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SUNUNU
Briefings

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Briefing for Governor Sununu
Preparations for the First Framework Convention Negotiating Session
Washington, DC, February 4, 1991
November 7, 1990

- A. Major Issues to Be Resolved by the White House
- B. Logistics of February Meeting
- C. Major U.S. Policy Issues for the Negotiations
- D. Timetable for Process to Prepare for the February Meeting
- E. Tasks and Products to be Addressed in Preparation for the February Meeting
- F. 1992 Conference in Brazil

- G. APPENDIX I Details of Issues Under Analysis
- H. APPENDIX II Specific Policy Analyses Identified by OMB
- I. APPENDIX III Prime Minister Margaret Thatcher's speech delivered to the SWCC
- J. APPENDIX IV "ECO" Reports published by the Non-Government Organizations during the SWCC
- K. APPENDIX V International Participation in SWCC

APPENDIX V

International Participation in SWCC

Negotiations on a Framework Convention on Climate Change
Proposed actions and Products:

1. PARAMETERS

- 1-1. Development of appropriate definitions [Task Force on Climate Approaches]

2. ECONOMICS

- 2-1. "The Economics of Long-Term Global Climate Change" report from the DPC GCWG Interagency Task Force on Economics. [INTERAGENCY TASK FORCE ON ECONOMICS]

- 2-2. Preliminary assessments of best available information on effectiveness and economic consequences of various response strategies [DOE, EPA, OMB, CEA]

- 2-3. Develop detailed analyses of the feasibility of meeting certain proposed targets in order to demonstrate the impracticability of these proposals. [DOE, EPA, CEA]

- 2-4. Calculate the impact on radiative forcing of emissions targets implemented by only a subset of countries (e.g., OECD members) [DOE, EPA AND CEA]

- 2-5. Evaluate the feasibility and economic consequences of emissions targets for the U.S. and other key countries. (Part of the effort will be to identify potential allies) [EPA, CEA, OMB AND DOE]

[SEE 10. ANNEXES AND PROTOCOLS FOR ECONOMICS IN THE CONVENTION]

3. NO REGRETS

- 3-1. Determine what could be listed under a "no regrets" heading. [STATE IN COOPERATION WITH OTHER AGENCIES]

4. COMPREHENSIVE APPROACH

- 4-1. Develop options regarding to what extent (i.e., how much detail) the framework convention should "tilt" the protocol in the direction of a comprehensive approach. [STATE WORKING WITH THE TASK FORCE ON CLIMATE APPROACHES]

- 4-2. The Task Force on Comprehensive and Incentives Approaches to Climate is specifically monitoring this set of products in preparation of the framework convention in relation to the comprehensive/incentives approach: [STATE AND DOJ]

4-2-1. Drafting a U.S. version of a possible framework convention. [STATE AND DOJ]

4-2-2. Develop an improved radiative forcing index. Sketch the design of a global change index. [CEES, EPA (ALBRITTON AND TIRPAK, ET. AL.)]

4-2-3. Design an international GHG monitoring system. [EPA, CES, DATA MANAGEMENT WORKGROUP, EPA, MARS]

4-2-4. Development of talking points including quantitative demonstrations that piecemeal proposals would have little environmental benefit, or actually be counterproductive. [DOJ]

4-2-5. Conduct quantitative analysis of the comprehensive and economic incentives approaches, and its variations by gas, strategy, sector, nation. [NORM HARTNESS, DOE]

4-2-6. List of the net index-weighted emissions change wrought by relevant U.S. actions, including "no regrets" measures. Prepare a similar list for other countries. [EPA]

4-2-7. Develop language for the framework convention to address the vision of decisionmaking under uncertainty. [CEES AD HOC ECONOMICS TASK FORCE]

4-2-8. Assess other's proposals. [EPA, DOE, CEA]

5. FINANCIAL ASSISTANCE

5-1. Options paper on how to handle the possibility of differentiated treatment in the framework convention for developing countries with respect to both general and specific obligations. [STATE]

5-2. Catalogue existing U.S. financial assistance related to climate change. [STATE]

5-3. Assessment of existing institutions and mechanisms related to financial assistance for climate change. [STATE]

5-4. Develop positions regarding technology development issues. [STATE, DOE, USDA, EPA'S INTERNATIONAL ENVIRONMENTAL TECHNOLOGY TRANSFER ADVISORY BOARD, DOC, USTR, AND OTHER RELEVANT AGENCIES]

6. INSTITUTIONS

6-1. Consider surveillance/verification/compliance functions that might accompany comprehensive/economic mechanisms to be included in the framework convention. Determine whether they should be included in the convention or subsequent document. [STATE AND THE TASK FORCE ON CLIMATE APPROACHES, in the long term: COMMERCE, USTR]

6-2. Review and analysis of existing institutions, identifying gaps, and considering the provision for the establishment of scientific or other bodies on a permanent or ad hoc basis to advise the parties on various technical matters. [STATE, TASK FORCE ON CLIMATE APPROACHES AND OTHER AGENCIES AS APPROPRIATE]

7. RESEARCH, SYSTEMATIC OBSERVATIONS AND ANALYSIS

7-1. Develop proposals it considers the U.S. should make with respect to research and monitoring. [INTERAGENCY WORKING GROUP ON DATA MANAGEMENT FOR GLOBAL CHANGE]

7-2. Develop an updated list of research areas to include in the convention, perhaps in an annex. The list should include areas in which further research is needed to determine an appropriate response strategy toward greenhouse gases. [TASK GROUP ON CLIMATE APPROACHES]

8. INFORMATION EXCHANGE AND REPORTING

8-1. Determine the kinds of scientific and economic information should be exchanged and under what conditions. [STATE WITH APPROPRIATE AGENCIES]

8-2. Consider the merits of a fund dedicated solely to climate change research and any institutional auspices under which it would operate. Also determine what kinds of scientific and economic information should be exchanged and under what conditions. [STATE AND RELEVANT AGENCIES]

8-3. Consider the need for the elaboration of a comprehensive international research program in order to facilitate cooperation in the exchange of scientific, economic, and other information on climate change. [CEES should provide its view]

9. SETTLEMENT OF DISPUTES

9-1. Options paper discussing whether we should support stronger dispute settlement provisions. [STATE]

10. ANNEXES AND PROTOCOLS

10-1. Analyses to demonstrate the advantages of economic approaches and options for references in the convention to economic mechanisms. [TASK FORCE ON CLIMATE APPROACHES]

APPENDIX IV

**"ECO" Reports published by the Non-Government Organizations
during the SWCC**

eco



Eco has been published by Non-Governmental Environmental Groups at major international conferences since the Stockholm Environment Conference in 1972. This issue is produced cooperatively by groups attending the Second World Climate Conference 1990

US CLAIM BASED ON DOUBLE COUNTING CFCs

By ECO Staff

The United States' claim, made by Mr Allan Bromley, President Bush's Science Advisor, that US greenhouse gas emissions will be held "at 1987 levels until at least the year 2000" is three-quarters based on counting CFCs already to be controlled under the Montreal protocol, it emerged yesterday.

Bromley's assertion, made in a speech on October 23rd, is undermined by unpublished EPA calculations, which show that the US programme relies far more on the CFCs than on the policies of tree-planting, landfill gas control, the new Clean Air Act, energy efficiency initiatives and other measures — which Bromley has emphasised. As Brooks Yeager, of the US Audubon Society points out: "In fact, the US 'stabilisation' programme assumes a 15% increase in CO₂ at the turn of the century." Yeager also questions other aspects of the programme. "The tree planting is not yet funded and discussion of the the 'global forestry convention' proposed at the Houston G7 summit that

Bromley mentions, has now been deferred until March 1991."

According to the EPA study, the US calculation, that in terms of 100-year global warming potentials the year 2000 emissions should have no greater impact than those of today, is arrived at as follows:

Current Commitment

Millions of tonnes of carbon reduced
(Carbon equivalents)

Tree initiative	9
DOE Energy Efficiency Initiatives	28
DOE Appliance Standards	4
DOE Renewable Initiatives	4
Clean Air Act	68
Landfill Regulation	44
CFC Phaseout & Montreal Protocol	551
Total:	708

This projected reduction for year 2000 emissions compares to US expected total emissions of 3,040 million tonnes without CFC phaseout under the Montreal Protocol. Total US emissions in 1987 were 2,330 million tonnes.

— continued on back page, col 3

Former US Negotiator Damn American Position

"The US position is not only irresponsible, unnecessary," said William A Nitze, President of The Alliance To Save Energy said yesterday. Commenting on the US policy at the Second World Climate Conference, Nitze, a former State Department negotiator on environmental issues, added, "The US has greater opportunities for reducing its CO₂ emissions through greater energy efficiency and use of renewables than most other industrialised countries. An international EPA study shows US CO₂ emissions increased by less than 15% between 1987 and 2000 even without counting the full benefits of the Clean Air Act amendments. Use of a 1990 baseline and modest policy changes to exploit lower negative cost energy efficiency improvements would eliminate any growth in US CO₂ emissions."

— continued on back page, col 3

CONTENTS

News	1
Interview: Giorgio Ruffolo	
Letter to Mr Cotti	
Conference Report	
Quotes of the Week	
Leader	
Opinion and Analysis	
— Japan	4-
Focus on Eastern Europe	
Focus on Technology	

EFTA ANNOUNCES TALKS AIMED AT CO₂ STABILISATION

By ECO Reporter

Following a joint meeting with European Community countries yesterday, a statement released by EFTA and EC Ministers represented by Flavio Cotti of Switzerland and Giorgio Ruffolo of Italy announced that 'senior environmental officials' would 'undertake every effort towards the adoption of a concerted EC/EFTA position and as appropriate, common proposals to the extent possible on issues such as achieving stabilisation and subsequent

Cotti and Ruffolo described the outcome of the meeting as a commitment by every country to stabilisation. Ruffolo described the meeting as "satisfactory and encouraging". Carlo Ripa di Meana, EC Environment Commissioner referred to "broad harmonisation" between EFTA and EC countries, and suggested that "the 18 countries of Europe are convinced and committed to stabilise CO₂ emissions by the end of this century". Ruffolo added "there is no possibility for delaying or postponing action".

C O N F E R E N C E R E P O R T

OECD
STABILISATION
PROPOSAL

How should the SWCC Science Report be translated into policy? That is the main question now facing politicians in the Ministerial conference.

Here David McRobert interviews Bunli Yang, Policy Adviser in the Cabinet Office of the Ontario government about a way forward for the OECD.

The scientific report of the Second World Climate Change Conference has confirmed an even stronger consensus for immediate actions to reduce the risks posed to the climate by the "Business-as-Usual" approach in the industrialized countries. However, possible next steps for policy-makers are under intense dispute as the Ministerial portion of the SWCC gets underway.

To explore what some of the next steps might be, ECO interviewed Dr. Bunli Yang, a policy advisor to the Cabinet Office of the Government of Ontario, Canada about his views on how to achieve even a small breakthrough in negotiations for an international convention on climate change.

ECO What implications for policy-makers do you draw from the scientific and technical report of the SWCC?

Yang The wide agreement expressed here at SWCC on the need for actions leads me to think that the ball is in the policy-makers' court to propose some practical things for the industrialized nations to do.

ECO Given the arguments being made about uncertainty of regional impacts and the need for flexible response, what kinds of measures can industrialized nations take on a collective basis before an overall international convention is negotiated?

Yang Well, I think that collective action by the industrialized nations is both possible and needed. If we have learned anything from the process that led up to the 1987 Montreal Protocol, and its stronger revamping in London this summer, it's that fairness

example, in trying to get the developing countries to take part in an overall agreement on greenhouse gas emissions, there should be an assurance of financial resources for them.

ECO The notion of a fund for technology transfer has been raised before, what's different now?

Yang The problem has been how to allocate the responsibility for paying the funds. There might be a straightforward way: on the basis of current use of fossil fuels. So, for example, think of a fund for technology transfer for energy conservation of \$250 million per year. That's only 10 cents per tonne of carbon in the fossil fuels used by OECD countries. So the OECD countries, in proportion to their existing energy use, would help improve energy efficiency in the developing countries. That strikes a fairness chord in me.

ECO The SWCC scientific report refers to cost-effective measures in the industrialized countries themselves, yet we hear that the draft Ministerial Statement does not even refer to the Toronto 20% target. And many countries, led by the US, seem to be avoiding even stabilization of emissions. Are the industrialized countries ready to reduce emissions?

Yang I think the targets are useful to focus attention on the size of commitments needed. But they can't be applied to the developing world on a country-by-country basis. And even for the OECD, it's the emissions in total that need reducing now, not just country-by-country. So the next step would be to make contributions by OECD governments (say at 10 cents per tonne) tradeable, with a higher charge for fossil fuels used above the overall OECD 1990 cap.

ECO That sounds complex and hard to administer. How would it work?

Yang Well, the OECD use of fossil fuels in 1990 ends up in 2.5 billion tonnes of carbon. The US part is about 1.1 billion tonnes, so the US contribution to the transfer fund would be \$110 million for its 1990 use of fossil fuels. Set an OECD cap at 1990 levels for 1990-2000. This is 'stabilization of emissions'. So if in 1995 the US emits 1.3 billion tonnes, it would pay into the technology fund \$110 million, having bought (or traded with) other OECD countries the permits for the additional 200 million tonnes. They would probably cost the US more than 10 cents per tonne. But there might not be enough permits for these contributions because the OECD countries together might be exceeding their cap of 1990 levels. Then the higher charge, essentially a penalty surcharge, of say \$5 per tonne would kick-in. So if there were no more permits available under the OECD

tonne, or another \$1 billion. That would be a very powerful economic incentive for the country to reduce fossil fuel use, and yet the money would be going into very worthwhile efforts.

ECO Is this a practical possibility for Ministers to commit to? And besides, the way you've described it, the stabilization target could be exceeded, so maybe it isn't a cap at all.

Yang I think your earlier question administration is important. No kind of cap or reduction target is going to be enforced internationally by the threat of death criminal penalties! There will have to be economic measures that will provide strong self-interest incentives. What better way than to use the existing abilities of the OECD and the IEA (International Energy Agency) to track fossil fuels use, and to have the OECD collect the contributions on that basis. The tradeable nature of the permits means that each country can have a flexible strategy but still have a strong incentive to go below 1990 levels of fossil fuel use.

ECO Are the Ministers ready for this?

Yang I think this approach addresses several issues at once: how to get funds today for the developing countries, how to allocate the funding fairly, how to get a meaningful OECD cap, and how to be flexible for individual countries. The Ministerial delegations are probably looking for constructive things to do, following the pretty solid scientific consensus from last week.

Quotes of the Week

"Reilly didn't feel it requires his time. It is largely a conference on climatology"

Bill Reilly's Press Secretary to Reuters, David Cohen, explaining why the US Chief Administrator to the EPA was absent from the SWCC

"As a scientist, I have no view or opinion as regards the position of the United States"
Professor Dooge, Chairman of the Organizing Committee, at the SWCC Press Conference

"It's like asking a parent how you treat your children — not that I'm trying to be paternalistic"

Professor Dooge, Chairman of the Organizing Committee, at the SWCC Press Conference

"I think we should say the Conference concludes that reductions are technically achievable"

Dr Al Gain of Saudi Arabia, in the last Science Plenary

"I think the Energy Working Group can live

OPINION AND ANALYSIS — JAPAN

日本政府の態度へ

日本政府の方針は、"ふりぎりの二酸化炭素(CO₂)排出量について2000年以後、概ね1990年レベルの安定化"という目標を示すに止り、第2回世界気象会議での任務は終ったに思っているようです。

でも世界40数団体からジュネーブに集ったNGOの人々は、そうは甘く見てくれませんよ。

環境省が示した積極案も、産業界のバックにいて省庁間で強い発言力を持つ通産省がつぶしにかかっているにせよ、アメリカに歩調を合わせて環境庁長官も意図的にジュネーブに送って来ないことなどは、二重に内容に乏しい日本の行動計画ともなう Villa Rigot で、盛んに話題になっているのですから。

技術力、経済力ともに世界的立場に立つ日本が、この2日間の関係会議にアメリカの顔色をうかがうにせよ、私には日本国民の姿も反映させ、CO₂削減に向けて積極的に行動することも、世界のNGOとともに監視していきますよ。

地球の友より



Keiko Ishikawa, FoE Japan

A Message to the Japanese Delegation

You seem to be quite pleased with yourselves and feel that your job is over at the Second World Climate conference because you have announced a target of stabilising "per capita" CO₂ emissions at the 1990 level after the year 2000. However, the more than 40 non-governmental organisations (NGOs) attending the conference do not share the same feeling with you in this respect. Recent talk among NGOs at the Villa Rigot has been focusing on the way in which the Ministry of International Trade and Industry (MITI), one of the most powerful Japanese ministries which has strong backing from Japanese industry, has crushed the very positive proposal put forward by the Environment Agency (EA), as well as the fact the Director General of EA has decided not to come to Geneva in order that Japan will appear to be sending a low level delegation like the US. The NGOs will be scrutinising your position very closely at the ministerial conference over the next 2 days to determine whether you listen to the voice of the Japanese people rather than keeping your eyes cast on the actions of the US, and if you will take a step forward towards reducing CO₂ emissions.

