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1998-0004-F[2]

FOIA Number:
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FOIA MARKER

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Record Group/Collection: George H.W. Bush Presidential Records
Collection/Office of Origin: Chief of Staff, White House Office of
Series: Sununu, John, Files
Subseries: Issues Files

OA/ID Number: 29159
Folder ID Number: 29159-003

Folder Title:
Global Warming 1991 [4]

Stack:	Row:	Section:	Shelf:	Position:
G	15	25	2	4

Withdrawal/Redaction Sheet

(George Bush Library)

Doc. No. / Type	Subject/Title	Date	Restriction	Classification
01a. Memo	From D. Allan Bromley to John Sununu Re: The 1992 Brazilian Convention on the Environment [FOIA RESTRICTIONS REDACTED] (2 pp.)	12/20/90	P-2, P-5 , (b)(6)	
01b. Letter	From William T. Golden, Joshua Lederberg Re: The 1992 Brazilian Convention on the Environment (1 pp.)	7/6/90	P-5	
01c. Letter	From Jesse H. Ausubel, Thomas F. Malone to William T. Golden, Joshua Lederberg Re: The 1992 Brazilian Convention on the Environment (4 pp.)	7/6/90	P-5	
02. Memo	From D. Allan Bromley to John Sununu Re: Congressional Hearings on Framework Convention (1 pp.)	1/14/91	P-5	
03. Memo	From D. Allan Bromley, Ede Holiday to John Sununu Re: Climate Change Framework Convention Meeting at 9:30 Wednesday (2 pp.)	1/23/91	P-5	
04a. Memo	From The Global Change Working Group to The Domestic Policy Council Re: Framework Convention on Climate Change (10 pp.)	1/22/91	(b)(1)	
04b. Report	Re: Country Targets and Timetables (4 pp.)	n.d.	(b)(1)	

Page 1 of 2

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Series: Sununu, John, Files
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WHORM Cat.:
File Location: Global Warming 1991 [4]

Pinksheet Number: KO0895
OA/ID Number: 29159-003
Date Closed: 1/4/2005
FOIA/Sys Case #: 1998-0004-F[2]
Re-review Case #: 2005-0426-S
P-2/P-5 Review Case #:

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05a. Memo	From The Global Change Working Group to The Domestic Policy Council Re: Framework Convention on Climate Change (10 pp.)	1/21/91	(b)(1)	
05b. Paper	Re: Positions on CO2 Emission Targets (1 pp.)	n.d.	(b)(1)	
05c. Report	Re: Country Targets and Timetables (4 pp.)	n.d.	(b)(1)	
06a. Memo	From D. Allan Bromley to John Sununu Re: Global Climate Change (3 pp.)	1/22/91	P-5	
06b. Memo	From The Global Change Working Group to The Domestic Policy Council Re: Framework Convention on Climate Change (same as doc 05) (10 pp.)	1/21/91	(b)(1)	
06c. Paper	Re: Positions on CO2 Emission Targets (1 pp.)	n.d.	(b)(1)	
06d. Report	Re: Country Targets and Timetables (4 pp.)	n.d.	(b)(1)	

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Open on Expiration of PRA
(Document Follows)
 By Jf (NLGB) on 10/28/05

Date Closed:	1/4/2005	OA/ID Number:	29159-003
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Re-review Case #:	2005-0426-S	Appeal Disposition:	
P-2/P-5 Review Case #:		Disposition Date:	
AR Case #:		MR Case #:	
AR Disposition:		MR Disposition:	
AR Disposition Date:		MR Disposition Date:	

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

- P-1 National Security Classified Information [(a)(1) of the PRA]
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THE WHITE HOUSE
WASHINGTON

AC/ER

December 20, 1990

MEMORANDUM FOR GOVERNOR SUNUNU

FROM: D. ALLAN BROMLEY 
SUBJECT: THE 1992 BRAZILIAN CONVENTION ON
THE ENVIRONMENT

In 1992 world attention will focus on Brazil as the host of a major conference on the global environment. This conference is one of a continuing series that included the 1972 Stockholm Conference and will address a very broad spectrum of environmental issues.

For the 1972 conference, the U.S. government appointed Senator Howard Baker as Special Ambassador and gave him a staff and the charge of developing U.S. positions for the Conference. He was appointed some eighteen months prior to the conference and reportedly felt that more lead time would have enabled him to do a much better job for the U.S.

