On Tuesday evening, 17 April, Klaus Töpfer, Executive Director of the United Nations Environment Programme, addressed participants, noting that successful negotiating processes usually take time to develop, and pointing to the experience addressing ozone layer depletion. On the climate change negotiations, he suggested that questions about whether the scientific findings are adequate for taking action are not compelling, as there are always gaps in information in any area of decision making, and the evidence for climate change and its links to human actions is strong. He added that precaution is the wisest course of action, and that an element of uncertainty should not be used as an excuse for inaction. Addressing concerns that action under the Protocol could carry economic costs, he said it was in everyone's interests that the world's major economies should continue to thrive, and stressed that climate change can be addressed without damaging these industrialized countries. He noted that the current climate change problems resulted from development in Annex I Parties, and said it is only natural that developing countries believe Annex I Parties should take the first steps in mitigating climate change. He said developing countries will have to use more energy to achieve poverty alleviation and much-needed development.

Stressing the importance of continuing with the current process, he noted that the Kyoto Protocol provides for market-based mechanisms that should be exploited. He also supported openness to the option of using sinks and carbon sequestration in meeting targets, including land use, land-use change and forestry (LULUCF) options under the Clean Development Mechanism (CDM).

On the prospects for ratifying the Protocol, he drew attention to opposition in the US Congress, and said it was important to listen carefully to concerns. However, he highlighted a recent statement by Christine Whitman of the US Environmental Protection Agency in which she stressed that global climate change is a serious issue that this administration is committed to addressing by working closely with friends and allies. He suggested that this was the language of someone genuinely wanting to solve an existing problem in cooperation with others.

SAM BROWNBAC (US SENATE): In a presentation on Wednesday morning, 18 April, Sam Brownback, Member of the United States Senate, took note of the Bush administration's recent comments criticizing the Protocol for not including commitments for all countries, and also drew attention to the US Senate's opposition to the Protocol. However, he said the US administration was taking climate change seriously. Highlighting the role of market-based mechanisms and carbon

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sequestration/sinks, he said he was introducing legislation supporting carbon sequestration activities both domestically and internationally. The legislation, which seeks to expand carbon sequestration and energy conservation activities, proposes a voluntary regime involving tax credits and local partnerships.

While acknowledging that some were skeptical about carbon sinks, he rejected the suggestion that they provide a loophole to avoid commitments, and pointed to the vast potential of sinks to contribute to removing carbon from the atmosphere. He said sinks can “buy time” to develop new technology by slowing the rate of CO₂ accumulation without damaging the economy. He expressed concern at the anti-sinks and anti-trading tone in international climate change talks. Emphasizing that we should do what is achievable now, he called for cooperative dialogue and engagement on this matter.

In the subsequent discussion, one participant said he was confused by the US position that the developing world must engage now in solving a problem that industrialized nations have caused, and asked how this could be reconciled with equity considerations. Senator Brownback said we should do what we can and what is feasible. He said the Senate had rejected the Protocol, but the US should identify realistic ways to make progress, such as through sinks and market-based mechanisms.

In response to a question on his proposed legislation, Senator Brownback indicated that it was expected to have a \$200 million tax credit price tag, and he anticipated that it would be compatible with the administration’s broader tax plan. One participant raised the issue of loss of agricultural and forested land in the US to urban sprawl and other development, while another urged greater domestic action to address emissions. In response, Brownback said his legislation was seeking to encourage domestic action such as sequestration.

A participant from a multinational corporation noted that the Senate vote on the Protocol was held prior to Kyoto, and said many representatives of industry believe the Protocol contains some crucial elements, including its reference to a basket of gases, flexibility for countries to determine how they will address climate change, access to use of sinks, and market mechanisms. He said the Protocol has elements that should not be lost, whether we move forward within the framework of the Protocol or not.

APPROACHES TO EQUITY

Participants convened for the first panel presentations and discussion on Tuesday morning, 17 April, to consider the issue of approaches to equity. Panel moderator Elliot Diringer, Director of International Strategies, Pew Center on Global Climate Change, highlighted the many approaches and relevant questions in considering equity concerns in the context of climate change. These include the question of who bears the responsibility for climate change, who is best able to act in meeting the costs of tackling the problem, and who is the most vulnerable to the impacts of climate change. Clearly defining equity is another key issue. He questioned whether agreement on a specific principle or approach that takes into account all elements of the equity issue is feasible, and asked how the gap between the equity and political realities might be bridged.