Friends of the Earth, Japan

Japan's Plan for Centralised, Nuclear Action

By Dwight Van Winkle, CASA Japan

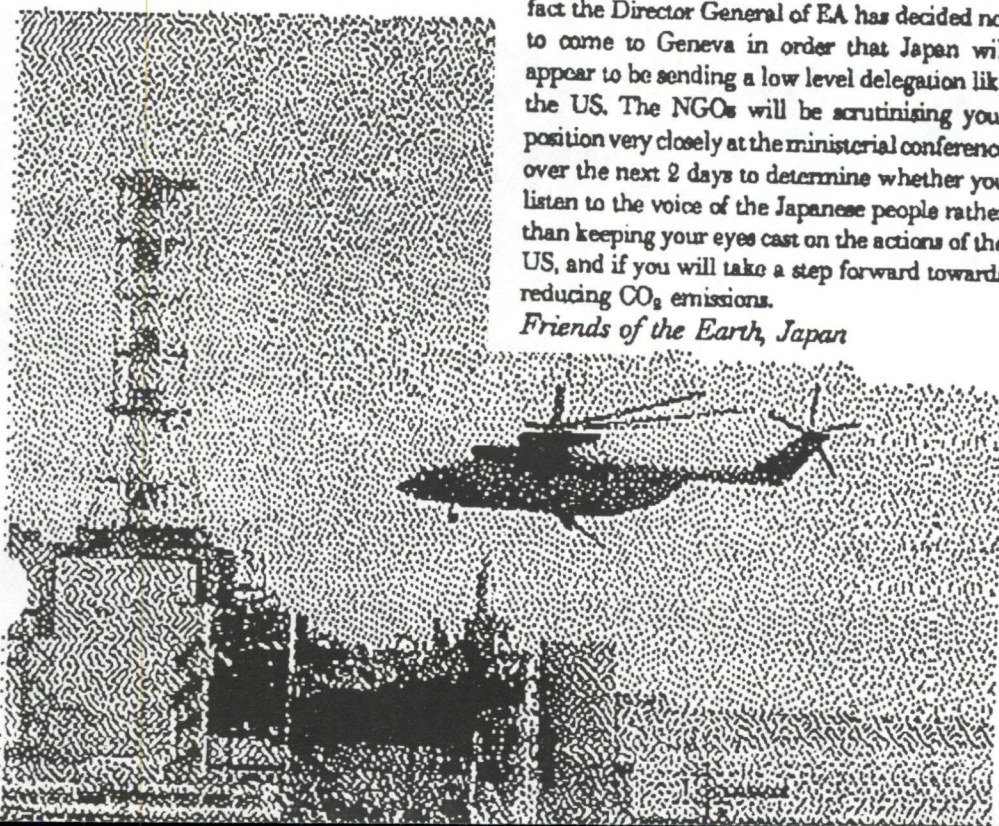
On page 7 of its Action Plan to Arrest Global Warming, the Japanese government informs us that nuclear power is "an energy with no CO₂ emission." Perhaps Japan could share with the rest of the world their secret of materialising out of thin air completed nuclear power plants and fuel to drive them. Outside of Japan, people still have to expend a tremendous amount of energy, mostly provided with fossil fuels, to mine and transport nuclear fuels, to build and maintain the plants, to store radioactive wastes for the necessary thousands of years, and to decommission these plants at the end of their short life spans.

Japanese power companies plan to build 40 nuclear power plants within the next 20 years, doubling their number. In Japan, nuclear power is being billed by its supporters as a "clean energy" which will provide a solution to the problem of global warming. They obviously have not talked to the leukemia victims of Chernobyl, who probably feel differently about the cleanliness of radioactivity.

The recommendations of Task Group 4 (Energy) include nuclear power among energy technologies that reduce greenhouse gas emissions. The Japanese government must be happy with this inclusion. I suggest they read on, however. The Task Group continues, "new methods are required to identify the least-cost mix" of energy sources. "Such methods must reflect the full economic, environmental, and public health cost of energy supply and use." Face it, Japan. Even if your electrical utilities were able to overcome the strong public opposition to nuclear power in Japan and find sites for 40 new plants, nuclear power fails to meet each of these very clear criteria for least-cost planning, and should be rejected both as a source of further power and as a means of alleviating solution to global warming.

Also on page 7 of the Action Plan, Japan states that "the introduction of dispersed power generation, such as fuel cells and photovoltaic cells, should be encouraged." They had better focus their encouragement on the Japanese Energy Utility Industry Council, who announced in June in their long-term forecast of electrical power supply composition that dispersed power sources will account for only 0.5% of total electrical power sources in 2000, and 2% in 2010. Not a very optimistic forecast, and one which is likely to be self-fulfilling.

Left: Chernobyl — it couldn't happen in



SECOND WORLD CLIMATE CONFERENCE NEWSLETTE

Will Norway Increase Emissions of CO₂?

By Gunnar Bolstad

Norway plans to increase its emissions of CO₂ by 6%. The increased emissions will come from a gas powerplant located in the North-West of the country, near the city of Kristiansund. Environmentalists hope that Gro Harlem Brundtland now returned as Prime Minister, will stop the plan.

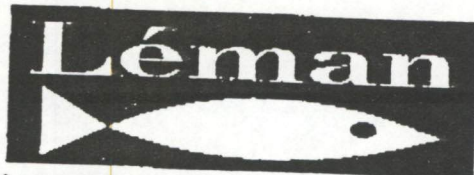
The Norwegian emission of CO₂ is 8.5% tonnes per capita. This is 4.5 tonnes more than the world average, despite the fact that 45% of Norway's energy comes from hydroelectric power.

In June of last year the Norwegian National Assembly decided that emissions of CO₂ are to be stabilised at the 1989 level by the year 2000. The State Pollution Control Authority has presented a cost-benefit analysis of CO₂ reductions, but at the moment there is no government plan as to how emissions will be stabilised at the 1989 level.

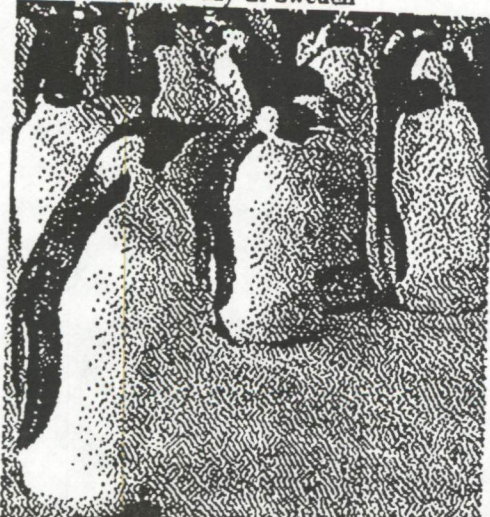
There are, however, plans to increase the emissions of CO₂ by 6%. A gas powerplant will emit more than 2 million tonnes of CO₂. The powerplant is supposed to provide energy for the metal industry, including the giant industrial company Norsk Hydro, which is partly state-owned.

Environment groups believe a much better environmental solution would be to export the gas as a substitute for oil and coal in the UK, or on the continent, where a gas power plant also can be utilised as a central heating plant, thus using the gas more efficiently.

Today there is an energy surplus in Norway and profitable saving potential of 20%, according to official estimates.



Léman is on holiday in Sweden



EFTA - continued from front page

Conclusions' does not amount to a binding or specific commitment. When asked at a press conference whether individual EFTA countries such as Sweden, Iceland and Finland had committed themselves to stabilisation of CO₂ emissions at present levels by 2000, Cotti was unable to answer. When asked if the net emissions of EFTA countries would stabilise, Cotti replied that "EFTA countries had no agreement together" and added that EFTA had no environmental remit, "environment does not belong in EFTA" he said.

Switzerland and Austria are publicly committed to CO₂ reductions but it is understood that neither Finland or Sweden are.

The EFTA/EC position invites 'all industrialised countries to take actions similar to those decided by the EC/EFTA countries and by certain other industrialised countries aimed at stabilising CO₂ emissions by the year 2000'. Following 'feasibility studies' programmes, strategies or targets for non-CO₂ greenhouse gases should be developed, adds the statement.

Eastern and Central Europe

The EFTA/EC Ministers also propose environmental cooperation in developing the European Economic Area covering both blocs, with 'policies based on the precautionary principle' in order to achieve 'sustainable development'. The Convention on Climate Change and 'legal instruments related to it, should be signed at the United Nations Conference on Environment and Development in 1992', while there needs to be closer cooperation with Central and Eastern Europe, says the statement.

The EFTA/EC position introduces the idea of applying the definition 'best available technology not entailing excessive cost' to development in East and Central Europe. It also calls for more use of 'economic and fiscal instruments' including pollution fees, noting that the next opportunity to discuss these at Ministerial level will be at the OECD Environment Committee in January 1991.

US Claim - continued from front

Environmentalists accept that the C Air Act will bring real benefits but contrast with briefings given by the Administration US press, criticising other countries for making similar claims about future work. Alden M. of the Union of Concerned Scientists commended yesterday "The National Energy Strategy" which Allan Brownley refers to appears likely to be heavily weighted in favour of increased domestic fossil fuel production and to largely overlook the tremendous potential for cost-effective energy efficiency improvements. However, "Allan Brownley claims that 'No other nation can make the claim that it will hold its greenhouse impact at 1987 levels by the end of the century but this is just not true. European countries and others that have committed to stabilise their CO₂ emissions while also phasing out CFCs will obviously realise significant reductions in overall greenhouse gas emissions. The US, by contrast, will make no progress over the next decade in overall emissions reduction."

Observers also contrasted the US claim which involves the so-called 'comprehensive basket of gases' approach, with the recently agreed Australian policy which specifically excludes CFCs from a pledge to stabilise greenhouse impact in 2000 and cut it 20% by 2005 (see SWCC ECO 1).

The EPA document acknowledges that CFCs are not included in the total greenhouse gas budget, total emissions in the year 2000 will exceed 1987 levels by approximately 1 million metric tonnes of carbon equivalent. Actual CO₂ emissions it notes, will be 15% above 1987 levels.

ECO's Who's Who: Guide to Environmental NGOs present at the Conference - Addendum

The Alliance To Save Energy, US - Bill Nitz; Greenpeace, Austria - M. Johann; Greenpeace, UK - Steve Elsworth; Norwegian Society for Conservation of Nature - Gunnar Bolstad; UK Association Youth, UK - David Allen.

Nitze - continued from front page
emissions. Therefore the US refusal to accept CO₂ stabilisation must be based more on ideology than on rational economic analysis

Split With Allies

"The White House has no appreciation of the international dimensions of this issue," Nitz continued. "Continued US refusal to acknowledge the seriousness of greenhouse warming and the need for immediate action: the face of growing scientific and political consensus is driving a wedge between the US and its closest allies. Key developing countries have made it clear that they will not take further action until the world's largest CO₂ emitter commits to reduce its own emissions. The US does not change its position soon," Nitz

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INTERVIEW

with Giorgio Ruffolo, Italian Minister of the Environment

As Chair of the European Community Environment Council Giorgio Ruffolo steered Europe to its recent decision to stabilise carbon dioxide emissions. An Economist who wrote a book 'Social Quality' advocating a link between Ecological and Economic thinking over ten years ago, Ruffolo is now engaged in helping restructure Italy's policies to integrate energy with environment.

ECO How do you evaluate the recent European Community decision to stabilize net emissions?

Ruffolo Winning the commitment of the twelve countries of the European Community was really a success: I hope that it is a good basis for a wider approach at tomorrow's conference. I'd underline the importance of the fact that it was a joint European Community Council of Energy and Environment Ministers that took the decision — that was the first such meeting.

The principal commitment is to stabilise CO₂ emissions at 1990 levels by 2000. The important principle of burden-sharing was also introduced: those countries with large emissions and more advanced industrial development are to make greater reductions so that those with very small emissions and rapidly developing economies can increase somewhat. They have a less strict target.

ECO What about the UK position — does that disappoint you?

Ruffolo The UK stressed its 2005 date. That is included in the deal — implicitly. We insisted that the Community as a whole stabilise by 2000. A further important factor is that the European Commission must now present a Report before the 1992 Conference in Rio de Janeiro, with proposals for reductions in 2005 and 2010. This is in line with the decisions taken at Bergen and Noordwijk.

ECO When will the Commission come forward with its proposals?

Commission to Make CO₂ Reduction Proposals to 2005 and 2010 'Next Year'

Ruffolo It will be next year: 1991. Another important part of the Luxembourg decision is the acknowledgement that fiscal instruments are very important. The Council of Ministers has taken note of that and the Commission will present particular proposals on a carbon tax before the end of 1990. That has been approved by a Resolution.



Giorgio Ruffolo

Ruffolo That's impossible to say but while certain things are discussed for decades, these days we live in times when an issue suddenly changes within weeks or months and decisions are taken very suddenly, particularly on these environmental subjects.

In Italy particularly, within the past three years we have seen 'an acceleration of history' in this subject. Advances have been made in policies on National Parks, urban cities, rivers and seas. We started with the normative changes — laws, directives, and now we have concrete programmes of action. Now we are linking ecology and environment with industrial and economic policy: that is essential. The only successful approach will be to involve environment in economics and economic theory in environment policy.

ECO Do you think the EFTA countries will follow suit?

Ruffolo I think they substantially agree on the position adopted by the Community.

ECO There is an inter Ministerial Commission linking environment and energy in Italy, but the ten year energy plan which is to be reviewed annually, forecasts an 11% increase in Italy's CO₂ emissions by 2000. Is that to be changed?

Ruffolo Yes, we must eliminate this trend. For this reason the Italian Government is studying proposals from the Ministries of Environment, Energy and Industry, to revise the economics of the Energy Plan. This means more efficiency and curbs on emissions. We plan to introduce a tax on CO₂ emissions in 1990: a carbon tax. We must eliminate that 11% in order to stabilise in line with the European position. That means energy saving measures.

If I can put it this way, our train is heading towards the 'Cassandra Crossing'; we must make a U turn, reverse the trend to avoid catastrophe.

ECO We featured the massive 600,000 petition recently handed to you by Lega per l'Ambiente asking for a 20% carbon dioxide reduction. What is your response?

20% cut is technically feasible and immediate action should be taken?

Ruffolo I haven't yet seen the Science Report but I know there are other studies showing that a potential of at least 50% exists in carbon emission reductions in OECD countries — which are cost effective.

ECO I know you are interested in the issue of technology transfer: will you be putting forward a specific plan on this at the Ministerial Conference?

Ruffolo Not a detailed plan but an approach which I hope will be included: we must have an instrument, a Protocol which allows the transfer of technology and assistance from the developed to the developing countries, in the Climate Convention. It could be along the lines of the provisions in the revised Montreal Protocol.

LETTER

Geneva, November 6th 1990

Dear Mr Cotti

You as chair person of the ministerial part of the SWCC will have a most important role. The World is looking to the outcome of this conference and we are very worried about its results. Ministers will adopt a Declaration, which we hope will call for immediate action, CO₂ reduction by industrialised countries and a strong global convention on climate change. The Scientists of the SWCC clearly concluded that there is a scientific consensus on global climate change, on the necessity to act now, notwithstanding existing uncertainties, because impacts on ecosystems and societies are considered to be unprecedented. They also concluded that CO₂ emission reduction of 20% by the year 2005 are not only feasible but also cost-effective foremost of the industrialised countries. Your job is not an easy one — because you will not only have to chair all the statements of heads of State, ministers and delegates, but you will probably also have to chair the discussion on the Ministerial Declaration. This Declaration looks to us more like a non-declaration as all the crucial points on CO₂ reduction targets, dates and the urgent call for immediate action have been removed from the original draft by the negotiators over the weekend. It has to be made sure that the ministers and negotiators really take note of the recommendations of the scientific community and take their responsibility to reduce CO₂ emissions in all industrialised countries. The EFTA and EC countries have to fulfil their commitment to keep these crucial points in and do their best. There are also still problems with square brackets... You see — there is still a lot to do. But we are positive that you, as the Swiss Minister for the Environment and chairman of this conference will do your best. We wish you good luck and all the best — the people of all over the World are looking to this conference and to the ministers to take active steps to solve this

eco

Daylight Robbery

A strange thing happened to the SWCC scientific statement on the way to the Palais. It disappeared. Ministers will not have it to hand.

The draft ministerial statement makes no reference whatsoever to the scientific statement. At the end of the Sunday night — Monday morning marathon session, the political representatives could not even agree to it going before the ministers as an appendix to their report. The civil servants seem happy to let their politicians work in a scientific vacuum.

This means that the politicians will not know that when they argue over action to *stabilise emissions*, the scientists talk of the need to drastically reduce emissions to *stabilise atmospheric concentrations*. Politicians are minimising action while the scientists call for minimising risk.

Politicians will talk of "no regrets" policies; unaware that the Science Report states that the risks of climate change justify reductions in emissions. Politicians will not know that the conference concluded that technically-feasible cost-effective measures exist to reduce carbon dioxide emissions in all countries.

Push Comes To Shove

For years environment groups have criticised the retrograde positions of countries such as the US and UK. At this conference, together with its oil allies, the United States has disgraced itself once again. The UK has been able to hide cuts under the European Community's CO₂ umbrella. But none of these 'villains' are feeling any real pressure. Why? Because, with the honourable exceptions of a few countries such as Australia, New Zealand, Austria and the Netherlands, supposed environmental leaders have backed away from commitments.

It is difficult to get used to the idea that Germany has got 'sticker shock' and dropped its highly moral commitment to tropical forest conservation, now that it sees it will cost real money. Hence the German delegation sat silent as mention of a forest protocol was cut from the draft declaration. And Sweden, host of the 1972 Stockholm Environment Conference, will not commit itself to stabilise CO₂ by 2000. Sweden's name only creeps into the draft list of 'committed' countries by the insertion of the weasel phrase 'aimed at' stabilisation. Hence too, the bizarre twists and turns of the EFTA/EC statement which does not amount to a commitment to stabilise, only a vague wish to do so.

Carlo Ripa di Meana claims that '18

countries of Europe' now lead the world and that a battle is about to start. But Europe isn't shooting. The Swedes and Germans have prepared a white flag. When push has come to shove, these so-called environmental leaders have let domestic political pressures (Sweden's problems restructuring its energy policy, and Germany's need to finance the old east), push the planet's interests aside.

Fortunately for today the Ministerial Declaration remains a draft. By tomorrow we will know if the Europeans have let the US and others off the hook by agreeing a document with no firm CO₂ target, no energy protocol, and hence (as Brazil then objected), no forest protocol. If this is the future greenhouse realpolitik, then Europe is throwing away its influence as well as its reputation.

OPINION AND ANALYSIS — JAPAN

CO₂ and Japan: A Freeze is Not Enough

by Stewart Boyle, Energy and Environment Programme Director, Association for the Conservation of Energy

Japan is the most energy-efficient nation in the world, has half the per capita carbon emissions of the USA, and "the development and diffusion of energy-saving technology has already run its course". Well, at least this is the case promoted by the Ministry of International Trade and Industry (MITI) in Japan. The truth is somewhat different. Faced with pressure from its Environment Agency and international public opinion, MITI has brought down the country's proposed CO₂ stabilisation target from 16%, to 9% and finally to something between zero and 6% (such is the ambiguity of their recent target announcement - see Léman, ECO no. 6, 5 Nov). Though a welcome first move, there in fact remains a significant energy and CO₂ savings potential throughout the economy.