Due to the growing interest in the issues, the scope and visibility of the 1992 Brazilian Conference will be very much higher than was the case in 1972.

Because of the importance of the 1992 Conference, the Carnegie Commission sent the ~~enclosed letter urging that we take action as soon as possible to ensure appropriate~~ U.S. participation in the Brazilian Conference. Timely action would support President Bush's commitment to global stewardship and environmental issues generally.

You, I am sure, will have people in mind as attractive candidates for this responsibility and I would only add the following as names that you might wish to include in your considerations:

a)

b)

c)



d) Howard Baker. Everyone agreed that he did a fine job in 1972. He is still vigorous and would certainly be able to hit the ground running. place

I believe that it is important that we act in a timely fashion to get our preparations underway. I was impressed, for example, by the extent to which the South American nations visited by the President two weeks ago already have in place extensive preparatory activities, and I am told the same is true of the major European countries and Japan.

Enclosure

Withdrawal/Redaction Sheet

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01b. Letter	From William T. Golden, Joshua Lederberg Re: The 1992 Brazilian Convention on the Environment (1 pp.)	7/6/90	P/5	

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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

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*Through January 20, 1989

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."

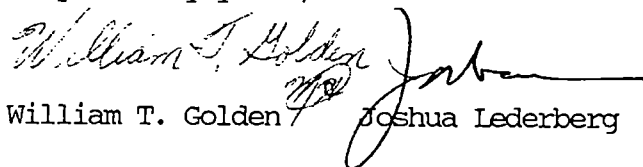
Workshop participants took particular note of the June 1992 United Nations ministerial Conference on Environment and Development to be held in Brazil. As a result, the co-chairs of the workshop have prepared a letter, attached here, which recommends three near-term actions by the U.S. government. These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

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01c. Letter	From Jesse H. Ausubel, Thomas F. Malone to William T. Golden, Joshua Lederberg Re: The 1992 Brazilian Convention on the Environment (4 pp.)	7/6/90	P5	

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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.

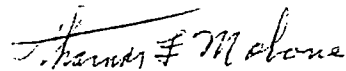
As agreed at the Workshop, this letter has been prepared in consultation with Harvey Brooks, Rodney W. Nichols, Walter A. Rosenblith, and H. Guyford Stever, members of the Commission and its international steering group who participated in the Workshop, and has their full agreement. A list of all the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

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THE WHITE HOUSE

WASHINGTON

January 14, 1991

MEMORANDUM FOR GOVERNOR SUNUNU

FROM: D. ALLAN BROMLEY 
SUBJECT: Congressional Hearings on Framework Convention

The House Energy and Commerce Subcommittee on Health and Environment requested Energy, State, EPA, and OSTP to testify on a variety of global change issues at a January 31, 1991 hearing. We are working with Fred McClure's office on this matter.

The subcommittee is requesting testimony on the position the U.S. will take next month to the first negotiating session on a framework convention; the nature and severity of climate change due to anthropogenic emissions; how global warming concerns are taken into account in the national energy strategy; current and future commitments, both domestically and internationally, to reduce greenhouse gas emissions, particularly CO₂; and other global climate change issues.

State says it would be inappropriate to testify at a public hearing prior to the February meeting as that could prejudice the U.S. position. This was relayed to Subcommittee majority staff who prepared a follow up letter (attached) insisting that the Administration testify or provide written justification for its refusal. This information was discussed at the White House Global Change Task Force meeting on January 11.

Options to respond include: 1) decline, 2) testify only on those issues that can be discussed in public at this time, or 3) suggest that Congressmen and their staff be briefed in a closed meeting. Whatever is said, a hearing will probably result in bad publicity for the Administration.

If we go to the Hill, it would have to be decided whether to go before the Subcommittee (Rep. Waxman chairs) or the full Committee (Rep. Dingell chairs). It is believed that Rep. Sharp (Energy Subcommittee chair) and Rep. Dingell have an interest in this issue and would not want to cede jurisdiction to Waxman's Subcommittee. In addition, they would probably be less antagonistic of the Administration than Waxman on this issue.