PRESENTATIONS: Alex Evans, Director of Communications at the Global Commons Institute, outlined the “contraction and convergence” approach to achieving equity, which supports setting country entitlements to emit greenhouse gases on a simple per capita basis by an

agreed date. Pointing to the need to stabilize concentrations of atmospheric greenhouse gases, he said the approach would begin with setting a contraction trajectory for emissions aimed at achieving a global cap on these emissions. He stated that a contraction and convergence approach assumed tradeability of entitlements. He argued that the approach was consistent with recent statements by the US administration, which stressed that it takes climate change seriously, wants developing country participation, and does not want the US to suffer economically from taking actions on mitigation. In terms of developing country participation, he stated that if entitlement to the rights to emit is accepted as the model, then developing countries need to join Annex I Parties in acquiring and exercising this right as soon as possible.

Luiz Gilvan Meira, President of the Brazilian Space Agency, stated that the concept of equity aims to balance fairly the responsibilities of developed and developing countries. He advocated implementation of the Kyoto Protocol and recalled that the idea of enacting targets and timetables had been raised originally by industrialized countries because it would enable the use of market mechanisms to achieve cost-effective mitigation solutions. He said equity is a central issue of the climate change debate and highlighted the principle of common but differentiated responsibilities as a way to apportion countries’ burdens. He said the principle of equal per capita emissions allocations is one of the means to measure countries’ responsibilities, although such a proposal was unlikely to be agreed on by negotiators. He suggested identifying the economic burdens implicit in mitigating climate change for each country, as well as the costs implied for different sectors within each country.

Nancy Kete, Director of the World Resources Institute’s Climate, Energy and Pollution Program, presented an analysis of different ways to achieve equity. She questioned whether equitable short-term responses were available to respond to a long-term problem such as climate change. She outlined different notions of equity, including: the US policy of making its commitment to a binding agreement conditional on participation by developing countries; the concept of the right to emit CO₂ as a human right; and the proposal for a universal per capita cap on CO₂ emissions. She argued that a fair solution has to be consistent with the UNFCCC, which enacted solutions that are complex, multi-faceted and qualitatively-oriented, and said it is not at all obvious from this legal instrument what constitutes a fair response to climate change. She said a carbon model that uses GDP as criteria would enable the participation of different countries without binding emissions caps and would reflect their differences and national circumstances.

Benito Müller, Senior Research Fellow, Oxford Institute for Energy Studies, made a presentation on how to achieve a fair compromise on allocating emission quotas (“assigned amounts”) to Parties in what he described as “a morally complex world.” He drew attention to two views on how to distribute global emissions: the per capita approach favored in developing countries, and a “grandfathering” approach that appears to be favored by some developed countries and takes into account the current situation. Both could be considered morally justifiable. He proposed a compromise solution that incorporates both views, based on various likely country positions and the size of the populations they represent.

DISCUSSION: In the ensuing discussion, one participant suggested setting commitments close to business-as-usual scenarios for developing countries. This would meet the call by some industrialized coun-

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tries for developing country commitments, while ensuring that industrialized countries still meet the initial costs of addressing emissions targets. The possibility of non-binding targets was also raised. In response to a question on how to allocate responsibility for adverse impacts of climate change when the consequences are inter-generational, Benito Müller supported the “polluter acts” approach, whereby there is recognition of the need to act now before the damage occurs, and that those emitting most should act first.

ECONOMIC CONSIDERATIONS

The panel discussion on economic considerations was held on Tuesday afternoon, 17 April, and was moderated by Malik Amin Aslam, Executive Director, ENVORK, Pakistan. He noted that the economics of climate change policies and costs have become clearer in recent years. He drew attention to the fact that developing countries with the least ability to respond are the most vulnerable to climate change, and that these countries are concerned about assuming obligations until developed countries have demonstrated their commitment to taking strong action. On the other hand, developed countries are concerned about loss of competitiveness of taking on responsibilities if other nations do not act. He noted that economic considerations raise questions of North-North as well as North-South equity, and suggested that, with the fate of the Kyoto Protocol hanging in the balance, economic considerations are critical.