In the electricity sector, huge forecasts requiring nearly 100GW of new coal, gas and nuclear plant by 2010 largely ignore the potential for demand side efficiency improvements in electrical appliances, lighting and drive motors. Unlike more progressive US utilities, least-cost planning techniques which allow utilities to sell energy conservation and hold or reduce demand, are nowhere present.

In the transport sector, fuel efficiency improvements have reversed since 1985, aided in part by a repeal of the tax system which encouraged smaller, more efficient vehicles. In the face of rising car ownership and congestion levels, new initiatives on fuel efficiency standards,

mass transit, are needed.

In other sectors, there has been a stalling of efficiency standards, and the building stock has low efficiency levels in lighting, air conditioning, and insulation. There has also been a significant falling away of public awareness and industrial priority on efficiency due to lower oil prices since 1985.

The recent Gulf Crisis is a reminder to Japan (and the US) that energy efficiency programmes have to be sustained, and directed at sectors other than just industry. Importing 99.6% of its oil, half of which comes from the Gulf of Hormuz, it is a nation which is highly vulnerable to external events such as fuel wars. Between 1973 and 1986, Japan reduced the amount of energy needed to produce a unit of economic output by 54%, better than any other nation. Japan could increase the energy services available to its people significantly in future, without reducing CO₂ emissions. A recently published study by the Royal Institute of International Affairs in London demonstrates that, with more realistic 'business-as-usual' energy forecasts, a greater emphasis of energy efficiency, fuel switching to gas and renewables, CO₂ could be reduced 7% by 2000, 10-20% by 2010, and 25-40% by 2050. The attainment of such reductions would keep Japan at the forefront of technological development. They would also reflect a more honest appraisal of

FOCUS

on Eastern Europe

Introduction

by Reinhold Pape

Hundreds of delegates from Western governments, aid agencies and environmental groups have visited Eastern Europe countries during the last months, yet experts in Poland say that only 5-10% of these visits have resulted in concrete assistance. 'Help' to Eastern Europe has become a 'big business', with big promises but very little real assistance. So far, the millions of US\$ given to the Bush-Center in Hungary has mainly been spent on expensive renovations and Italian furniture.

From the 2 million SEK raised in Sweden for a so-called Wistula Project, not a single crown reached Poland. It stayed in the pockets of Western consultants. Big promises concerning the so-called 'Debt for Nature' also failed. But now there is news about hazardous waste sent from the west to the east.

It really is time for Western organisations to start listening to the real needs of Eastern Europe and to respect the opinions of Eastern Europe's new NGOs. Below are some examples of what the environment movement in Eastern Europe is aiming at to do on the environmental policy level: A second part of this special focus appears in tomorrow's ECO.

Position Statement of Central and Eastern European NGOs present at the SWCC, November 5, 1990

Due to recent political changes Central and Eastern European NGOs are the first time present in the joint work of representatives of science, policy making, industry, governments and NGOs working together.

Having attended SWCC we support the recommendation of the Conference that "nations should now take steps towards reducing sources and increasing sinks of greenhouse gases through national actions and negotiation of a global convention on climate change" to minimise "risks to society and natural ecosystems".

We want to have "accurate public information" on climate issues as well as "to participate fully in the free exchange and flow of information necessary for the development and technical input" of any convention which coincides with the interest of this region.

On this basis the newly liberated Central and Eastern European nations should be ready to cooperate with those already working on both the assessment of global warming and the strategies for addressing it.

However, for policy implications there is a need to realise that these countries have a

developing countries and of differentiated responsibility of the industrialised and the developing countries the conference statement points out that "the problem is largely the consequence of past patterns of economic growth in the industrialised countries". But this is not the case with the countries in Central and Eastern Europe.

Devastation of the environment, and, among other problems, accumulation of greenhouse gases in this region, had caused other than economic growth. These nations were blocked by force into a counterproductive economic system by now bankrupted. Central and Eastern European countries, notwithstanding their cultural and political potential, may suffer from a double burden: after the social and natural resources have been misused by totalitarian regimes for decades, these countries are now facing a possible environmental colonisation by industrial firms seeking an extra profit both from cheap labour and from the inadequate environmental legislation.

Central and Eastern European nations should be given special attention as we are not industrialised, neither do they share most of the problems of the developing countries.

It is true that we have suffered from the lack of financial resources, an overused infrastructure and a fragmented flow of information. But we have neither a population nor a food problem.

These countries have a hidden potential:

- a — somewhat limited — tradition of parliamentary democracies;
- that of a liberal economy;
- a homogeneously distributed school achievement;
- a legacy of universities and learned societies at least 600 hundred years old;
- and the remnants of a civil society still existing in collective memory

These capacities are there. They need no establishment, only revitalisation. This hidden potential, if properly managed and supported, means these nations will soon be able to catch up with industrialised countries with a better environmental performance — therefore they may contribute to tackling global problems, too.

It should be noted by the ministerial session, that according to the NGO statement to SWCC, November 1, 1990 "The economic restructuring currently occurring in Eastern Europe presents a critical opportunity to introduce energy-efficient technologies that will benefit both the environment and the economies of these countries."

Work on energy conservation in this region

risk are also desirable on other grounds."

The community of environmentally responsible countries should help these newly and freely elected, still vulnerable governments to find environmentally sound ways of managing their economies. This kind of investment may bring short-term returns both nationally as well as on a globally.

The support should come in the form of special policies, conventions, codes of industrial behaviour to stop environmental exploitation and a transfer of know-how to rationalise, or swaps of nature-for-debt. Any differentiated policies should meet the ambition and the efforts of these nations to cope with their difficulties, to re-enter into the European community as well as to run a less polluted economy and work on a healthy and effective society.

Jadwiga Taylor Rusworth,
Social Ecological Institute, Poland

Dr Judit Vársárhelyi,
Independent Ecological Centre, Hungary

Igor Halama,
Green Circle, Czechoslovakia

Black Triangle — Time for Action

by Reinhold Pape

Alarming news has reached the public in recent years about the degradation of the environment in Central Europe in the border region of Czechoslovakia, Poland and East-Germany. Here the effects of heavy pollution have not only become obvious by destroyed forests and landscape but also by its direct influence on human health. Life expectancy is in some parts of the region 4-5 years lower than the average and scientists believe that the causes are the polluted living-environment. The region is called the 'Black Triangle' because here the basis for the energy production of the 5 countries is abundant - brown coal, which is burned in large coal power stations, heavy industrial plants and in communal heating without any cleaning of the exhausted gases and dust.

The region is also typical of a very old and insufficient heavy-industry structure without any environmental protection measures and which have caused strong local environmental protection measures and which have caused strong contamination of soils, vegetation and food products. Environmental groups from the three countries are now preparing for a campaign to get national and international attention in order to solve the problems of this region.

SECOND WORLD CLIMATE CONFERENCE NGO NEWSLETTE

ECCO



Eco has been published by Non-Governmental Environmental Groups at major international conferences since the Stockholm Environment Conference in 1972. This issue is produced cooperatively by groups attending the Second World Climate Conference 1990

TAKE IMMEDIATE ACTION SAY SWCC SCIENTISTS

By ECO Staff

More than 700 scientists from 120 countries yesterday released the strongest warning of its kind yet delivered to the world's politicians, when the Second World Climate Conference reported on its scientific and technical sessions in Geneva.

The scientific Report which is presented to Ministers meeting this week, goes much further than the Intergovernmental Panel on Climate Change which is in effect its predecessor, in calling for countries to take 'immediate action' to reduce risks of climate change, 'concluding' that 'technically and cost-effective opportunities' exist to reduce CO₂ emissions from many industrialised countries, and that 'remaining uncertainties must not be the basis for deferring societal response'.

The report reflects an even stronger scientific consensus than the IPCC that action on the

greenhouse effect is justified, stating: 'a clear scientific consensus has emerged on estimates of the range of global warming which can be expected during the 21st Century. If the increase of greenhouse gas concentrations is not limited, the predicted climate change would place stresses on natural and social systems unprecedented in the past 10,000 years'.

It adds: 'This conference concludes that, notwithstanding scientific and economic uncertainties, nations should now take steps towards reducing sources and increasing sinks of greenhouse gases... with the long term goal of halting the build-up of greenhouse gases at a level that minimizes risks to society and natural ecosystems'.

It also warns that because natural feedbacks which will increase global warming have been

- continued on back page, col 3

Pacific Summit: Bush 'Rejects' IPCC On Sea Level Rise

Sea-level rise is so uncertain that it poses minimal concern, President George Bush is understood to have told leaders of Pacific Island states last week. Bush addressed 10 Heads of State at an environment summit called to discuss global warming and the US facility to incinerate chemical weapons on Johnston Atoll.

The leaders pointed to the findings of the IPCC on sea level rise, and were perplexed when Bush rejected them, saying "My scientists are telling me something different to that".

News of the Bush statement has sent a wave of dismay through members of the US scientific community who were involved in the IPCC process. At the Second World Climate Conference Mr Jim Bruce of the Coordinating Committee

- continued on back page, col 1

US, USSR, SAUDIS GUT MINISTERIAL STATEMENT

By ECO Reporter

On the eve of the Ministerial portion of the Second World Climate Conference, the US, USSR and Saudi Arabian delegations led successful moves to gut a draft of the statement to be adopted by politicians who start a 3 day meeting today, Monday.

Yesterday, at the same time as their scientists delivered a report saying immediate action should be taken on climate change, the major oil producers proposed deleting key sections on targets and dates for reducing greenhouse gases, from the draft Ministerial Statement. In negotiations taking place in the United Nations

USA, supported by Canada, succeeded in removing reference to the 'Toronto Target' of a 20% cut in CO₂ emissions by 2005, adopted by a major conference in Canada in 1988.

"Speaking as a Canadian, I am ashamed at the complicity in helping the US water down the Ministerial declaration" said David McRobert of the Toronto-based Pollution Probe group. "The United States has turned its back on science — including its own researchers — and is working with the fossil fuel industries to block any meaningful action by the Ministers" said Alden Meyer of the US Union of Concerned Scientists. "It's appalling that the US has taken

CONTENTS

News	1,8
Interview:	
Dr Stephen Schneider	2
Interview: Prof Bert Bolin	3
Leader	4
Opinion and Analysis	4-5
The View from Tuvalu	5
Eco's Guide to US Policy	6

Two Views on Science and Policy

Today, ECO carries two interviews with two of the major scientific figures involved with climate change issues, Professor Bert Bolin, Chairman of the IPCC, and Dr Stephen Schneider of the National Center for Atmospheric Research, who has worked on analysing the significance of climate models for some 15 years.

INTERVIEW

with Stephen Schneider
of the National Center for Atmospheric
Research in Boulder Colorado



probability. Why should the science community demand a 95% or 99% probability before their findings can be used to inform decisions? It's elitism of the worst kind."

"I like to say if there is a coin flip probability — 50:50 — of unprecedented global climatic change actually occurring, and that there is a 1 in 10 chance — Russian Roulette odds — of it turning out to have catastrophic impacts, then that's more than adequate to say we should slow down."

"...when you treat the environment as a sewer, something eventually stinks."

ECO What is the most important scientific development being reported at the Second World Climate Conference?

Schneider I don't want to be cynical but in truth there's very little that's scientifically new. Three main 'scientific' events have caught world imagination in the last decade. The discovery of the ozone hole — though not directly related to global warming served as a symbol of the fact that when you treat the environment as a sewer, something eventually stinks.

Secondly, there was the rising temperature trend — the record warm years in the 1980s. Of course, one record warm decade does not a greenhouse prove but the momentum of public opinion would have been much the less without it.

Thirdly, for the last 10 years the modelling community has worked its tail off trying to disprove the predictions of warming caused by greenhouse pollution, and has failed to do so. Nothing has really shaken the prediction of a 1.5–4.5°C rise with doubling of CO₂ or equivalent. More recent models suggest 1.9–5.2°C. Without feedbacks they suggest 1.5°C.

ECO You published a table showing the time probably needed to resolve uncertainties. Do decision-makers understand the scientific process?

"Smoking Gun"

Schneider Consensus on the magnitude of the temperature effect is not only based on the models, it also depends on the temperature record, as Tom Wigley showed in the only original piece of climate science I saw presented at the meeting. We've detected

fluctuation — you might expect a cent like that once in a millenium but certainly far less than even odds — a 50 probability — that it would occur chance.

So we can already argue that something unusual has occurred. It's not proof of cause and effect, but certainly the fact that it has coincided with increasing greenhouse g emissions and is within the expected range of the models, is suggestive. Intuitively, to me, it's close to a smoking gun.

The 99% certainty that scientists like before having high confidence will indeed take a decade or two more to achieve.

"Elitism of the Worst Kind"

ECO Do you think the generally understood 'criteria' of scientific proof are really very useful in dealing with such an issue?

Schneider It's not a 'scientific certainty' in the sense of a traditional 99% probability — but what makes 99% appropriate for policy making? People make decisions to get medical treatment or to buy health insurance for potential problems that are not established beyond doubt. Why should science be any different?

Corporations spend trillions of dollars on the basis of economic estimates with no more than a 50% probability. Why should the science community demand a 95% or 99% probability before their findings can be used to inform decisions? It's elitism of the worst kind.

I'm not saying we should exaggerate probabilities. What I do believe is that scientists should not claim they cannot talk to the public until there is a 95% probability — especially not as they rely on public funds.

ECO Is the scientific community getting its message reported properly?

Schneider Scientists are human beings. They hold world views. Mine is that we must take global collective action to help the world survive. Uncertainty by itself is no excuse for inaction. Others shed their scepticism at a higher degree of certainty than I do. I like to say if there is a coin flip probability — 50:50 — of unprecedented global climatic change actually occurring, and that there is a 1 in 10 chance — Russian Roulette odds — of it turning out to have catastrophic impacts, then that's more than adequate to say we should slow down.

Some others view 'world survival' as an abstract entity and regard their 'scientific purity' as most important. They fear society will resent them crying wolf if they turn out to be wrong. So they say nothing. Many scientists in fact make this decision without realising it is a value judgement.

Unlike journalists who lead with a headline

"We've detected about an 0.5°C rise during the twentieth century record. That's certainly not a normal fluctuation — you might expect a century like that once in a millenium but it's certainly far less than even odds — a 50% probability — that it would occur by chance."

So we can already argue that something unusual has occurred."

"It's not a 'scientific certainty' in sense of a traditional 99% probability — but what makes 99% appropriate for policy making?"

"Corporations spend trillions of dollars on the basis of economic

while others take the 'world citizen' view, and describe dangerous possibilities.

But I think we don't require proof of scary scenarios to convince the world to take action. We need to attach odds to the various possibilities. I believe that suppressing a dangerous or scary possibility is as irresponsible as putting out a scary scenario without odds. If I'm only 10% certain that there's botulism in tonight's soup, that's enough to stop me from trying it. I don't need 99% probability.

Some lobbies or governments are parading an unrepresentative series of people with extreme views to mislead the public. They claim that the science is totally uncertain, but they never give any probabilities. That's misrepresentation.

"Does it really matter if there is a 10% or 50% chance of catastrophe?"

ECO How do environmental groups perform?
Schneider Unfortunately, some are like Sununu: they take things out of context or forget to mention odds. Everybody should tell the story probabilistically. The truth is bad enough. Does it really matter if there is a 10% chance of catastrophe? or 50%? We're not talking asteroid-collision-with-the earth odds here — its not as if there's only a thousandth or a millionth of a percent chance that a climate catastrophe will occur. We don't need to claim certainty for the evidence. That's only an invitation to discredit us.

Some in industry have been spreading confusion since the events of 1988. In the US some have used full page newspaper adverts to do so, making it no longer politically safe for most politicians to talk about the need for carbon taxes. They are raising what appear to be fundamental new questions about greenhouse science, but in fact they largely flaunt well known uncertainties. They are beating us with our own caveats and pretending they invented them.

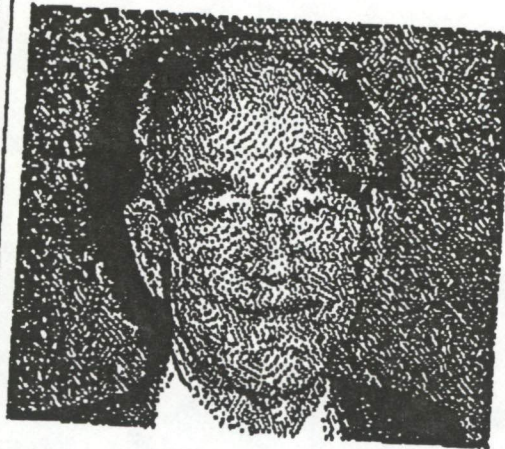
The public often falls for it because they misunderstand the nature of the scientific process, debate and doubt. The media enjoys polarised debate because they like a conflict. Politicians can use the debate as they like.

ECO Would you comment on President Bush's position?

Schneider I suspect that his Chief of Staff John Sununu doesn't let a representative spectrum of climate scientists get near the Oval Office. The President apparently only hears knowledgeable or extreme people. Neither Bolin nor Hansen nor myself have spoken with him. I doubt he gets balanced information on global warming or he'd join the Margaret Thatcher, and other 'conservative' leaders, who counsel at least some immediate action to counter the greenhouse effect.

INTERVIEW

with Professor Bert Bolin
Chairman of the IPCC



"We don't understand the carbon cycle adequately today. We can only account for where about 80% of the emissions go."

How can we be sure that the same fraction will stay in the atmosphere? If 50 or 60% stays in the atmosphere of a warmer world, that will mean concentrations rising at twice the present rate. I think it is most likely that accumulation will go more quickly in future than less quickly."

ECO You have received a prize for your work during this Conference, and have become an international public figure as a result of your work with the IPCC: what do you feel about that?

Bolin It's unimportant what I feel as an individual — I do feel very engaged in the issue. Engaged in trying to steer a way between extremes on either side of the argument in this business.

ECO The science-policy interaction seems a very difficult area. Working Group I's report was very well received, II and III less so, do you think there is now a problem with communicating the nature of uncertainty to people?

Bolin All three Reports were well received. There is naturally a tendency among researchers to talk about their own research and to interpret it in terms of policies. That is a major step and many don't recognize it. A single scientific voice is not very important. It may even be counter-productive.

I'm not saying that scientists should keep quiet but it is important to sift out what

"Journalist Problem"

ECO Is there a problem with journalists wanting to hear about what we don't even though that may in itself be impractical/scientifically?

Bolin Journalists are a major problem. Journalists are a major problem. I recently gave a long interview to a major daily newspaper in Sweden and the journalist then talked with Professor Budeko, who thought that he thought a warmer world would be a better world. She wrote that, and it is correct. He does think that. But that was all she wrote, which was very misleading. They take a point and make that seem to be 'the issue'. Journalists put about wild exaggerations which naturally scare people. There may be an utterly small chance that things turn out in such a way. We don't need to scare people, instead we must bring home to them that we face a serious issue in the future development of our world, and set in train a process of collaborative action, involving those who have influence.

"30-40 Years"

ECO what about environment groups, what do you think of their work?

Bolin Generally they do a good job but there are a lot of battles going on over issues that are not of central importance. From the 'green' side there are many — and I admire the engagement of those people — who create such battles. How would one go about convincing people to take real action to reduce their CO₂ emissions for example. That is a practical question, and one which extreme green groups do not want to address.

Drive the car less, economise on heating but what else can you do? Very little: we have built a society which depends on cheap energy — you can't change that in less than 30-40 years.

If you ask 100 people in the US if they would do the things really required to achieve the reductions described in Working Group I, 90% would say no.

No single country would accept those things in the next 10 years.

Severe measures would also create unrest and conflict: then what has been achieved? Politicians who advocate such measures will get kicked out of office. Greens ignore that aspect of the problem.

ECO The conference has heard a lot about feedbacks which do you think is likely to be the most important?

Bolin The most important is water vapour. That is crucial and work on it is reasonably well in hand.

The surprises I referred to earlier this

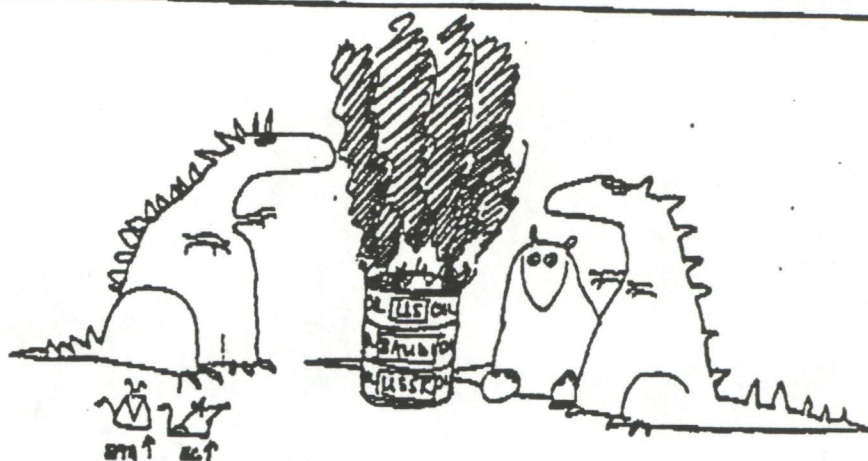
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SEE NO LIMITS, HEAR NO SCIENCE, TAKE NO ACTION

The 747 scientists who penned the Science Report of the Second World Climate Conference have left politicians with little choice. They have called for immediate action. They have concluded that carbon dioxide reductions are technically (and economically) feasible, and proposed a cut of 1-2% a year. They have, most significantly, ruled out uncertainty as a justification for 'societal delay'.

The SWCC Science Report is a highly significant document. Twice as many scientists contributed to it as to the IPCC, and it reaches firmer, stronger conclusions, after taking on board the IPCC itself. It introduces the important priority of taking action to limit greenhouse pollution at levels which will prevent serious damage to human society and to ecosystems. For making that link we must thank the scientists who contributed to the Stockholm Environment Institute Report.

SWCC scientists may think there is no longer justification for delay but 'societal' means societies and although the people may share the scientist's concern, in practice it is governments who must act. Yet before the ink was dry on the science report we witnessed the unedifying spectacle of negotiators ignoring the science and preparing to do nothing, by gutting the draft Ministerial Declaration to remove talk of targets and dates. The US even enlisted Canada's help to try and trick the world into double-counting CFCs already controlled under the Montreal Protocol.



AS THE SECOND WORLD CLIMATE CONFERENCE DRAWS TO A CLOSE,
DINOSAURS WARM THEIR PAYS AROUND THE SUNNY CAMPFIRE

coal interests. All the computer models in the world will not make a Swiss Franc of difference to governments who simply want to sell all the oil the world can be persuaded to buy. Simple greed is now coming out in the open.

When science provided what sounded like convenient uncertainties, Mr Bush and his camp followers demanded more science. Now science is just being ignored. Other excuses

will be cooked up on Mr Sununu's cafire. The US, USSR and Saudi Arabia: like the three monkeys: see no limit, hear no science, take no action.

The oil nations are industrial dinosaurs that the world cannot afford. Environment groups only half joking refer to them as the 'forces of darkness'. If they are allowed to succeed, it could be the midnight oil that they are burning.

OPINION AND ANALYSIS

CO₂ Stabilisation Would Serve the US National Interest

By Brooks B. Yeager, Legislative Director,
Audubon Society

The actions that would be required to stabilise US CO₂ emissions would have considerable economic benefits which could help overcome the nation's serious economic problems. It would improve American oil security, help reduce the deficit, and strengthen the economy in world trade.

Yet as I write these words, there is no sign the Administration realises that CO₂ reductions

are an opportunity not a problem. True, the US has real problems.

800,000 American soldiers are now encamped in the sands of Saudi Arabia, readying themselves for a conflict over the stability of a major portion of oil supply. The US economy is grinding to a halt, with analysts predicting that a severe recession may now be underway. The dollar seems to be in a chronic fall in currency markets, reflecting the declining position of the US in world trade. The Congress has only recently returned home for the November General Election, and although Democratic leaders and the President managed to patch together a precarious budget deal, nobody believes the compromise will actually cure the long-term Federal deficit.

Meanwhile, the White House is steadfastly refusing to commit to any date by which it will stabilize CO₂ emissions, and US negotiators at the Second World Climate Conference Ministerial talks are blocking international calls for CO₂ action. The White House derides stabilization, implying it will be difficult to implement and that the cost is impossible to estimate.



OPINION AND ANALYSIS

rejecting the only long-term economic strategy that could really contribute to the gradual improvement of the economy?

A multitude of national economic studies, some of them funded by the US Government, now demonstrate the achievability of stabilization of CO₂ emissions at 1990 levels, at no economic cost. Such a program, which would, for instance, involve encouraging industry to achieve new process efficiencies, require greater automobile fuel economy, and facilitate the introduction of energy efficient appliances in the marketplace, would actually result in consumer savings totalling billions of dollars.

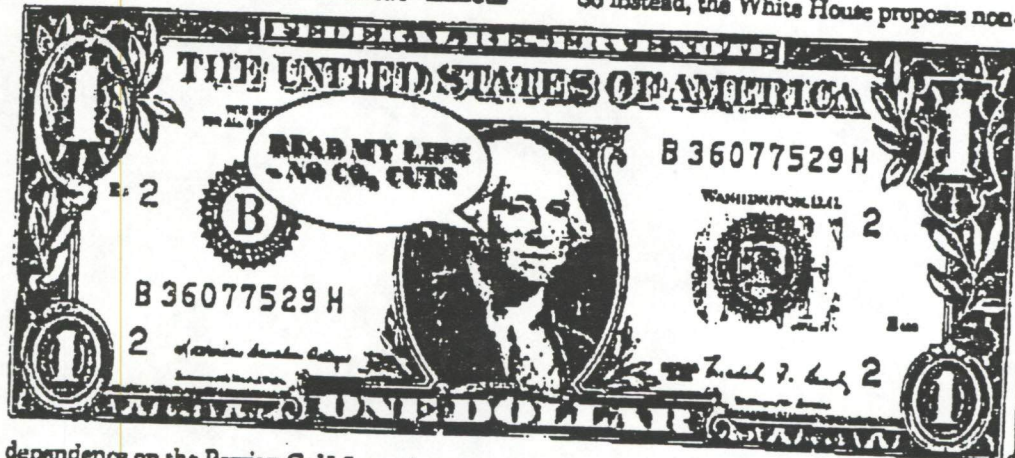
Because many of the savings would occur in the oil-greedy transportation sector, they would also contribute to the nation's long-term oil security, and lessen America's anxious

carbon tax, could encourage a more realistic market response for renewable sources of energy, perhaps even reviving the failing US solar industry, making another substantial dent in the deficit.

Non-Solutions

For the current resident of the White House, these multiple opportunities apparently look like threats. To support fuel economy, Mr. Bush would have to part ways with General Motors, Ford, and Chrysler. To impose a carbon tax, he would have to take on the coal industry, still licking its wounds from the Clean Air Act. To approve new regulatory standards, he would have to run against the traditional Republican abhorrence of government interference with the "free market."

So instead, the White House proposes non-



dependence on the Persian Gulf. Incentives for corporate investment in energy efficiency, such as conservation investment credits, could help the wasteful US industrial sector regain some of the efficiency ground lost in Japan and Germany, both of whom seem to have concluded that meeting the challenge of climate change can be economically beneficial. A phased-in

solutions. For oil security, drill the Arctic National Wildlife Refuge. For the deficit, raise taxes on beer, wine, and gasoline (but only five cents, mind you), and income taxes on the middle class. For our trade position... well, there simply aren't a lot of good ideas there. And for the climate? Do nothing, and hope the weather doesn't bite back.

NOT JUST A HORSE RACE

On Tuesday 6 November, up to 100,000 people are expected to gather, discuss and speculate on the outcome of an event of great uncertainty. Those gathering will be representing millions of their countrymen and women also interested in the outcome of the vent. The focus of speculation is the annual Melbourne Cup, a rich Australian horse race, run over 3,200 metres and with 81 starters.

Despite scientific assessment of power, trying capacity and endurance, etc., the outcome cannot be predicted with confidence. In spite of claims of divine guidance or extrasensory perception by some, all who speculate are, in truth gamblers attempting to reduce the odds using a mixture of crude calculation, perception and the advice of spivs and touts of the horse-racing fraternity. At the end of the day, the

of the global community will also be assembling. Their charter will be to speculate on the Race for Life. Without divine guidance, extrasensory expertise in the physical dimensions of the problem they will be relying on the spiv and touts of the scientific community.

As with any horse race, the Race for Life is altered by human intervention. The stewards in Geneva will be meeting to find a common objective and to develop strategies that might be adopted to meet that objective.

Although idealism would have us hope that the stewards would alter the course of events such that we would all be winners, this is an impossible dream. However, if as the Race for Life unfolds human intervention directed by the stewards, perchance, produces an increasing proportion of

THE VIEW FROM TUVALU

AN ARCHIPELAGO HAUNTED BY SEA LEVEL RISE, THE MALDIVES

By Abdullah Majeed, Maldives Director of Meteorology
The Republic of Maldives lies in the equatorial calm of the northern Indian Ocean. The Maldives is a archipelago of 1190 small coral islands, most of which barely rise more than two metres above mean sea level. The country has a population of little over 200,000. Two hundred islands are inhabited, with a total land area of 298 square kilometres strung over 90,000 square km of sea.

The Maldives had its first experience of global warming and sea level rise when almost one third of the country was hit by a tidal wave in April 1987. Malé, the capital island, which houses a quarter of the nation's population, suffered the worst of the ordeal. One fourth of the urban land was inundated by the salt water and 30% of the land reclaimed during the last seven years was completed washed away. The nation's sole international airport sustained extensive damage to its physical infrastructure and installations.

President Maumoon Abdul Gayoom of the Maldives brought the issue of the rising sea levels to the Commonwealth Summit in Vancouver 1987 and to the United Nations Conference on Environment and Development in 1987.

In November 1989, the Maldives hosted a conference on sea level rise among the small states of the world which are the most vulnerable to the phenomenon. The country is also mounting a campaign of public awareness among its citizens.

For a country like the Maldives, the IPCC projected sea level rise of one metre will be disastrous, if not fatal. We, like some other small island states would like to see all the countries of the world, especially the developed, stabilise the emissions of carbon dioxide and arrest the sea level rise. For a country, which emits very little carbon dioxide certainly does not wish to become a dinosaur of the 21st century nor be wiped out from the face of the earth due almost entirely to the actions of richer countries.

THE VIEW FROM

ECO GUIDE TO US POLICY

With the Ministerial Conference approaching, ECO introduces a short guide to US policy, in case delegates have trouble with lip reading.

The following is the official White House 'Talking Points' brief which was inadvertently released through NGOs at the Bergen Conference, where the US wanted to avoid even discussing carbon cuts. US policy has not changed much but ECO has added some new points the help policy development along.

TALKING POINTS APRIL 17, 1990

- The U.S. is taking environmentally responsible actions that make sense on their own merits that also help deal with global change issues.
- The U.S. Conference is working in complement to the IPCC.
- The world community is making great strides towards understanding the science of global change, but many fundamental questions remain unanswered.
- The economic impacts of potential global changes and possible responses are not well understood--more work is needed.
- Science, economics and policy formulation need to be integrated, so we can deal responsibly with global change.

DEBATES TO AVOID

- NOT BENEFICIAL TO DISCUSS WHETHER THERE IS OR IS NOT WARMING, OR HOW MUCH OR HOW LITTLE WARMING. IN THE EYES OF THE PUBLIC WE WILL LOSE THIS DEBATE. A BETTER APPROACH IS TO RAISE THE MANY UNCERTAINTIES THAT NEED TO BE BETTER UNDERSTOOD ON THIS ISSUE.
- DON'T GET INTO AN ADVOCACY POSITION OF THE MERITS OF VARIOUS POLICY PROPOSALS.
- DON'T LET REPORTERS POSITION THIS CONFERENCE AS AN ATTEMPT TO DELAY SERIOUS DECISIONS ON THIS ISSUE.
- THIS CONFERENCE IS ACCELERATING THE INTERNATIONAL DISCUSSION AND UNDERSTANDING OF THESE ISSUES. (DON'T USE SPECIFIC NUMBERS IE., DEGREES, DOLLARS, RATES ETC.)

The Talking Points' brief from Bergen

- Eco's extra points for the US: void the use of the words 'climate', 'change', 'disaster', 'US' and 'responsibility', especially in that order.
- Remember, your mother might like a warmer climate — cheaper vacations at home. Everyone has a mother, even 'Third World' delegates.
- Most of the countries that will draw

- The right to have a big car is contained in the US Constitution (somewhere).
- Only wimps like forests.
- Who needs glaciers anyway? (Remember that all the ice used to be water in any case, and that melting is a natural process)
- It took hundreds of years to prove that the earth wasn't flat; we've only been looking at this greenhouse thing for a decade or so (this will convince most scientists).
- Although rats and bugs may prosper in a warmer climate more than elephants and rhinos, this will cut zoo feeding bills.
- Don't use the phrase 'global warming', instead always refer to 'so-called measurements

- of a claimed variation in certain atmospheric phenomena usually taken on earth's surface but as yet still understood'.
- Don't talk to the press, fore environmentalists, dogs or other (especially parrots) who may be with hostile powers (avoid speaking close to telephones, house plants, light fittings anyone with facial hair (including delegation).
- Always remember, the Saudis are the guys, the Russians used to be bad but coming along, the Europeans can't be trusted and the rest of the world doesn't count

6-11-90 13:20

WHITEHOUSE BULLETIN

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THE WHITE HOUSE BULLETIN

BULLETIN BROADCASTING NETWORK, 209 CAMERON ST., ALEXANDRIA, VA 22314 (703) 684-9020
compromise on agriculture, emphasizing the United States is not willing to give up the probability of this is around 60-40."

- A U.S. delegation led by NOAA Administrator John Knauss will take the message of "let's get serious in February" to the Second World Climate Conference in Geneva.

according to a number of involved Administration officials. The international conference — which will begin with scientific discussions this Monday, with the ministerial session scheduled for November 6 and 7 — will address the issue commonly referred to as global warming. During the Geneva meeting, the U.S. expects a number of Western European governments along with Japan to push strenuously for targets and timetables for greenhouse gas reductions, "as they have been doing at every international meeting in the last year." Japan will unveil its target to stabilize carbon dioxide emissions on a per-capita basis, in the year 2000 and beyond at about the same level as 1990. These expected pronouncements from other nations were criticized this morning by an involved Administration official: "While the Japanese position looks like stabilization at 1990, it is not. It is an 18% increase over 1988, steadily increasing as the population grows. Australia wants to reduce emissions of greenhouse gases by 20% by the year 2005, but this declaration is really no more than a feasibility study and has no legal significance unless adopted by the territories. France has set a stabilization target which is actually above its current emission level. The U.S. is not in favor of continued political statements in the form of declarations. This is all a shell game with these countries and they are not making legal commitments. Even the UK, which says it is going to stabilize to 1990 levels by 2005, seals its lips when you ask how long after 2005 they will hold at that level." While these nations are expected to push strongly at the end of the meeting for a declaration which includes targets, the U.S. negotiating position will be that the opening round of negotiations on a framework convention (scheduled for early February in Washington, D.C.) is the right time and setting for such discussions. The President's Science Advisor Allan Bromley recently chaired a meeting at which the instructions for the Knauss delegation were provided. The U.S. will issue a statement to the conference restating Secretary Baker's "no regrets policy." The statement will highlight progress that the U.S. has already made on the issue — ORO reductions, the clean air act, the President's tree-planting initiative, energy-efficiency initiatives, as well as the leading role provided by the U.S. in providing climate-change research. According to one U.S. official, "these actions will bring the U.S. to 1987 levels of net greenhouse gas emissions by the year 2000, which is really better than the other nations are doing."

While reserving judgement, the White House is optimistic that the final language of the clean air bill will allow the President to sign it into law. According to an official, "We haven't seen the final language yet."

Bolin - continued from page 3

today. We can only account for where about 80% of the emissions go.

"More Quickly"

How can we be sure that the same fraction will stay in the atmosphere? If 50 or 60% stays in the atmosphere of a warmer world, that will mean concentrations rising at twice the present rate. I think it is most likely that accumulation will go more quickly in future than less quickly.

Another feedback question concerns the delays between emissions and temperature response. Delays are considerable but I think it is most likely that they will get shorter in future.

ECO You spoke this week of the northern carbon sink and its potential role in positive feedbacks if a change does occur there, when will we know?

Bolin Nobody knows how to monitor it. It would be interesting to know what has happened to the tundra-taiga border over the past 50-100 years for example. That is an interesting point.