PRESENTATIONS: Thomas Black-Arbelaez, Director, Andean Center for Economics in the Environment, Colombia, presented an analysis of equity with regard to the flexible mechanisms of the Kyoto Protocol. He argued that the design of these mechanisms, particularly the CDM, could limit their economic efficiency and create numerous inequities, especially for developing countries. He said equity is a difficult matter because of the extremely wide range of issues and perspectives that could be raised, as well as the many interpretations of what it means. He highlighted factors affecting equity and efficiency with regard to the mechanisms, including the design, implementation and operation of the emissions permit trading market, the price of emissions permits, the issue of supplementarity, transaction costs, and the approach taken in terms of CDM project formulation. He said the polluter pays principle should be applied to demonstrate historical responsibility for climate change and to help identify abatement obligations. Therefore Annex I Parties should take the lead in emission reductions as established in the Protocol, with developing countries participating in a well-designed CDM.

On supplementarity, he argued that if limits are placed on the use of the mechanisms, it would restrict the amount of imported permits that could be used by Annex B Parties (industrialized countries and countries with economies in transition) to meet their commitments. He said this means that when these limits are reached, additional Certified Emissions Reductions (CERs) would have no value. On transactions costs, he suggested keeping them low to facilitate the finance and technology flows to developing countries. He concluded that to promote equity, bilateral models of CDM project formulation and finance should include the fast track proposal for small projects, and forestry projects.

Sujata Gupta, Fellow and Dean, Tata Energy Research Institute (TERI), India, presented a developing country perspective on equity and economic considerations. Setting the international context, she noted that per capita energy consumption is far higher in the US than in India or China, and said that the aim of increasing developing countries’

per capita income levels will result in an increase in energy use. On the current international negotiations, she highlighted the call by the US for developing countries to engage in “meaningful participation,” and said India was already making significant efforts in this area, even though it had not taken on specific obligations. She highlighted a sense of commitment at The Hague on the need to take concrete action, and recognition by a number of developed country negotiators on the need to move in the long term toward equity on a per capita basis. The approach should be flexible, however. She supported a future strategy for India that would: support the Kyoto Protocol as a step in the right direction; continue with the current domestic program of “meaningful participation”; and support participation in CDM projects. She concluded by expressing confusion at statements by some developed country speakers, who acknowledged that developed countries should act first, but sought to make developing country participation a precondition for action.

Thomas Rutherford, Assistant Professor of Economics, University of Colorado, presented research supporting developing country involvement in the CDM as a productive way to approach the equity issue. Cautioning that the costs for developing countries of not being engaged and involved in the CDM could be considerable, he suggested that standing aside and allowing developed countries to take all the first measures will not benefit developing countries. Reflecting on the state of current negotiations, he endorsed the idea of resuming COP-6 at Bonn in July and striving for some sort of resolution, as not doing so carried considerable economic costs.

DISCUSSION: In the subsequent discussion, Thomas Black-Arbelaez responded to a participant’s concerns about sinks projects, noting that these projects are complex, while cautioning that not allowing the sinks option would result in a missed opportunity for developing countries, and would restrict the chance to learn by doing. Responding to a question on loopholes under the CDM, he said it was important to ensure there are not too many loopholes, and that proposals such as “buy-in” from both countries involved, certification, and reviews aim to minimize such problems.

Regarding a comment on the nature of developing country participation, Sujata Gupta said participation in the CDM is one way to proceed, while noting that there are other contributions that are already taking place.

ETHICAL, MORAL AND CULTURAL CONSIDERATIONS

The panel on ethical, moral and cultural considerations convened on Tuesday afternoon, 17 April and was moderated by Walter Grazer, Director of the Environmental Justice Programme of the US Catholic Conference. Stating that the debate on climate change has largely been conducted in the context of scientific, economic and political factors, he indicated that ethical, moral, religious and cultural considerations are also relevant. He said these factors do affect the debate, and suggested that a better understanding of other cultures and traditions could assist in identifying shared moral values and approaches that might be applicable.