The progress of science is steady but if a major surprise occurs (such as the ozone hole), then we suddenly get a lot of new information.

ECO Are you disappointed by the position of countries such as the US and the UK, which have not even talked much about the statements of IPCC 1 which said that 60% reduction in CO₂ emissions is required to reach stabilisation. Do they accept the IPCC estimates concerning sea level rise and temperature?

Bolin The UK has now joined the Europeans. The US is another matter. I agree fully — on the other hand, in no other country has anyone looked completely into what the difficulties for taking action in a free market. I am disappointed by the recent US decision concerning cars (a decision in Senate not to raise the fuel efficiency of cars).

There is a tendency for politicians to view the practical problems most seriously with respect to their own country. It is important to broaden views more. In the United States Bill Reilly (in the US Administration) is well aware of what all this is about. As is Alan Bromly. It is obvious that the President may be looking at the next elections. He may not be fully aware of all the implications of this.

Information is always sifted, and he does have a major responsibility to the Republicans, he can't change policy overnight. Perhaps it can change if he is re-elected.

ECO Has your faith in governments as a means of getting action on this issue increased or decreased as a result of your experiences in the IPCC process?

NGO PROFILE

The FORUM of Brazilian NGOs

Over 200 independent organizations have joined together to create the "FORUM of Brazilian non-governmental organizations for preparation for the United Nations Conference on Environment and Development (UNCED)" in 1992 in Rio de Janeiro.

In addition to bringing together these various groups within Brazil, the FORUM also serves as a point of contact for the UNCED secretariat, other UN bodies, and NGO networks outside Brazil. Its aim is to stimulate and coordinate NGO activities in Brazil before and during the conference, including the formulation of positions on the substantive issues under discussion. By presenting a united front, the FORUM can pressure the Brazilian government to adopt the UN recommendation for NGO participation in the official decision-making process and in the elaboration of national reports. It is important that the representatives of these 200 NGOs have a vehicle through the FORUM to ensure that environmental, social, cultural, and ethical

impact on governments. Governments have not changed as a result of the IPCC process but the IPCC has made it possible for them to do their job better than before. It is a job the scientific community could retain.

ECO As a Swede do you feel there is a parallel with the acid rain debate, after all that started over twenty years ago and is still not resolved?

Bolin Action on CO₂ is being taken. The Netherlands and Germany are ahead of Sweden in fact the nuclear issue complicates that one. Many new investments (in technology and so on) involve CO₂ reductions that are economically beneficial. But to have a crash programme would be a terrible waste of money. One would have to scrap things that would have worked for decades.

ECO What would your message be to people outside this Conference?

Bolin Resolving the question about what needs to be done implies judgements about the well-being of populations: we need to find optimal ways of proceeding nationally and internationally. It is a ten year job and we are about a year into it. The (Ministerial) Conference this week will confirm some of these things — such as through the European initiative. That is a signal to the negotiators.

Now we need a cost benefit analysis to bring home to people the costs and benefits of taking action or not: one which brings in wider costs too, that is externalities.

issues be heard in the UNCED process.

Programs to deal with climate change must address the issues of developing countries, that effective development models can be implemented there. The FORUM and its members suggest the following measures:

1) Promote the development of human capacity on issues related to climate change within developing countries in the government, the universities, and the public.

2) Provide funding to deal with climate change. First, for environmental and other studies of specific regional eco-systems. Secondly, to assist in implementing necessary changes.

3) Promote effective mechanisms of industrial technology transfer in order to reduce the environmental degradation process which is usually related with industrialization in developing countries.

4) Stimulate the study of urban development and land-use to create effective planning methods in developing countries.

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7861

NEW PUBLICATION

Global Warming and the Third World: A New Newsletter

So far, Third World countries have not been closely involved in either the scientific or political discussions relating to global warming. "Insufficient information" and "insufficient communication" have been identified, by the IPCC, as two factors seriously inhibiting the involvement of Third World nations.

If these countries are to play their part in international negotiations on climate change, and guarantee that the terms of any agreement are not to their disadvantage, an adequate flow of information is essential. A newsletter due to be published from early 1991 aims to address this problem.

The newsletter has the support of the Swedish International Development Agency (SIDA). It will be published on a regular basis from early 1991 by the International Institute for Environment and Development (London-UK), in partnership with the Climate Research Unit (University of East Anglia, Norwich-UK) and the Climate Action Network (London-UK). Additional partners from Third World research and other organisations are currently being sought.

EFTA Countries Fall Out Over Stabilisation

by ECO Reporter

European Free Trade Association seemed likely to split over a proposal to stabilise CO₂ emissions in 2000 on 1990 levels Sunday night, as officials met to prepare for the Ministerial section of the Second World Climate Conference. Today Monday November 5 EFTA ministers are due to agree a joint strategy.

Yesterday evening negotiations between the EFTA group, normally at the front of environmental reform, was deadlocked over an Austrian proposal to limit each country's emissions to present levels, from the end of the century. Sweden and Finland opposed the Austrian move, which was initially backed by Switzerland and Norway. The controversial EFTA draft also called for negotiation of protocols in parallel with those for a climate convention. Observers believe Sweden's embarrassing position is explained by its commitment to also phase out nuclear power.

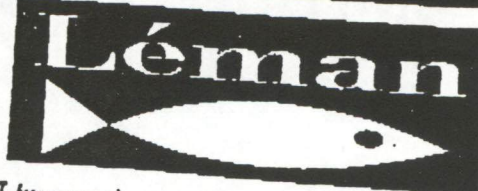
Environment groups of the EFTA countries attending the SWCC urged the EFTA group to promote 'as a first step, stabilisation at the 1988 level'. They also called for a 90% reduction by 2000 as a 'minimum intermediate target', pointing out that IPCC I concluded a 60% cut was needed to stabilise CO₂ levels at today's concentrations.

The groups also appealed to the EFTA bloc to 'strongly promote international agreements on forest conservation, and additional financial and technical aid to developing countries'. The environmentalists noted that 'great attention' would focus on the EFTA group as well as the EC, at the Conference, because they are widely expected to give a world lead on greenhouse gas reductions.

Sea Level - continued from front page
commented "I don't know who the President's scientists are: the IPCC and SWCC estimates are a firm scientific consensus based on the work over hundreds of scientists". A senior official from an OECD country commented that the President could 'only have been talking about one scientist', John Sununu who is his Chief of Staff and an engineer. Delegates pointed out that as the US has accepted the final report of the IPCC, the President has in fact accepted the sea level rise estimates which he now rejects, although he may not be aware of that. "This insults science and the whole Pacific region - it's no less than outrageous hypocrisy," said Bill of the Australian Conservation Federation.

Aid Offer

ush offered an aid package believed worth hundreds of millions of dollars to the leaders, from the Solomon Islands, Tuvalu, Fiji, the Cook Islands, Papua New Guinea, Tonga, Western Samoa, Marshall Islands, Kiribati and the Federated States of Micronesia, as an inducement



Léman was interested to hear Japanese delegates from MITI explain their country's new carbon dioxide target. Keichi Yokobori, who chaired the forceful Energy and Industry sub-group of IPCC confessed with pride in the wording of his country's recent declaration. "I received much praise for the per capita wording of our target which is very suitable for our needs", he told others. But Léman is told that the Japanese population is increasing. Léman understands that this will allow a 6% increase in CO₂ emissions, which seems to have been ignored by Mr Yokobori. So is this a real freeze or not? Léman feels the SWCC should be told.

Léman understands that unusual conditions of near hysteria broke out during the negotiations to agree the draft Ministerial Declaration in the early hours of Sunday morning. Tired delegates were reduced to gales of laughter as the United States, upset at being left off the list of countries which had done something to reduce CO₂ emissions (as they have not), repeatedly tried to get their country mentioned. Other nations which had not committed to stabilisation or cuts began to ask why, if the US were to be included, their paltry efforts might not qualify them for inclusion in the roll of honour. Mexico pointed out that something - not much admittedly - but something, had been done in Mexico City. The Indians remembered things underway in India which seemed just as relevant as the US not yet enacted Clean Air bill.

After some minutes, with the list growing ever longer, the US mention was consigned to square brackets. With the laughter of weary delegates echoing in Léman's ears, your correspondent retired to bed.

ECO's Who's Who: Guide to Environmental NGOs present at the Conference - Addendum

Friends of the Earth, USA - Liz Cook; Friends of the Earth, Luxembourg - Claude Turmes; Stichting Natuur en Milieu, Netherlands - Ralph Hallor; WWF, UK - Jane Bevan;

eco

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CLIMATE CONFERENCE NEWSLET

Statements gutted - cont from front page
Late Sunday night, the drafting group adopted a long section on forests which away from commitments made at the and Noordwijk Conferences to call for a P to protect forests, linked to a Climate C Convention. "This is a chopper's charter - nothing useful" said Adam Markham of "it will end up in the hands of the FAO - has shown itself unable to conserve the w tropical forests". Environment groups alarmed at the failure of German delegates to oppose such weak wording. All references to rights of indigenous peoples were also deleted.

USA, USSR and Saudi Arabia also overcame weak opposition from European countries which had proposed the call for a 90% cut at least stabilisation and weak wording which merely states that 'establish targets and feasible national programmes or strategies'. The draft also allows countries to 'analyse feasibility' of these options before the June 1992 Brazil Sustainable Development conference. "This waffle lets the US off the hook: it means 18 months of doing nothing. Needless to say, the US is delighted", said Stewart Boyle, of the Climate Action Network.

SWCC Scientists - continued from front page
left out of models for simplicity, and others will increase as warming takes hold, "it appears likely" that, "as climate warms, these feedbacks will lead to an overall increase... in greenhouse gas concentrations". In other words, "climate change is even now probably under-estimated."

On the key gas carbon dioxide it states that: "In order to stabilize atmospheric carbon dioxide concentrations... at about 50% above pre-industrial concentrations [today's levels being c. 25% above], a continuous world-wide reduction of net carbon dioxide emissions by 1 to 2% per year, starting now, would be required".

As to countries of the 'third world' whose future emissions will determine the success of any climate agreement, it notes: "it is clear that developing countries must... 'leapfrog' ahead directly from a status of under-development through to efficient, environmentally benign, technologies presently found only in the most advanced industrial economies..." and calls for: "a massive and sustained flow of scientific and technological expertise towards the development of the intellectual resources, technical and institutional capacity of the developing countries."

"Mechanisms for the transfer of technology" says the report, "...should take into account... the need for preferential and assured access, intellectual property rights, the environmental soundness of such technology and the financial implications... Additional financial resources will have to be channelled..."

APPENDIX III

Prime Minister Margaret Thatcher's speech delivered to the SWCC

PLEASE CHECK AGAINST DELIVERY

Maynard
11/6/90

NOT FOR PUBLICATION, BROADCAST OR USE ON CLUB TAPES
BEFORE 11.15 LOCAL TIME ON TUESDAY 6 NOVEMBER 1990

For:
DR. Bromley

or

Ken Gall

TEXT OF A SPEECH

MADE BY THE PRIME MINISTER

THE RT HON MARGARET THATCHER FRS MP

AT THE SECOND WORLD CLIMATE CONFERENCE

IN GENEVA

ON

TUESDAY 6 NOVEMBER 1990

PRIME MINISTER'S OFFICE
10 DOWNING STREET
WHITEHALL
LONDON
SW1A 2AA

[Introduction]

Mr. Chairman, Your Majesty, President Koller, Distinguished Colleagues, Your Excellencies, Ladies and Gentlemen,

May I begin by thanking Heads of Agencies and Organisations for sponsoring this Second World Climate Conference, and indeed all those connected with it. It is a most important event for all our countries and I wish you success in your endeavours.

Mr. Chairman, since the last World War, our world has faced many challenges, none more vital than that of defending our liberty and keeping the peace. Gradually and painstakingly we have built up the habit of international cooperation, above all through the United Nations. The extent of our success can be seen in the Gulf, where the nations of the world have shown unprecedented unity in condemning Iraq's invasion and taking the measures necessary to reverse it.

But the threat to our world comes not only from tyrants and their tanks. It can be more insidious though less visible. The danger of global warming is as yet unseen, but real enough for us to make changes and sacrifices, so that we do not live at the expense of future generations.

Our ability to come together to stop or limit damage to the world's environment will be perhaps the greatest test of how far we can act as a world community. No-one should under-estimate the imagination that will be required, nor the scientific effort, nor the unprecedented co-operation. We shall have to show statesmanship of a rare order. It's because we know that, we are here today.

[Man and Nature: out of balance]

For two centuries, since the Age of Enlightenment, we assumed that whatever the advance of science, whatever the economic development, whatever the increase in human numbers, the world would go on much the same. It was progress. And that was what we wanted.

Now we know that this is no longer true.

We have become more and more aware of the growing imbalance between our species and other species, between population and resources, between humankind and the natural order of which we are part.

In recent years, we have been playing with the conditions of the life we know on the surface of our planet. We have cared too little for our seas, our forests and our land. We have treated the air and the oceans like a dustbin. We have come to realise that man's activities and numbers threaten to upset the biological balance which we have taken for granted and on which human life depends.

We must remember our duty to Nature before it is too late. That duty is constant. It is never completed. It lives on as we breathe. It endures as we eat and sleep, work and rest, as we are born and as we pass away. The duty to Nature will remain long after our own endeavours have brought peace to the Middle East. It will weigh on our shoulders for as long as we wish to dwell on a living and thriving planet, and hand it on to our children and theirs.

- 2 -

[The importance of research]

I want to pay tribute to the important work which the United Nations has done to advance our understanding of climate change, and in particular the risks of global warming. Dr. Tolba and Professor Obasi deserve our particular thanks for their far-sighted initiative in establishing the Intergovernmental Panel on Climate Change.

The IPCC report is a remarkable achievement. It is almost as difficult to get a large number of distinguished scientists to agree, as it is to get agreement from a group of politicians. As a scientist who became a politician, I am perhaps particularly qualified to make that observation!

Of course, much more research is needed. We do not yet know all the answers. Some major uncertainties and doubts remain. No-one can yet say with certainly that it is human activities which have caused the apparent increase in global average temperatures. The IPCC report is very careful on this point. For instance, the total amount of carbon dioxide reaching the atmosphere each year from natural sources is some 600 billion tonnes, while the figure resulting from human activities is only 26 billion tonnes. In relative terms that is not very significant. Equally we know that the increases of carbon dioxide in the atmosphere date from the start of the industrial revolution. And we know that those concentrations will continue to rise if we fail to act.

Nor do we know with any precision the extent of the likely warming in the next century, nor what the regional effects will be. We cannot be sure of the role of clouds.

There is a continuing mystery about how atmospheric carbon, including the small extra contribution from human sources, is being absorbed: is most of it going into the ocean, as used to be thought? Or is it being increasingly absorbed by trees or plants, or soils, especially in the northern hemisphere? These are questions that need answers, sooner rather than later.

Global climate change within limits need not by itself pose serious problems - our globe has after all seen a great deal of climate change over the centuries. It is notable that the blue-green algae which dominated the Precambrian period at the dawn of life are still major components of the marine phytoplankton today. Despite the climate changes of many millions of years, these microbes have persisted on earth virtually unchanged, pumping out life-giving oxygen into the atmosphere and mopping up carbon dioxide.

The real dangers arise because climate change is combined with other problems of our age: for instance the population explosion;

- the deterioration of soil fertility;
- increasing pollution of the sea;
- intensive use of fossil fuel;
- and destruction of the world's forests, particularly those in the tropics.

- 3 -

Britain will continue to play a leading role in trying to answer the remaining questions, and to advance our state of knowledge of climate change. This year, we have established in Britain the Hadley Centre for Climate Prediction and Research for this purpose. We need to improve in particular our understanding of the effect of the oceans on our weather, improve too our capability to model climate change. I have seen for myself the outstanding work being done on both these subjects at the National Center for Atmospheric Research in Boulder, Colorado.

We must also make sure that research is carefully targeted. Too many people can do the same thing, and at the same time vital problems can be neglected. The task of global observation is immense. It will require a coordinated effort more ambitious than any attempted before, as the meeting of scientists and experts last week recognised.

[The need for precautionary action]

But the need for more research should not be an excuse for delaying much needed action. There is already a clear case for precautionary action at an international level. The IPCC tells us that we cannot repair the effects of past behaviour on our atmosphere as quickly and as easily as we might cleanse a stream. It will take, for example, until the second half of the next century, until the old age of my grandson, to repair the damage to the ozone layer above the Antarctic. And some of the gases we are adding to the global heat trap will endure in the Earth's atmosphere for just as long.

The IPCC tells us that, on present trends, the earth will warm up faster than at any time since the last ice age. Weather patterns could change so that what is now wet would become dry, and what is now dry would become wet. Rising seas could threaten the livelihood of that substantial part of the world's population which lives on or near coasts. The character and behaviour of plants would change, some for the better, some for worse. Some species of animals and plants would migrate to different zones or disappear for ever. Forests would die or move. And deserts would advance as green fields retreated.

Many of the precautionary actions that we need to take would be sensible in any event. It is sensible to improve energy efficiency and use energy prudently; sensible to develop alternative and sustainable sources of supply; sensible to replant the forests which we consume; sensible to re-examine industrial processes; sensible to tackle the problem of waste. I understand that the latest vogue is to call them 'no regrets' policies. Certainly we should have none in putting them into effect.

And our uncertainties about climate change are not all in one direction. The IPCC report is very honest about the margins of error. Climate change may be less than predicted. But equally it may occur more quickly than the present computer models suggest. Should this happen it would be doubly disastrous were we to shirk the challenge now. I see the adoption of these policies as a sort of

- 4 -

[The need for environmental diplomacy]

We are all aware of the immense challenge. The enormity of the task is not a matter for pessimism. The problems which science has created science can solve, provided we heed its lessons. Moreover, we have already established a structure of international co-operation on the environment to deal with ozone depletion. For the first time ever, rich and poor nations alike set out together to save our planet from a serious danger. This painstaking work culminated in the historic agreement reached in London this year. That agreement is a real beacon of hope for the future.

The main focus in London was on protecting the ozone layer. But the agreement will have other consequences. We should not forget that CFCs are 10,000 times more powerful, molecule for molecule, than carbon dioxide as agents of global warming. But of the other greenhouse gases, carbon dioxide is by far the most extensive and contributes around half the manmade greenhouse warming. All our countries produce it. The latest figures which I have seen show that 26 per cent comes from North America, 22 per cent from the rest of the OECD, 26 per cent from the Soviet Union and Eastern Europe and 26 per cent from the less developed countries.