PRESENTATIONS: Bert Metz, Head of the Global Environmental Assessment Division of the National Institute for Public Health and the Environment of the Netherlands, made a presentation identifying various differences in cultural perspectives on the climate change negotiations in the US and Europe. On emissions trading, he said the

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US was more positive, as the concept fitted into its pro-market culture, while Europe remained more skeptical. Regarding negotiating style, he noted that the US was more aggressive and flexible in responding to negotiating situations that might arise, while Europe was more passive and inflexible, particularly given difficulties coordinating views within the EU group. On implementation philosophy, he said the US takes a legalistic approach that agreements must be achievable and ratifiable by Congress, while the EU takes the approach of aiming high and seeing what can be achieved. Other relevant differences relate to: the decision-making framework; public decision making; level of trust in government; the focus of the media; the influence of lobby groups; levels of trust in the United Nations; perceptions of dependence on the rest of the world; involvement in international agreements; and assessment of the importance of international equity.

Wanee Samphantharak, Deputy Secretary General, Ministry of Science, Technology, and Environment, Thailand, presented on Thai cultural and ethics codes and their relevance to climate negotiations. She explained that Thai ethics and morals derived from Thailand's traditional Buddhist religion, which recognizes humans as an inseparable part of nature and emphasizes their mutual co-existence. It also underscores the value of moderation. She outlined how Thai society - structured around agricultural activities, labor sharing, and cooperation in community activities - had been influenced by western development patterns. She explained that values such as moderation were replaced with economic maximization and an emphasis on economic wealth and materialism. Regarding ethics and the international environment, she said that although there are many ethical principles underlying the UNFCCC, proceedings at the negotiations appear to lack any consideration of ethics and morals. She stated that the negotiations overemphasize markets and efficiency, while inadequately addressing financial technical support for vulnerability and adaptation. She suggested that they also ignore inter-country and inter-generational equity, and fail to distinguish between emissions necessary for survival from those for luxury uses. She suggested that Thailand's cultural principles could contribute toward achieving global sustainable development.

Drew Christiansen, Senior Fellow, Woodstock Theological Center, Georgetown University, presented a Catholic perspective on equity and global climate change. He noted that the US administration had presented a clear rationale for rejecting the Protocol based on the view that it does not serve the interests of the US, and does not include developing countries. He said this position raises various equity issues addressed by contemporary Catholic social teaching. In terms of common good considerations, he said the modern Catholic view is that a planetary/global common good exists, that serving the common good is a fundamental responsibility of all public officials, and that a leadership role among nations is merited only if it takes these considerations into account.

He noted that responses to climate change can take place through many methods, such as market-based mechanisms, but suggested that ultimately sacrifices must be made to address such a significant problem. Stating that "we can't trade our way out of responsibility to reduce emissions," he suggested that unless the US is willing to make sacrifices then it is turning its back on its wider responsibility. He said technology innovation will assist and trading will also play a role in addressing the problem, but "intelligent sacrifices" would also be required. He noted the principle of solidarity, which requires increased

coordination among wealthy nations to help the poor. This entails support for and improvement of multinational and transnational mechanisms, such as the Kyoto Protocol.

DISCUSSION: In response to a question on whether some cross-cultural agreement might be developed on what constitutes an equitable approach, Bert Metz said there is no clear definition of equity, although he would equate it with concepts such as fairness. He said participants in negotiations will determine whether proposals are fair based on a variety of considerations, such as who is responsible for climate change, who has the capacity to address the problem, and who will be most affected by it. Drew Christiansen highlighted the inter-generational nature of equity.

One participant noted that labeling Bert Metz's list of US and EU characteristics as "cultural" differences might imply that these characteristics are somehow fixed or difficult to change. He suggested that the characteristics identified are not necessarily deeply embedded, and can alter over time. Bert Metz stressed that he was not a social anthropologist, and was identifying general characteristics apparent at this point in time.

FAIR AND REASONABLE ACTIONS: FIRST STEPS

This panel convened on Wednesday morning, 18 April, and was moderated by Christiana Figueres, Executive Director, Center for Sustainable Development in the Americas. She expressed the hope that this conference would mark the beginning of an ongoing dialogue. Highlighting the intent behind the UNFCCC and Kyoto Protocol of setting out an equitable approach, she noted that some countries still consider the Protocol to be unfair, and made reference to recent comments by the US.

PRESENTATIONS: Kanat Baigarin, Head of the Climate Change Coordination Center of Kazakhstan, made a presentation on Kazakhstan's decision to seek to join UNFCCC Annex I and Protocol Annex B. He noted that consensus was not reached among Parties when it tabled the request at COP-5, and that it was pursuing the matter by taking voluntary obligations under UNFCCC Article 4.2(g) (non-Annex I Parties taking on certain Annex I commitments). He reiterated Kazakhstan's wish to participate in the Protocol, and outlined the country's actions on climate change. He said Kazakhstan would continue to take steps based on a voluntary approach pending resolution of its request to join Annex I and Annex B.

Hjalmar Árnason, Member of Iceland's Parliament and Chair of its Committee on Industry and Energy, outlined the challenge facing Iceland under the Protocol. He noted that because of the small size of Iceland's economy, the development of one proposed industrial plant will mean that it has exceeded its emissions target under the Protocol. Given that a higher proportion of Iceland's energy already comes from renewable energy sources compared to other Annex I Parties, this raises equity issues, as well as practical challenges in terms of reducing greenhouse gas emissions further. He said the response has been a plan to reduce Iceland's emissions by moving towards replacement of fossil fuels with hydrogen-based fuels. The first phase will involve operating hydrogen buses in Reykjavik, which will later be extended to other vehicles, and then to the fishing fleet. He said the ultimate objective is to become the world's first "hydrogen society," possibly as soon as 2030-2040.

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Kazuo Asakai, Ambassador for International Economic Affairs and Global Environmental Affairs, Japan's Ministry of Foreign Affairs, presented Japan's perspective regarding ongoing negotiations on the Kyoto Protocol. Regarding the recent US announcements, he said Japan has expressed its concern and considers it important for the US to ratify the Protocol and continue to participate in discussions leading to Bonn. He argued that the Protocol adequately addresses the variety of equity issues raised by different Parties. He acknowledged economic concerns that the cost of meeting Kyoto targets are too high, but suggested that methods to address these concerns are built into the Protocol. These methods include making use of sinks and the mechanisms.

He outlined some possible implications in the hypothetical case that the Protocol entered into force without the US. These include the likelihood that the price of emissions credits would be lower due to the absence of a potential major purchaser. It might also impact on the operation of the "EU bubble" – the mechanism under which EU countries such as Spain and Portugal that seem likely otherwise to exceed their emissions targets could purchase certificates from other EU countries, such as Germany and the UK, that are within their targets. He suggested that, if the US was no longer a purchaser in the market, it might be more profitable for countries such as Spain or Portugal to buy from Russia or other countries. Another implication could be that the incentives for involvement in the CDM might be lower if cheaper sources of emissions certificates are available. He noted, however, that this was speculative, as it was difficult to imagine a situation where the Protocol enters into force without the US.

On participation by developing countries, Kazuo Asakai said he could imagine a global scheme covering all countries, but to establish emissions limitations for developing countries is not realistic in the short term. He suggested that it was equitable for developed countries to take a lead at this stage. He cautioned that trying to develop an alternative to the Protocol risks upsetting the balance between economic and environmental factors, and between developed and developing countries.

DISCUSSION: In the subsequent discussion, Kazuo Asakai responded to a question on the Protocol's future should the US persist in its current position by stating that he did not think the Protocol was dead. He said Japan was working hard to convince the US of the value of the Protocol, and he thought there was "still a fair chance" that it would succeed.

One participant asked why Iceland and Kazakhstan wanted to undertake commitments under the Protocol when they are not bound by it. Hjalmar Árnason said it was part of Iceland's role as a member of the international community. Kanat Baigarin indicated that Kazakhstan considered greenhouse gases to be an important element of the future energy resource market, and wanted to participate in this. He said he wanted to establish a positive climate for investment in energy projects in Kazakhstan.

FAIR AND REASONABLE ACTIONS: THE PATH FORWARD

This panel convened late morning, Wednesday 18 April, and was moderated by Elliot Diringer, Director of International Strategies, Pew Center on Global Climate Change, who introduced the issue, drawing attention to the debate on what is fair and equitable in terms of developing country involvement. Reflecting on comments made during the

meeting, he said he had yet to detect an emerging consensus during discussions on what is fair and equitable in terms of country commitments.