These figures underline why a joint international effort to curb greenhouse gases in general and carbon dioxide in particular is so important. There is little point in action to reduce the amounts being put into the atmosphere in one part of the world, if they are promptly increased in another. Within this framework the United Kingdom is prepared, as part of an international effort including other leading countries, to set itself the demanding target of bringing carbon dioxide emissions back to this year's level by the year 2005. That will mean reversing a rising trend before that date.

The European Community has also reached a very good agreement to stabilise emissions. I hope that Europe's example will help the task of securing world-wide agreement.

Targets on their own are not enough. They have to be achievable. Promises are easy. Action is more difficult. For our part, we have worked out a strategy which sets us on the road to achieving the target. We propose ambitious programmes both to promote energy efficiency and to encourage the use of cleaner fuels.

We now require, by law, that a substantial proportion of our electricity comes from sources which emit little or no carbon dioxide. That includes a continuing important contribution from nuclear energy.

Such measures as these - which increasing numbers of countries are adopting - should be seen as part of the premium on that insurance policy which I mentioned. They buy us protection against the hazards of the future: but they also pay dividends even though the gloomier predictions about global warming are not fulfilled - dividends such as less air pollution, lowered acid rain, reduced energy costs.

- 5 -

Mr. Chairman, people may disagree about the effects of increased man-made carbon dioxide in the atmosphere. But everyone agrees that we should keep in healthy condition the forests and seas which absorb and utilise a large part of it here on earth. We would be wise to do that for other reasons too: for the beauty of the forests and the infinite variety of species which inhabit them, and to preserve the food chain and balance of nature in the sea.

That's why we want to contribute to conserving the world's forests, and to planting new ones. Trees help to reduce global warming. We intend to plant more at home: we have just announced our plans to replant one of the ancient forests of England - destroyed in an earlier phase of our history.

We shall offer our expertise and aid funds to help plant and manage forests elsewhere in the world, particularly in tropical countries. A year ago I told the United Nations General Assembly that the United Kingdom would aim to increase its funds for tropical forestry by £100m. We now have 150 projects underway in more than 30 countries.

Our aim is to give the people in those countries a better standard of living by conserving and using the forests than by cutting them down.

[The need for a Global Convention]

But our immediate task this week is to carry as many countries as possible with us, so that we can negotiate a successful framework convention on climate change in 1992. We must also begin work on the binding commitments that will be necessary to make the convention work.

To accomplish these tasks, we must not waste time and energy disputing the IPCC's report or debating the right machinery for making progress. The International Panel's work should be taken as our sign post: and the United Nations Environment Programme and the World Meteorological Organisation as the principal vehicles for reaching our destination.

We will not succeed if we are too inflexible. We will not succeed if we indulge in selfrighteous point-scoring for the benefit of audiences and voters at home. We have to work sympathetically together. We have to recognise the importance of economic growth of a kind that benefits future as well as present generations everywhere. We need it not only to raise living standards but to generate the wealth required to pay for protection of the environment.

It would be absurd to adopt policies which would bankrupt the industrial nations, or doom the poorer countries to increasing poverty. We have to recognise the widely different circumstances facing individual countries, with the better-off assisting the poorer ones as we agreed to do under the Montreal Protocol.

The differences can't be drafted away in that famous phrase so beloved of diplomats "a form of words". They need to be resolved by tolerant and sympathetic understanding of our

- 6 -

various positions. Some of us use energy more efficiently than others. Some of us are less dependent on fossil fuels. And we each have our own economic characteristics, resources, plans and hopes for the future. These are the realities that we must face if we are to move forward towards a successful conclusion to our negotiations in 1992.

Just as philosophies, religions and ideals know no boundaries, so the protection of our planet itself involves rich and poor, North and South, East and West. All of us have to play our part if we are to succeed. And succeed we must for the sake of this and future generations.

One of our great poets, George Herbert, in his poem on "Man" wrote this:

"Man is all symmetry,
Full of proportions, one limb to another, And all to all the
world besides;
Each part may call the farthest, brother; For head with foot
hath private amity,
And both with moons and tides."

We are, in symmetry with nature. To keep that precious balance, we need to work together for our environment. The United Kingdom will work with all of you in this cause -to save our common inheritance for generations yet to come.

APPENDIX II

Specific Policy Analyses Identified by OMB

October 22, 1990

POLICY ANALYSES RELATING TO
FRAMEWORK CONVENTION NEGOTIATIONS

GENERAL OBLIGATIONS

1. What are the advantages of a comprehensive approach for purposes other than implementing and monitoring emissions control commitments? Should the general obligations include the obligation to develop a strategy of "no regrets" and other "appropriate" measures using a comprehensive approach?

- The U. S. advocacy of a comprehensive approach may be taken by many to relate only to commitments to emission reduction targets and timetables.
- However, countries may wish to negotiate commitments other than control targets and timetables - such as to carry on various joint research programs. Shouldn't any such commitments be included in a comprehensive approach?
- Finally, individual country consideration of "no regrets" actions or voluntary actions ought to be done using a comprehensive approach.
- It may be advantageous to the U. S. to have a paper available which explicitly describes the uses and value of the comprehensive approach as a general way to consider and address climate change issues, as distinguished from a way to rationalize and minimize costs of emission reduction target and timetable commitments.

2. What "no regrets" actions has the U. S. already taken? What are the costs and estimated U. S. emissions reductions of these actions?

SPECIFICITY OF RESPONSE MEASURES: TARGETS AND TIMETABLES

3. What do we know and what are the uncertainties about the costs and effectiveness of partial and unilateral actions that have been proposed such as a 20% CO₂ reduction below 1990 levels achieved by the year 2005 and maintained indefinitely by the industrial countries alone?

- To what degree would economic activities in the industrial countries shift to modes emitting other GHGs?
- To what extent would high emission activities be transferred to developing countries and continue to emit at similar or

higher rates? In general, what are likely to be the emissions implications of unilateral actions at various scales?

- What are the trade implications of unilateral actions at various scales?
- To what extent would the capital costs of such targets impact on the private and governmental capital available for environmentally sound economic growth in the developing countries.
- How quickly would the world-wide reduction in emissions from unilateral actions, after taking into account the likely shifts described above, be eliminated by emissions growth outside the industrial nations?

4. What are the current knowledge and uncertainties about the costs and other implications to the U. S. of actions to reduce GHG emissions below the levels achievable by the "no regrets" actions already committed to?

- How do U. S. costs of control vary with the magnitude of reduction, with the timing of reduction, and with the gases included?
- What do we know about the costs, effectiveness, and other implications of possible "no regrets" actions that we have not yet committed to implement, such as the potential "no regrets" actions under the National Energy Strategy?
- Can the U. S. show, in the negotiations, that it has done its homework in analyzing the issue of going beyond "no regrets": that the costs could be very high, that costs are strongly related to how fast emissions are reduced, that there are many remaining areas of uncertainty, and that premature and unilateral actions could well be counter-productive?
- The U. S. should also have information available to support a comprehensive approach by showing the degree to which the selection of the most cost effective GHG emissions reductions depends strongly on an appropriate greenhouse gas index as well as on the costs of eliminating or sequestering a unit of a specific greenhouse gas.

5. What are the estimates of emissions and costs of reduction being made by other participants in the international discussion?

- What information from the International Country Case Studies underway in the EIS of the IPCC would be useful to the U.S.?
- What do we know about global models being developed by the OECD, Japan, and others?

- Can we use what we know about these efforts to help us understand country positions and strategies and to support the positions we take?

6. How are the costs and benefits of mitigation measures likely to be related to the rapidity of implementation?

- Mitigation is likely to involve significant replacement of existing long-lived capital with new technology which has costs which decline as the time of initial investment is delayed. Investment in an early version of a technology means that the lower costs of the later version can not be obtained.
- To the extent that mitigation forces retirement of capital before its economic replacement time, costs are increased.
- On the other hand, delay in implementing mitigation increases the costs of any climate change that does occur or the costs of adapting to it.
- Can the U. S. describe these issues and make a credible case that they can not be ignored and thereby help support its positions in the negotiations?

7. What is the appropriate trade-off between addressing climate change by preventing it and by adapting to it?

- Analysis of the impacts of climate change has generally ignored adaptations to climate change that will occur for market driven reasons as well as governmentally sponsored adaptation.
- Given the costs of climate change, the costs of adaptation, and the costs of mitigation, it is almost certain that the least cost response will include accepting some change and responding with both adaptation and mitigation. The theological approach which many have taken to the climate change issue ignores this point.
- Is there advantage to the U. S. in trying to give this point more visibility in the discussion?
- What do we know and need to know about the kinds of market-driven adaptation that are likely to occur with various degrees of climate change? What are the costs of such various degrees of climate change, including the market-driven adaptations that would accompany them? What kinds of governmental actions or policies could be adopted to achieve additional adaptation at minimum cost?

8. What do we know and where are the uncertainties about the differing claims that (a) substantial emissions reductions can be obtained, not only without major costs, but with significant economic savings through energy conservation, or, alternatively, (b) that significant emissions reductions beyond the "no regrets" actions would be very costly because they would require major capital investments that would not otherwise be economic?

- Much of the pressure for large reductions may be based on the assumption that the energy conservation enthusiasts' more optimistic savings estimates are valid.
- Does the U. S. have sufficient information to reach conclusions as to the validity of each set of claims and as to the degree of uncertainty that remains?
- Can that information be used to support U. S. positions?

9. What do we need to know about the implications of various elements of target-and-timetable emissions control agreements?

- What are the implications of different approaches to setting baselines for such agreements: the highest historic value prior to 1990, a year in the next decade, a specified year or a year selected by the party from a specified range? What are the implications of different baseline years for different gases or groups of gases?
- What are the implications of different approaches to the timing of targets? Short term targets vs. those set for 10 years later or 25 years later? Targets set close together in time or at longer intervals? Initial targets set in the short term with less stringent levels or set at a later time with more stringent levels?
- What are the implications of various target formats? Successive phased targets set in advance at one time or a single target with later increments to be considered later? Considering changes in targets at short intervals or at longer intervals?

10. What are the implications of different types of targets for a control agreement?

- What are the implications of targets based on some absolute historic level? On emissions per capita? Emissions per unit of gross domestic product? Emissions per unit of energy use?
- What are the implications of targets based on some combination of bases, such as reducing from some absolute level until some per capita (or other per unit) level is reached?

- What are the implications of adjusting targets for local endowments of resources that produce emissions or are alternatives to emission-producing resources? For local characteristics or relative costs of emission-producing and alternative resources?

11. What considerations would have to be dealt with in implementing emissions control agreements?

- How would agreements be monitored? How would reported data be verified? Who would determine initial baseline conditions, if obligations are based on such conditions?
- What would be appropriate methods of sanction? For non-compliance by non-parties? For non-compliance by parties? What degree and length of time of non-compliance would trigger sanctions? Under what conditions would sanctions be raised? Could trade sanctions be designed as a means of enforcement?
- How would regional economic organizations be treated?

SPECIFICITY OF RESPONSE MEASURES: SPECIFIC NO REGRETS MEASURES

12. What "no regrets" measures should be considered by countries in developing a strategy of appropriate measures. Should the Convention identify such measures for consideration? Shouldn't the convention specify that, in order to encourage "no regrets" and other "appropriate" voluntary measures, countries should receive credit for such measures in the negotiation and implementation of any subsequent agreements to implement the Convention?

- Should the U. S. develop a list which identifies measures which are likely to be justified by non-climate benefits to be included in the convention as potential "no regrets" measures which should be considered by each country in the development of their own initial strategy?

SPECIFICITY OF RESPONSE MEASURES: REQUIREMENT THAT ANY INSTRUMENT BE COMPREHENSIVE

13. What kind of greenhouse climate change metric or greenhouse warming potential should be used? How sensitive is a greenhouse gas index likely to be to those factors that are highly uncertain?

- Is a set of greenhouse warming potential (GWP) indices based on the cumulative instantaneous radiative forcing of a given GHG release sufficient to compare different gases or should such indices reflect the relative discounted amounts of all future forcings from such releases? Are comparisons of

forcings sufficient or should the relative present amounts of future climate changes be compared? Or the relative present values of future damages? Should gases that have indirect impacts on radiative forcing, etc. be included? If so, how should non-climate impacts of such gases, such as the polluting effects of SO₂, be treated? If discounting is not used, what time frame or time frames should be used? Should the indices include non-climate effects, such as CO₂ fertilization?

- An index based on cumulative radiative forcing neglects important economic aspects - the time path of realized climate changes resulting from radiative forcing, the time path of damages resulting from realized climate changes, the time path of benefits such as CO₂ fertilization, and the discounting of damages and benefits.
- Whether or not an index based on radiative forcing alone would be substantially different from one that included these economic aspects is unknown, nor is it known how differing assumptions about those aspects that are uncertain might change the relative index.
- The U. S. needs to understand what differences there might be in indices with different bases in order to determine its own position about alternatives indices and to be able to counter other country objections that a reasonably valid set of indices can't be supported by the present state of knowledge.

14. What are the likely arguments that may be raised against a fully comprehensive approach to emissions controls?

- What are the likely arguments for and against controlling GHGs in groups or as individual chemicals? Can we make a strong case to support our position?

15. What are the likely arguments for and against international emissions trading?

- What are the arguments relating to trading among countries with greatly different economic levels?
- How are schemes such as coal-by-wire to be dealt with?
- How are trading agreements to be monitored? How would sanctions be imposed upon countries which have entered into trading agreements?

SPECIFICITY OF RESPONSE MEASURES: DIFFERENTIATED TREATMENT

16. What are the characteristics of the major negotiating countries that are likely to affect their negotiating positions and rationales?

- What is the likely sensitivity of their economic structure to changes in climate? Are they likely to be clear losers, clear winners, or relatively unaffected? What is their capability for market-driven adaptation to changes, and at what costs?
- What are the economic and other constraints to the kinds of actions which they might take to limit or to adapt to climate change? Are certain kinds of action advantageous for them?
- What are the likely trade effects and effects on the relocation of economic activities that would be produced by actions to limit climate change, including actions that might be taken unilaterally elsewhere?
- How do these characteristics and sensitivities compare with those of the U. S.?

17. What proposals are other countries making in international fora, in their own domestic political and legislative processes, and what are the views of their governments and publics on the issues of climate change?

- Can the U. S. establish a systematic process for keeping an up-to-date summary of these matters with enough accuracy and timeliness to be useful to our decision-makers and negotiators?

18. What can we say about the reasons for differences in GHG emissions per unit of gross domestic product (GDP)?

- What explains the relatively high emissions per unit of GDP in the U.S. compared to some other countries with similar per capita incomes? Can we justify them on the basis that they reflect efficient decisions based on underlying real conditions in our economy or are they the result of market imperfections, institutional distortions, etc.?
- What do these considerations imply about the costs and difficulty of reducing GHG emissions in the U. S.?

19. What are the implications of various kinds of differential obligations and responsibilities for different countries or groups of countries to take into account differences in abilities to perform such obligations?

- What are the implications of differences in the times at which obligations become binding? Of differences such as exempting a country from a control obligation until per

capita emissions reach some threshold level? Other kinds of differences?

- Would differences in obligations generate differences in incentives and in behavior that would not be desirable either from the point of view of achieving the objectives of the obligation agreements or from the point of view of taking differences in ability into account?
- How could differentials in obligations be kept from being a trade advantage or an offset to the results sought by the agreements to accept obligations?

FINANCIAL ASSISTANCE

20. What economic and other arguments can the U. S. marshal for an assistance regime which integrates the need for economic growth and for sustainable, environmentally sound approaches?

- Separating the priorities, planning, and implementation of environmental projects from that of development projects is likely to produce different incentives and different results than if there is a single funding source to projects that integrate developmental and environmental considerations and objectives.
- If developing countries are only obligated to do "good" environmental things to the extent that industrial countries fund them through an environmental fund, is development likely to be sound and sustainable?
- If development projects can leave environmental considerations for separate, and perhaps later, funding, will they adequately take such considerations into account? Will an environmental fund be used too often to correct, at higher cost, the environmental defects of development projects?
- Should not the U. S. have available materials that describe in detail the counter-productive aspects of an assistance regime which separates environmental and development goals, funding, and implementation?

21. What are various countries seeking from a financial assistance regime? What kinds of arrangements or what kind of strategy are likely to produce a result that would be acceptable to the U. S.?

DEVELOPMENT AND TRANSFER OF TECHNOLOGY

22. What is the likelihood that R&D in alternatives to fossil fuels would pay off in terms of economically efficient replacement of fossil fuels in the near term?

- Claims for solar, wind, and other non-fossil alternatives are often made that their costs have declined in relation to fossil fuels and will cross the cost-time curves of the latter in just a few years.
- The economics of emissions reductions depends on whether cost reductions in non-fossil alternatives replace fossil fuels or simply drive down fossil fuel prices.
- Would it be advantageous to the U. S. to make these questions more visible?

23. What are the objectives of various countries with respect to transfer of technology? What kinds of arrangements or strategies would produce a result that is acceptable to the U. S.?

INSTITUTIONS

RESEARCH, SYSTEMATIC OBSERVATIONS AND ANALYSIS

24. What are the major scientific and socioeconomic uncertainties that might be resolved in a near-term time frame and which could significantly increase the effectiveness or reduce the costs of addressing climate change?

- What are the key uncertainties that affect decision-making? How are they related to other uncertainties? Where are investments in reducing uncertainty likely to have the most payoff in terms of improving the quality of decision-making, both in the short term and over longer periods? To what degree is international cooperation in monitoring and research needed?
- Can the U. S. provide a menu of areas of uncertainty which can be quickly reduced and which should be reduced before major commitments are made?
- For example, can the U. S. make a credible argument that we need to know how much all countries together are likely to achieve by "no regrets" actions before we can sensibly analyze the costs and benefits of additional actions, and that that can be done fairly quickly?
- In other words is there likely to be very high pay-off in terms of more effective response to global change from

reducing the existing uncertainties about, for example, energy saving measures and other "no regrets" actions in the different socioeconomic circumstances of developing and industrial countries?