PRESENTATIONS: Alistair Maclean, Counsellor, Trade and Environment Policy, Embassy of Australia, outlined environmental, equity, international competitiveness and political reasons for developing country participation. These include the fact that developing country emissions will account for 55% of global emissions by 2010; concerns that non-participation will bring about carbon leakage (whereby carbon intensive industries shift to countries where carbon use carries no or lower costs); and economic welfare considerations.

He said the ultimate objective of the UNFCCC cannot be achieved without developing country participation. Noting that this issue was not at the core of negotiations in The Hague, he said the US administration's recent comments had put it back at the center of the debate. He also suggested that any framework that excludes the US – which is the world's largest greenhouse gas emitter – will not be effective. In addition, he reiterated Australia's position that the engagement of developing countries must be resolved before it will ratify the Protocol. He supported bringing the issue into the mainstream of negotiations, and the identification of equitable commitments that take into account national circumstances, issues of equity and development needs.

Jung-Sik Koh, Director of Energy Policy, Ministry of Commerce, Industry and Energy, Republic of Korea, argued that a fair and equitable solution in terms of allocating mitigation responsibilities was complex and would be difficult to achieve. He noted that 22.4% of the total world population owns 79.4% of the world wealth, consumes 60.6% of the energy available and emits 61.2% of the CO₂ emissions. He outlined the Republic of Korea's efforts to harmonize energy, economy and environment, and highlighted the creation of the Energy Project Special Account, which aims to collect resources from revenues and from different economic activities and apply them to energy initiatives. He highlighted major achievements in the energy sector on efficiency enhancement and energy conservation, and other initiatives on, *inter alia*: voluntary agreements undertaken by the majority of Korean firms; financial assistance with loans and tax benefits; and energy regulations.

Kalipada Chatterjee, Global Environment Systems Group, India, outlined his country's situation and perspective on climate change. He described India's development strategy, which focuses on two main issues: containing population growth and alleviating poverty. He underscored the importance of the rural sector for the success of any poverty alleviation strategy and noted the high levels of illiteracy as another factor. He said environmental protection is one of the overriding sustainable development goals of India, while underscoring the country's need for rapid economic growth to improve quality of life. He highlighted the need for technology transfer and resources to address the country's dependence on coal-based technologies. Although India is exempted from the Protocol's targets, he said the government is taking action to support energy efficiency and renewable energy, highlighting the recent creation of the Climate Change National Research Programme. He concluded that mitigation and adaptation are the available options, and highlighted the opportunities for technology transfer projects under the CDM.

Richard Muyungi, Vice President's Office of Tanzania, delivered a presentation on behalf of Philip Gwage, Assistant Commissioner for the Department of Meteorology, Uganda. He addressed the issue of equity as it relates to both mitigation and adaptation, and stated that the CDM

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would help developing countries to meet the costs of adaptation. On financial assistance to developing countries, he said that COP-6 President Jan Pronk's proposal does not meet developing countries' needs, and urged the provision of additional resources.

DISCUSSION: In the ensuing discussion, one participant noted diverging information and statistics quoted on the same issues by the various presenters. Another participant raised the concern that industries that are heavily reliant on fossil fuels might transfer some of their operations to countries where environmental regulations might be less stringent, simply shifting the emissions elsewhere.

CLOSING SESSION

Eileen Claussen, President of the Pew Center on Global Climate Change, reflected on discussions at this conference. She stated that there had been more interesting and stimulating ideas on the conference's topics than she had thought possible, and thanked speakers and participants for their exceptional contributions. She also expressed her appreciation to the Pew Center staff for their hard work. She said one factor uniting all of those present was the obvious desire to find solutions to this problem. She asked participants to continue thinking about and discussing these issues, and highlighted the fact that we all have a responsibility to leave the world in better shape than we found it.

THINGS TO LOOK FOR

CSD-9: The Ninth Session of the Commission on Sustainable Development is taking place in New York from 16-27 April 2001. This session will focus on: atmosphere; energy/transport; information for decision making and participation; and international cooperation for an enabling environment. A multi-stakeholder dialogue segment will consider energy and transport. For more information contact: Andrey Vasilyev, Division for Sustainable Development; tel: +1-212-963-5949; fax: +1-212-963-4260; e-mail: vasilyev@un.org; Internet: http://www.un.org/esa/sustdev/csd9/csd9_2001.htm For information for major groups, contact Zehra Aydin-Sipos, Division for Sustainable Development; tel: +1-212-963-8811; fax: +1-212-963-1267; e-mail: aydin@un.org

REGIONAL SEMINAR ON ADAPTATION TO CLIMATE CHANGE VARIABILITY IN THE INSULAR CARIBBEAN: This workshop will take place from 7-9 May 2001, in Havana, Cuba. It will be hosted by the Government of Cuba and UNDP. For more information contact: Jafet Enríquez, tel: +537-24-1512/15; fax: +537-24-1516; e-mail: jafet.enriquez@undp.org; Internet: <http://www.onu.org.cu>

KYOTO MECHANISMS: EMERGING BUSINESS OPPORTUNITIES: This forum, which will be held from 10-11 May 2001 in Hong Kong, examines the business opportunities and risks as countries work towards a final agreement under the UNFCCC Conference of the Parties. Several companies will outline emissions trading market structures and provide insights on global corporate initiatives in promoting emissions trading. Government officials from India and China will discuss investment opportunities available under the Kyoto mecha-

nisms. Case studies on Malaysian and Indonesian CDM projects will examine legal, auditing and finance issues. For more information contact: Centre for Management Technology, Christina Lu Jialing; tel: +65-346-9132; e-mail: christina@cmtsp.com.sg; Internet: <http://www.cmtevents.com>

THIRD UN CONFERENCE ON LEAST DEVELOPED COUNTRIES: This meeting will convene from 14-20 May 2001 in Brussels, Belgium. It will include a Round Table on Energy. For more information contact: Office of the Special Coordinator for Least Developed, Landlocked and Island Developing Countries, UNCTAD, Geneva, Switzerland; tel: +41-22-907-5893; fax: +41-22-907-0046; Internet: <http://www.unctad.org/en/subsites/lids/document.htm> and <http://www.un.org/events/lidc3/conference/>

INTERNATIONAL CONFERENCE ON CHALLENGES OF A CHANGING EARTH: This conference will be held in Amsterdam, the Netherlands, from 10-13 July 2001. It will examine the scientific basis needed to understand the complexities of the Kyoto Protocol and define the global carbon debate within a dynamic Earth System and human context. The conference is being organized by the International Geosphere-Biosphere Programme, together with the World Climate Research Programme and the International Human Dimensions Programme for Global Environmental Change. For more information contact: Susannah Elliott, International Geosphere-Biosphere Programme; tel: +46-8-1664-48; fax: +46-8-1664-05; e-mail: susannah@igbp.kva.se or igbp@congreg.nl; Internet: <http://www.scionf.igbp.kva.se>

RESUMED SIXTH CONFERENCE OF THE PARTIES/14TH SESSIONS OF THE UNFCCC SUBSIDIARY BODIES: The resumed COP-6 (as outlined under COP-6 decision FCCC/CP/2000/L.3) and the 14th sessions of the Subsidiary Bodies of the UN Framework Convention on Climate Change will be held from 16-27 July 2001 in Bonn. For more information contact: the UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.int; Internet: <http://www.unfccc.int>

18TH SESSION OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC) PLENARY: This meeting will be held from 24-29 September 2001, in London, UK. The purpose of the meeting is to adopt/approve the Synthesis Report. For more information contact: Renate Christ, IPCC Secretariat, tel: +41-22-730-8574; fax: +41-22-730-8025; e-mail: christ_r@gateway.wmo.ch; Internet: <http://www.ipcc.ch/activity/master-sch.html>

SEVENTH CONFERENCE OF THE PARTIES TO THE UN FRAMEWORK CONVENTION ON CLIMATE CHANGE: COP-7 is scheduled to take place from 29 October - 9 November 2001, in Marrakech, Morocco. For more information contact: the UNFCCC Secretariat; tel: +49-228-815-1000; e-mail: secretariat@unfccc.int; Internet: <http://www.unfccc.int/>