INFORMATION EXCHANGE AND REPORTING

SETTLEMENT OF DISPUTES

ANNEXES AND PROTOCOLS

OTHER

25. What are the defects of policies addressing only one or selected sectors, such as a transport-only policy?

- For example, how might emissions shift under a high CAFE statute due to changes in the economic life of existing vehicles, increases in miles driven, shifts to electric cars fueled by coal generated central power plants or to cars fueled by methanol or other alternative fuels?

26. What are the defects of command-and-control strategies which mandate specified technologies.

- To what extent does U. S. experience show that such approaches discourage the development and use of efficient technologies, leading to increased emissions in the longer run?

27. To what degree could ecological impacts be managed by adaptive actions?

- What are the possible management measures that might be taken? What would their costs and other implications be?
- What would be the likely ecological changes that would remain after management measures?

29. What, if any, role is there for international agreements on adaptation?

- Would agreements trade adaptation assistance for commitments to do such things as create or improve resource management and planning capabilities? Trade adaptation assistance for unused emission rights?

- Would agreements on adaptation be needed to avoid added regional disagreements, such as those over water use rights?

Outline of Preparations for Negotiations
on a Framework Convention on Climate Change

This outline is organized along the lines of the IPCC/RSWG Legal Measures Paper on "Possible Elements for Inclusion in a Framework Convention on Climate Change."

General

This paper assumes that a comprehensive approach leaves open what the ultimate response strategy or strategies will be (for example, controls on net emissions of greenhouse gases, technology R&D).

Preamble

-- Preambles, which explain the purpose of the agreement, generally contain hortatory language and declarative findings (such as "recognizing the need for further research and systematic monitoring to develop the scientific knowledge about the global climate").

-- Preambular language is customarily negotiated after the body of an agreement to ensure that it accurately reflects the agreement's content and to include items on which the parties were not able to reach substantive agreement in the text itself; given the range of extant proposals, it will be to our advantage to continue this practice. We will be able to draw from our positions on specific issues to develop appropriate preambular language when needed.

Definitions

-- Which terms need definition, and how any such terms should be defined, customarily follows elaboration of the body of the agreement, as they depend upon the purpose of the agreement and the language used by the negotiating parties.

-- Nonetheless, to enhance our ability to advocate a comprehensive approach, it might be useful to have definitions developed (in conceptual if not legal language) for certain terms connected with such an approach, e.g., greenhouse gases, net emissions, global warming potential index, sources, sinks.

Proposed Action: The Task Force on Climate Approaches should develop appropriate conceptual definitions for terms associated with a comprehensive approach.

General Obligations

-- Following the format of other framework conventions (for example, the Vienna Convention), general obligations are set out in a separate article and may or may not be followed up by more specific commitments later in the convention.

-- The following general obligations were largely accepted by IPCC/RSWG participants, including the United States:

- taking "appropriate" (but unspecified) response measures to limit, reduce, adapt to, and, as far as possible, prevent climate change;
- taking "no regrets" measures;
- cooperating in research, monitoring, and information exchange;
- encouraging the development and transfer of relevant technologies, as well as providing technical and financial assistance;
- encouraging public education and awareness;
- flexibility to fulfill the requirements of the agreement using bilateral, regional or multilateral agreements of arrangements;
- cooperating with competent international organizations;
- strengthening or modifying, if necessary, existing legal and institutional instruments and arrangements.

Although there may be differences concerning how to frame the general obligations, the main issues will relate to whether certain general obligations should be specifically elaborated elsewhere in the convention itself. The most controversial are likely to be: specificity of response measures; financial assistance; and technology transfer. Each of these is addressed below.

Specific Issues

1. Specificity of Response Measures

Issues:

- Whether, apart from general obligations to take "appropriate" measures and "no regrets" measures, the convention should contain specific targets with respect to either levels of emissions or atmospheric concentrations?

-3-

U.S. Position to Date: The USG view has consistently been that it would be premature to include targets in the framework convention. Further, we have argued that response strategies should be chosen based on assessments regarding their effectiveness in averting potential impacts of climate change, as well as their economic consequences. We have also argued for a comprehensive approach that considers all greenhouse gases, their sources and sinks, together.

Proposed Actions: 1) DOE, EPA, OMB, and CEA should coordinate the following efforts: a) making preliminary assessments of best available information on the effectiveness and economic consequences of various response strategies; b) developing detailed analyses of the feasibility of meeting certain proposed targets; c) calculating the impact on radiative forcing of emissions targets implemented by only a subset of countries (e.g., OECD members); d) assessing the feasibility of response strategies contained in the Bergen and Noordwijk declarations. 2) To enhance our negotiating position in support of a comprehensive approach, the Task Force on Climate Approaches should develop an explanation setting out, in some detail, how such an approach would work and explaining its advantages over a piecemeal approach.

-- Should any such targets include stabilization by industrialized countries, as a first step, and later reduction of CO2 emissions and emissions of other greenhouse gases?

U.S. Position to Date: Again, the USG view has been that the convention should not contain targets for either stabilization or reduction of greenhouse gas emissions.

Proposed Action: At a minimum for internal purposes, EPA, CEA, OMB, and DOE should, using best available information, evaluate the feasibility and economic consequences of emission targets for the U.S. and other key countries.

-- Should the convention spell out specific "no regrets" measures that the parties should take?

U.S. Position to Date: The USG has advocated taking "no regrets" measures in the face of scientific

10/22/90

-4-

uncertainty. However, we have not taken a position on whether specific "no regrets" measures should be required by the framework convention.

Proposed Action: State should coordinate with relevant agencies to determine what could be identified under a "no regrets" heading.

-- Should the framework convention commit the parties to formulate appropriate specific measures (such as in a protocol)?

U.S. Position to Date: The Vienna Convention provides for, but does not require, the formulation of further specific measures. The USG view has been that the convention should not require the development of a subsequent instrument (i.e., a protocol) but should provide that any instrument that is developed must address greenhouse gases, their sources and sinks, comprehensively.

Proposed Action: State should work with the Task Force on Climate Approaches and other agencies, as appropriate, to develop options regarding to what extent (i.e., in how much detail) the framework convention should "tilt" any future protocol in the direction of a comprehensive approach. In addition, it should be considered to what extent (and from what baseline) a "credit" should be given in any protocol for current and past actions relevant to climate.

-- Should the convention provide that implementation of specific obligations may take place in different timeframes for different categories of countries? To what extent should the convention provide for differentiated treatment with respect to both general and specific obligations?

U.S. Position to Date: The USG view has been that all countries have a responsibility to protect the global environment. At the same time, we have recognized that certain differentiated treatment may be appropriate to reflect the more limited technical and financial situation of developing countries. The Vienna Convention requires the parties to undertake the general obligations "in accordance with the means at their disposal and their capabilities". The Montreal Protocol contains a ten-year grace period for certain developing countries (although such differentiated treatment was not required by the Vienna Convention). Both the Noordwijk and Bergen Declarations contain language recognizing the possible need of some countries to increase greenhouse gas emissions for development purposes.

Proposed Action: State should prepare an options paper for interagency review on how to handle the possibility of differentiated treatment in the framework convention.

2. Financial Assistance

Issues:

-- Whether, apart from a possible general obligation to promote financial assistance to developing countries to address climate change, there should be a specific commitment to provide new and additional financial resources?

U.S. Position to Date: We have opposed committing to new and additional funding which increases the overall budget. Although we did agree to "additional" funding in the Montreal Protocol amendments, those amendments explicitly provide that such funding and funding mechanism is without prejudice to other environmental issues. We have given the environment, and in particular climate change (Congressionally-mandated), a higher priority in our assistance programming, both bilaterally and multilaterally. The scope of resource needs and the costs and benefits of meeting possible obligations must be assessed and the adequacy of existing resources determined before increases could be considered.

Proposed Action: State should coordinate an effort with appropriate agencies to catalogue existing U.S. financial assistance related to climate change.

-- Whether, apart from a possible general obligation to promote financial assistance to developing countries to address climate change, there should be a specific funding mechanism to assist such countries in implementing the convention and presumably its protocol(s).

U.S. Position to Date: We have opposed the establishment of new mechanisms, insisting that there be assessments of whether existing institutions and mechanisms are adequate to meet needs.

Proposed Action: State should provide an assessment of existing institutions and mechanisms related to financial assistance for climate change.

3. Development and Transfer of Technology

-- Following other framework conventions, it would be usual for the convention to call upon the parties, generally, to promote the development and transfer of technology to assist developing countries to take measures to address climate change.

Issues:

-- Whether the convention should call for special terms to attach to climate-related transfers of technology (e.g., preferential, non-commercial), taking into account the protection of intellectual property rights.

U.S. Position to Date: Given that private industry, rather than the U.S. government, owns environmentally-related technologies, we have traditionally not been in a legal position to ensure any special terms of transfer. Thus, we have generally endorsed a rather weak commitment to "facilitate" such transfers. In the ozone context, where the substitutes and technologies are fairly discrete and EPA works closely with the relevant companies, we agreed "to take every practicable step...to ensure...that the best available, environmentally safe substitutes and related technologies are expeditiously transferred to [developing countries] and that [such] transfers occur under fair and most favorable conditions". However, our agreement was not to be taken as a precedent for other environmental areas. In this context, we would need to ensure that any such article did not preclude a subsequent emissions trading system as the means of satisfying technology transfer needs.

Proposed Action: State should work with DOE, DOC, NOAA, and USDA to develop positions regarding technology development issues. With respect to technology transfer issues, State should draw on the expertise of EPA's International Environmental Technology Transfer Advisory Board, as well as work with DOC, USTR, and other relevant agencies, to consider whether and, if so, how we could go beyond a general commitment to promote the development and transfer of environmentally-related technologies.

Institutions

-- It has been the general practice under international environmental agreements to establish various institutional mechanisms, including a secretariat (a standard administrative body) and a Conference of the Parties (not an independent organization but simply the mechanism through which the parties act, including taking decisions).

Issues:

-- Should any of the convention's institutions, through some kind of majority vote, have the authority to bind all the parties with respect to specific response measures?

10/22/90

-7-

U.S. Position to Date: Such an approach would be unacceptable in that we would not want to be bound by specific response obligations without our consent.

-- Should any international institution have powers with respect to surveillance, verification, and compliance?

Proposed Action: Initially, State should work with the Task Force on Climate Approaches and other agencies, as appropriate, to consider whether any surveillance/verification/compliance functions that might accompany comprehensive/economic mechanisms **approaches need to appear in the framework convention** (as opposed to a subsequent legal instrument). In the longer term, State should work with Commerce and USTR to review possible trade sanctions against parties in non-compliance (as well as non-parties) and their implications for the United States.

-- Should provision be made for the establishment of scientific or other bodies, on a permanent or ad hoc basis, to advise the parties on various technical matters?

U.S. Position to Date: We have supported the existence of subsidiary bodies on topics such as science and economics.

Proposed Action: State should prepare a review and analysis of existing institutions with a view to identifying possible gaps/overlaps and recommending how best to fill/eliminate them. Further, State should work with the Task Force on Climate Approaches and other agencies, as appropriate, to consider what bodies would be useful in connection with a comprehensive approach.

Research, Systematic Observations and Analysis

-- It would follow general practice for the convention to include provision for cooperation in research and monitoring. We have advocated strong research and monitoring provisions in the framework convention.

Proposed Action: The CEES and any other appropriate interagency group should develop proposals it considers the United States should make with respect to research and monitoring.

-- In terms of research, there appears to be consensus that each party might be called upon to undertake, initiate, and/or cooperate in, directly or through competent international bodies, the conduct of research in a variety of listed areas.

10/22/90

-8-

Proposed Action: We need to develop an updated list of research areas to include in the convention, perhaps in an annex (as was done in the Vienna Convention). In addition to any areas identified by the CEES, such a list should include areas in which further research is needed to determine an appropriate response strategy towards greenhouse gases. The Task Group on Climate Approaches should develop such a list.

-- General consensus also emerged on the need for monitoring and analysis of climate and cooperation in ensuring collection, validation and transmission of research, observational data and **analysis through appropriate data centers.**

Issues:

-- Whether there should be provision for open and non-discriminatory access to meteorological data developed by all countries?

U.S. Position to Date: We have strongly favored such a provision and will be promoting the concept at the Second World Climate Conference with respect to data and information for climate/global change research.

-- Whether a specific scientific research fund should be established?

U.S. Position to Date: Although not in the context of a convention, we are supporting the Climate Studies Fund, which is based on voluntary contributions, operated under WMO auspices, and designed to address climate change scientific research.

Proposed Action: State should work with relevant agencies to consider the merits of a fund dedicated solely to climate change research and any institutional auspices under which it would operate.

Information Exchange and Reporting

-- It would follow general practice for the convention to include provision for exchange of information on measures that parties had adopted in implementation of the convention and its protocol(s). In addition, as in the Vienna Convention, the parties could be called upon to exchange scientific, technical, socio-economic, commercial, and legal information related to climate change.

Proposed Action: State should work with relevant agencies to determine what kinds of scientific and economic information should be exchanged and under what conditions.

Issues:

-- Whether there is a need for the elaboration of a comprehensive international research program in order to facilitate cooperation in the exchange of scientific, economic, and other information on climate change?

Proposed Action: The CEES should provide its view on this issue.

-- Whether each party should be obligated to develop a national inventory of emissions, as well as strategies for addressing climate change?

U.S. Position to Date: We made this proposal in the IPCC Response Strategies Working Group.

Settlement of Disputes

-- It would be customary to include a provision on the settlement of disputes, should differences arise concerning the interpretation or implementation of the convention and/or any annex/protocol.

Issues:

-- Whether resort to binding dispute settlement should be voluntary or mandatory.

U.S. Position to Date: In the environmental context, we have generally favored voluntary resort to binding dispute settlement or mandatory resort to non-binding dispute settlement.

Proposed Action: State should prepare an options paper analyzing whether, in the climate change context, we should support stronger dispute settlement provisions.

Final Clauses (such as amendment, adoption of annexes, adoption of protocols, signature, ratification, right to vote, entry into force, reservations, withdrawal)

-- These provisions are generally non-controversial.

Annexes and Protocols

-- It would follow general practice for the framework convention to provide for the possibility of annexes and protocols.

Issues:

-- Assuming that the convention itself does not contain obligations for greenhouse gas emissions limitations, whether the convention should provide how such obligations are to be addressed in any protocol(s), e.g., that **greenhouse gases, their sources and sinks, are to be dealt** with individually, in groups, or comprehensively.

U.S. Position to Date: As mentioned above, the U.S. view has been that the convention should not require the development of a protocol but should provide that any protocol that is developed must address greenhouse gases comprehensively.

-- Whether specific response obligations should be negotiated simultaneously with the framework convention (either directly in the convention or in a protocol being negotiated at the same time).

U.S. Position to Date: We have taken the view that any specific response obligations should be contained in a protocol that should be negotiated subsequent to the framework convention.

Other

-- A remaining issue for the United States is the extent to which the convention should address economic mechanisms, such as emissions trading.

Proposed Action: The Task Force on Climate Approaches should develop the necessary analyses to demonstrate the advantages of economic approaches. Further, State should work with the Task Force to consider options for references in the convention to economic mechanisms, e.g.:

(a) the parties could be required to evaluate alternative administrative and enforcement mechanisms that could be used in connection with various response measures;

CARNEGIE COMMISSION ON SCIENCE, TECHNOLOGY, AND GOVERNMENT

10 Waverly Place, New York, N.Y. 10003 (212) 998-2150 FAX (212) 995-3181

6 July 1990

The Honorable D. Allan Bromley
Assistant to the President for Science and Technology
The White House
Washington, D.C. 20506

Dear Allan,

As you are aware, the Carnegie Commission on Science, Technology, and Government was established in 1988 to seek ways in which the branches of the U.S. government can encourage and better use the contributions of the nation's scientists and engineers.

In early June the Commission convened a workshop to examine "International Environmental Organizations: The Science and Technology Dimensions." This meeting was designed to study, in depth, the institutional issues raised at the recent "White House Conference on Science and Economics Related to Global Change."

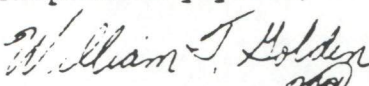
Workshop participants took particular note of the June 1992 United Nations ministerial Conference on Environment and Development to be held in Brazil. As a result, the co-chairs of the workshop have prepared a letter, attached here, which recommends three near-term actions by the U.S. government. These are:

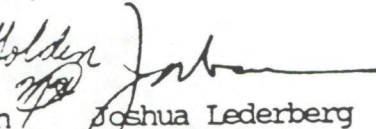
- 1) appointment of a Special Ambassador for the 1992 Brazil Conference to oversee the complex U.S. efforts required to be successful at the meeting;
- 2) appointment of a Presidential Commission (or comparable body) for the Conference to synthesize data and concepts for the U.S. position; and
- 3) appointment of a Public Advisory Committee to the Special Ambassador to enhance dialogue among industry, universities, and citizens with the government on issues relating to the Conference.

The workshop participants believe that such actions could greatly facilitate the process of analysis and consultation needed to organize a unified U.S. position for this important meeting and to relay recommendations to the President for consideration. We understand that the Office of Science and Technology Policy is working with the Council on Environmental Quality, the Department of State, and other agencies in the preliminary preparation for Brazil. Thus, we bring the suggested actions to your attention. If the Workshop participants are correct, it would be desirable to take actions, in concert with the Congress, before the end of 1990, so that the mechanisms can be most effective.

Our Carnegie group would be pleased to meet with you and other officials to share detailed views relating to this matter.

Respectfully yours,


William T. Golden


Joshua Lederberg

WILLIAM T. GOLDEN
Co-Chair
JOSHUA LEDERBERG
Co-Chair
DAVID Z. ROBINSON
Executive Director
RICHARD C. ATKINSON
NORMAN R. AUGUSTINE
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LEWIS M. BRANSCOMB
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*Through January 20, 1989

CARNEGIE COMMISSION ON SCIENCE, TECHNOLOGY, AND GOVERNMENT

6 July 1990

Mr. William T. Golden
Dr. Joshua Lederberg
Co-Chairmen, Carnegie Commission
on Science, Technology, and Government
10 Waverly Place
New York NY 10003

Dear Bill and Josh,

As co-chairmen of the meeting, we are pleased to report a successful Workshop of the Carnegie Commission on the subject of "International Environmental Organization: The Science & Technology Dimensions" at The Rockefeller University, June 4-6, 1990. The detailed findings of the Workshop will be conveyed to you later this summer.

During the course of our discussions, an important issue emerged that calls for early consideration. Our attention was drawn to the UN Conference on Environment and Development to be held in Brazil in June, 1992. Major recent studies have provided convincing evidence that the linkage between environment and development is now so compelling that the two very complex and important topics often need to be considered together. Decisions of lasting significance with regard to international institutions and decision-making processes bearing on both the quality of the global environment and the strategies for economic growth could be made in connection with the Conference.

The UN has appointed an outstanding Secretary General, Maurice Strong of Canada, for the Conference and established a Preparatory Committee to develop the agenda and supporting papers. A demanding schedule of international and regional meetings has been set by the Preparatory Committee for the next two years. Several scientific organizations in the United States (for example, the American Association for the Advancement of Science, American Association of Engineering Societies, Social Science Research Council, Consortium of Social Science Associations, the Council of Scientific Society Presidents, and Sigma Xi) have banded together to elicit and integrate the views of the scientific community in this country on these issues. There has been a call from the recent ministerial-level conference in Bergen, Norway, supported by influential scientists from many nations, for a "Science Summit" on environment and development that would be held only a few months before the 1992 Brazil Conference.

Our Workshop members agreed that it is a matter of prime importance that the United States be well prepared for the Brazil Conference. Several of the attendees were involved in similar preparatory work for other UN conferences, such as that on the Environment held in Stockholm in June, 1972, and on Science and Technology for Development held in Vienna during

August 1979. The strong and persuasive national position developed by the United States was a factor in the success at Stockholm. An experienced delegation coped well with the contentious problems faced in Vienna. Our Workshop participants were unanimous in the conviction that lessons from the past show that more activity in regard to the Brazil Conference is desirable, both within the government and in its interactions with the outside community. Several actions should be considered, as a matter of urgency, to assure a dynamic and creative participation by our country. We recommend the following:

- 1) The President should appoint a Special Ambassador to work with the Secretary of State and other high level officials to oversee policy planning and development of a unified U.S. government position for the Conference on Environment and Development. This Special Ambassador should be provided with adequate funds and staff to support careful preparation of papers outlining options for the U.S. position. To be effective, the initial papers should be in hand no later than 1 September 1991. Accordingly, the Ambassador should be appointed by the fall of 1990, this year.
- 2) The President and the Congress should establish a Presidential Commission (or comparable body) on the UN 1992 Conference on Environment and Development to provide and help synthesize a wide range of data and views from governmental and nongovernmental sources in order to assist the State Department and other federal agencies involved in the planning process. To assure an appropriate diversity of perspectives, the President and Congress should appoint individuals from the Congress, the Executive Branch, industry, labor, environmental organizations, the scientific and engineering community, and other professionally expert and concerned groups to serve on the Commission. Selected members of the Commission would later serve as members of the U.S. delegation to the Conference and would thus be well-prepared to represent the U.S. position. For the 1972 Stockholm Conference, Senator Howard H. Baker, Jr. of Tennessee served as chairman of the comparable advisory group. Having a distinguished and knowledgeable sitting member of the Congress lead the group worked exceptionally well.
- 3) The Secretary of State in consultation with appropriate federal officials¹ should appoint a larger Public Advisory Committee to work with the Ambassador in preparing for the Conference. The Committee would serve to assure broad public dialogue in the U.S., through regional conferences and other means, on the issues the Conference will address.

* * * * *

¹ These include the Assistant to the President for Science and Technology, the Chairs of the Councils of Economic Advisors and Environmental Quality, the Secretary of Energy, the Secretary of the Treasury, the Administrator of the Environmental Protection Agency, the Administrator of the Agency for International Development, the Under Secretary of Commerce for Oceans and Atmosphere, and the Director of the National Science Foundation.

CARNEGIE COMMISSION ON SCIENCE, TECHNOLOGY, AND GOVERNMENT

We urge you to bring these considered recommendations to the attention of the President, key White House officials, the Secretary of State, and such other individuals in the executive and legislative branches whom you feel must be informed now. We note that the steps recommended are ones that traditionally have been taken by the U.S. government in preparing itself for world conferences of major potential significance, such as the 1972 Stockholm Conference and the 1979 Vienna Conference.

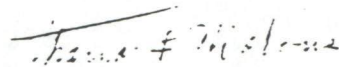
As agreed at the Workshop, this letter has been prepared in consultation with Harvey Brooks, Rodney W. Nichols, Walter A. Rosenblith, and H. Guyford Stever, members of the Commission and its international steering group who participated in the Workshop, and has their full agreement. A list of all the Workshop participants is attached.

We join in commending you for your initiative in bringing the participants of our Workshop together and look forward to discussing with you our conclusions on a range of issues during the months ahead.

Sincerely yours,



Jesse H. Ausubel



Thomas F. Malone

cc. Workshop participants

"International Environmental Organization: The S&T Dimensions"
Workshop, The Rockefeller University, New York, NY
June 4-6, 1990

Participants:

John F. Ahearne, Sigma Xi
Jesse H. Ausubel, Carnegie Commission on Science, Technology, and Government
D. James Baker, Joint Oceanographic Institutions
Richard E. Benedick, World Wildlife Fund/ The Conservation Foundation
Harvey Brooks, John F. Kennedy School of Government, Harvard University
William C. Clark, John F. Kennedy School of Government, Harvard University
Richard E. Hallgren, American Meteorological Society
Philip W. Hemily, National Research Council
John A. Knauss, National Oceanic and Atmospheric Administration
J. W. M. La Riviere, Institute for Hydraulic & Environmental Engineering, Netherlands
Jeffrey Laurenti, UN Association of America
James R. Mahoney, National Acid Precipitation Assessment Program
Thomas F. Malone, St. Joseph's College
Rodney W. Nichols, The Rockefeller University
William A. Nitze, Environmental Law Institute
John S. Perry, National Research Council
Peter H. Raven, Missouri Botanical Garden
Walter A. Rosenblith, Massachusetts Institute of Technology
H. Guyford Stever, Carnegie Commission on Science, Technology & Government
Peter S. Thacher, World Resources Institute
Mary Martha Treichel, National Research Council
Gilbert F. White, University of Colorado
Robert M. White, National Academy of Engineering
Anne V.T. Whyte, International Development Research Centre, Canada

APPENDIX I

Details of Issues Under Analysis

Negotiations on a Framework Convention on Climate Change
Proposed actions and Products:

1. PARAMETERS

1-1. Development of appropriate definitions [Task Force on Climate Approaches]

2. ECONOMICS

2-1. "The Economics of Long-Term Global Climate Change" report from the DPC GCWG Interagency Task Force on Economics. [INTERAGENCY TASK FORCE ON ECONOMICS]

2-2. Preliminary assessments of best available information on effectiveness and economic consequences of various response strategies [DOE, EPA, OMB, CEA]

2-3. Develop detailed analyses of the feasibility of meeting certain proposed targets in order to demonstrate the impracticability of these proposals. [DOE, EPA, CEA]

2-4. Calculate the impact on radiative forcing of emissions targets implemented by only a subset of countries (e.g., OECD members) [DOE, EPA AND CEA]

2-5. Evaluate the feasibility and economic consequences of emissions targets for the U.S. and other key countries. (Part of the effort will be to identify potential allies) [EPA, CEA, OMB AND DOE]

[SEE 10. ANNEXES AND PROTOCOLS FOR ECONOMICS IN THE CONVENTION]

3. NO REGRETS

3-1. Determine what could be listed under a "no regrets" heading. [STATE IN COOPERATION WITH OTHER AGENCIES]

4. COMPREHENSIVE APPROACH

4-1. Develop options regarding to what extent (i.e., how much detail) the framework convention should "tilt" the protocol in the direction of a comprehensive approach. [STATE WORKING WITH THE TASK FORCE ON CLIMATE APPROACHES]

4-2. The Task Force on Comprehensive and Incentives Approaches to Climate is specifically monitoring this set of products in preparation of the framework convention in relation to the comprehensive/incentives approach: [STATE AND DOJ]

4-2-1. Drafting a U.S. version of a possible framework convention. [STATE AND DOJ]

4-2-2. Develop an improved radiative forcing index. Sketch the design of a global change index. [CEES, EPA (ALBRITTON AND TIRPAK, ET. AL.)]

4-2-3. Design an international GHG monitoring system. [EPA, CES, DATA MANAGEMENT WORKGROUP, EPA, MARS]

4-2-4. Development of talking points including quantitative demonstrations that piecemeal proposals would have little environmental benefit, or actually be counterproductive. [DOJ]

4-2-5. Conduct quantitative analysis of the comprehensive and economic incentives approaches, and its variations by gas, strategy, sector, nation. [NORM HARTNESS, DOE]

4-2-6. List of the net index-weighted emissions change wrought by relevant U.S. actions, including "no regrets" measures. Prepare a similar list for other countries. [EPA]

4-2-7. Develop language for the framework convention to address the vision of decisionmaking under uncertainty. [CEES AD HOC ECONOMICS TASK FORCE]

4-2-8. Assess other's proposals. [EPA, DOE, CEA]

5. FINANCIAL ASSISTANCE

5-1. Options paper on how to handle the possibility of differentiated treatment in the framework convention for developing countries with respect to both general and specific obligations. [STATE]

5-2. Catalogue existing U.S. financial assistance related to climate change. [STATE]

5-3. Assessment of existing institutions and mechanisms related to financial assistance for climate change. [STATE]

5-4. Develop positions regarding technology development issues. [STATE, DOE, USDA, EPA'S INTERNATIONAL ENVIRONMENTAL TECHNOLOGY TRANSFER ADVISORY BOARD, DOC, USTR, AND OTHER RELEVANT AGENCIES]

6. INSTITUTIONS

6-1. Consider surveillance/verification/compliance functions that might accompany comprehensive/economic mechanisms to be included in the framework convention. Determine whether they should be included in the convention or subsequent document. [STATE AND THE TASK FORCE ON CLIMATE APPROACHES, in the long term: COMMERCE, USTR]

6-2. Review and analysis of existing institutions, identifying gaps, and considering the provision for the establishment of scientific or other bodies on a permanent or ad hoc basis to advise the parties on various technical matters. [STATE, TASK FORCE ON CLIMATE APPROACHES AND OTHER AGENCIES AS APPROPRIATE]

7. RESEARCH, SYSTEMATIC OBSERVATIONS AND ANALYSIS

7-1. Develop proposals it considers the U.S. should make with respect to research and monitoring. [INTERAGENCY WORKING GROUP ON DATA MANAGEMENT FOR GLOBAL CHANGE]

7-2. Develop an updated list of research areas to include in the convention, perhaps in an annex. The list should include areas in which further research is needed to determine an appropriate response strategy toward greenhouse gases. [TASK GROUP ON CLIMATE APPROACHES]

8. INFORMATION EXCHANGE AND REPORTING

8-1. Determine the kinds of scientific and economic information should be exchanged and under what conditions. [STATE WITH APPROPRIATE AGENCIES]

8-2. Consider the merits of a fund dedicated solely to climate change research and any institutional auspices under which it would operate. Also determine what kinds of scientific and economic information should be exchanged and under what conditions. [STATE AND RELEVANT AGENCIES]

8-3. Consider the need for the elaboration of a comprehensive international research program in order to facilitate cooperation in the exchange of scientific, economic, and other information on climate change. [CEES should provide its view]

9. SETTLEMENT OF DISPUTES

9-1. Options paper discussing whether we should support stronger dispute settlement provisions. [STATE]

10. ANNEXES AND PROTOCOLS

10-1. Analyses to demonstrate the advantages of economic approaches and options for references in the convention to economic mechanisms. [TASK FORCE ON CLIMATE APPROACHES]

Timetable for First Negotiating Session in February

- October 29 SWCC Science Meeting
- November 6-7 SWCC Ministerial Portion of Meeting
- November 7 Comprehensive Task Force directive transmitted asking for final materials needed to complete comprehensive approach plan.
- November 8 Staff meeting to prepare for briefing on SWCC and forestry convention
- November 9 Global Change Strategy Task Force Meeting
- Agenda items: (1) report on result of SWCC and implications for Framework convention; (2) forestry convention.
- November 12 Veterans Day Celebration
- November 14 PCC WGCC (DOS) meeting - Progress report on preparations for a framework convention by all subgroups.
- November 16 Compilation of materials prepared for framework convention.
- November 19 Staff meeting to organize materials on framework convention and comprehensive approach, determine outstanding materials and revise timetable as needed.
- November 21 GC Strategy Task Force Meeting
- Agenda items: (1) Progress Report on Preparations for framework convention by PCC WGCC subgroups; (2) briefing on comprehensive approach EPA/DOJ; 3) Tasking out of additional information required and preparation of options paper on major, outstanding issues needing resolution.
- November 22 Thanksgiving Day
- November 26 Staff meeting to compile materials for options paper and develop draft structure of options paper.
- November 28 GC Strategy Task Force Meeting
- Agenda items: (1) Discussion of framework convention preparation of options package for presentation at DPC GCWG meeting; (2) selection of a negotiator and head of delegation.

November 30 Deadline for all PCC WGCC Workgroup reports. Tentative deadline for Comprehensive Approach Task Force materials and Economics Task Force report.

December 1-7 Staff meetings to develop final options papers for presentation to full Global Change Working Group for approval.

December 10 Full DPC GCWG to 1) review options paper, 2) review U.S. preparations for, and approaches to, negotiating a framework convention, 3) discussion of PCC WGCC Workgroup reports, and 4) tasking of additional work product.

December 11-19 Staff meeting as needed to compile and integrate additional information, put options paper into final draft form.

December 18 Strategy Task Force Meeting, if needed.

Agenda items: (1) package options (based on all comments) for consideration by DPC GCWG.

December 20 Full DPC Global Change Working Group meeting.

Agenda items: (1) Review Options Package to be presented to full DPC.

December 20-January 6 Staff meeting as needed to further refine options paper and compile additional information.

December 25 Christmas Day

January 7 Options package distributed to DPC members in preparation for meeting.

January 15 Full DPC meeting to consider Options package.

January 22 Full DPC meeting to consider Options package.

November 6, 1990

Current USG Positions

1. Targets and timetables

We should not agree to specific targets and timetables. We should take a comprehensive approach that includes all sources and sinks of greenhouse gases and, in the short-term, take those actions which are justified for reasons other than climate change.

The Second World Climate Conference Ministerial Declaration lists a number of countries who have made some commitment to stabilize greenhouse gases. However, the Declaration also referred to options other than targets and recommended consideration of all gasses, sources and sinks in the most comprehensive manner possible.

2. Comprehensive Approach

The U.S. favors the comprehensive approach which includes all greenhouse gases.

The Second World Climate Conference Ministerial Declaration clearly preserves receptiveness to this approach. It recommends that "in the elaboration of response strategies over time, all greenhouse gases, sources and sinks be considered in the most comprehensive manner as possible and also that limitation and adaptation measures be addressed."

3. Financial Assistance

We will not commit to providing new and additional funding which increases the overall budget. We are already giving the environment a higher priority in our assistance funding, both bilateral and multilateral, and believe that existing resources and mechanisms must be fully utilized before new monies can be considered. It will also be necessary to quantify the costs associated with any actions in this area before consideration of new funds can be justified. We will also note that the provisions of the Montreal Protocol are not a precedent for other environmental issues.

The Second World Climate Conference Ministerial Declaration is not limited to new funding. Instead, it recommends that "adequate and additional financial resources should be mobilized" This is compromise language that could be interpreted as acknowledging the potential for reprogramming of funds.

4. Statements Concerning the scientific understandings of climate change.

The statements must accurately describe the scientific context and uncertainties associated with potential climate change. The magnitude, timing, rate and regional distribution of predicted climate changes are uncertain because of limitations in our present scientific understanding of climate processes and in our ability to model behavior of climate systems and components. The human-caused emissions of greenhouse gases, while significant, are much smaller than the exchange between the atmosphere and natural systems.

5. Precautionary Principle

Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty is no excuse to postpone actions which are justified in their own right. Environmental measures must anticipate, prevent, and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation which are justified on their own right. These measures include: improved energy efficiency, use of lower greenhouse gas-emitting sources; improved forest management; development of comprehensive coastal management plans; use of practices to recycle and reuse CFC gases and their substitutes; and improved agricultural practices.

The SWCC Ministerial Declaration language reflects the U.S. position much better than previous, similar declarations. It specifies "cost-effective measures" to be taken where there is not full scientific certainty.

Logistics of February Meeting

RESPONSIBILITY FOR CONTRACTING WITH HOTEL FACILITIES

The Department of State/ Bureau of Oceans and International Environmental and Scientific Affairs will take the lead in securing the conference facilities. It is anticipated that they will do the same for conference participant hotel reservations and press arrangements.

HEAD OF DELEGATION

Buff Bolin, Assistant Secretary for Oceans, and International Environment and Scientific Affairs, has indicated an interest in heading the U.S. delegation.

COORDINATION OF DELEGATION

In the past, the Department of State has had the responsibility of delegation logistics. They will probably need guidance and backup from the DPC Global Change Working Group or Office of Cabinet Affairs if any limits are to be placed on delegation size or composition.

PREPARATION OF MATERIALS FOR MEETING

Department of State/Bureau of Oceans and International Environmental and Scientific Affairs has coordinated staff-level preparation of background materials. This needs to be closely coordinated with the outcome of the policy deliberations in the Domestic Policy Council.

Major Issues to Be Resolved by the White House

- 1. Appointment of a head of delegation for the Framework Convention negotiations. This could be the same person as the "Special Ambassador", called for by the Carnegie Commission to be appointed to oversee the complex preparatory efforts leading up to the 1992 United Nations Conference on Environment and Development, to be held in Brazil (the "Brazil Conference).**
- 2. Background data and further details of positions on major issues to be addressed in the framework convention, including the comprehensive approach, economic aspects of emissions reductions, targets and timetables, the precautionary principle, the need for further scientific research, and financial assistance.**
- 3. Beginning development or further development of any new policy initiatives that may be needed in conjunction with a framework convention. One initiative that may prove most useful is the National Energy Strategy.**
- 4. Compilation of Administration accomplishments in the environmental area.**
- 5. Timing of any new announcements on climate change policy. The beginning of the framework convention negotiating session may heighten public awareness of the issue. It coincides with the State of the Union address.**