The next steps are to determine what Reps. Dingell and Sharp think about this hearing and try to obtain a closed-door briefing for full Committee members if that seems appropriate. The Global Change Strategy group expressed reservations about testifying, but did not reject the idea and felt that if the decision was made to go to the Hill, that I should represent the Administration. I welcome your comments on this and would be happy to work with Fred McClure to arrange a legislative strategy meeting for you on this issue, if you would like.

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SUITE 400
LOS ANGELES, CA 90048-4183
(213) 851-1040

Congress of the United States
House of Representatives
Washington, DC 20515-0524

HENRY A. WAXMAN
24TH DISTRICT, CALIFORNIA

January 10, 1991

COMMITTEE:
ENERGY AND COMMERCE
CHAIRMAN, SUBCOMMITTEE ON
HEALTH AND THE ENVIRONMENT
GOVERNMENT OPERATIONS
SELECT COMMITTEE ON AGING
DEMOCRATIC STEERING AND
POLICY COMMITTEE
PHILIP M. SCHILRO
ADMINISTRATIVE ASSISTANT

The Honorable James A. Baker III
Secretary of State
Office of the Secretary
7th Floor, 2201 C Street
Washington, D.C. 20520

Dear Secretary Baker:

I understand that the White House, the State and Energy Departments, and the Environmental Protection Agency are refusing to send representatives to testify before the Health and the Environment Subcommittee on global climate change on January 31, 1991. This is extremely distressing.

Global climate change is an immensely important problem. Domestically, the Environmental Protection Agency's Science Advisory Board has called global warming the most serious environmental threat to the welfare of the United States. Internationally, the Intergovernmental Panel on Climate Change, a panel established by the United Nations Environment Programme and the World Meteorological Organization, has stated it is "certain" that global warming will occur and predicted a warming of 3 degrees centigrade (5.5 degrees Fahrenheit) by 2100; and over 100 nations, meeting at the Second World Climate Conference, have declared that global warming poses a "risk for survival in low-lying coastal and arid and semi-arid areas of the world" and called for international negotiations to limit emissions of greenhouse gases to begin "without delay."

Because of the problem's tremendous importance, I asked that top Administration officials present the Administration's views on a variety of global warming issues. These included the Administration's views on the nature and severity of global warming; on the appropriate domestic policy responses; and on the importance of international action to address global warming. Perhaps most important, I asked for a description of the U.S. objectives in the international negotiations on global warming to begin on February 4, 1991. I addressed my requests to you; Dr. Bromley, the White House Science Advisor and head of the interagency task force on global warming; Admiral Watkins of the Energy Department; and Administrator Reilly of the Environmental Protection Agency.

My staff was informed by your staff, however, that no representative from the Administration can testify on any matter related to global warming in advance of the February round of international negotiations.

The ostensible reason for the refusal to testify is that the U.S. position on global climate change is "classified" information. My staff was informed that discussing U.S. policy on global warming with a congressional committee of jurisdiction in advance of the international negotiations in February would prejudice the U.S. position. However, we were told that the Administration could testify after the February round of negotiations were completed.

The Administration position is unacceptable. One of the important purposes of the hearing is to provide a forum for the Administration to advise and consult with members of Congress about the position that the U.S. will take in the global warming negotiations. This is appropriate -- indeed, essential -- in light of the worldwide importance of the threat of global warming. Yet the Administration's position is that Congress -- and the public -- should not be informed of the U.S. position until after the fact. The Administration's response indicates that current U.S. policy on global warming will be formulated and executed in secret.

This does a disservice to the country. The global warming issue is complex, controversial, and vital to global welfare. It should be fully debated before Congress and the American people. This should happen before U.S. negotiators sit down with negotiators from other nations and commit the U.S. to a policy position. Unfortunately, the Administration's refusal to appear -- and its insistence that U.S. policy is "classified" -- prevents this debate from occurring.

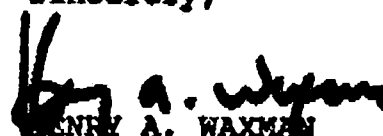
Moreover, my invitations to Administration witnesses asked for a large amount of important information that does not bear upon the upcoming international negotiations. For instance, I asked Dr. Bromley to set forth "the Administration's views on the domestic policies the U.S. should implement to reduce the U.S. contribution to global warming." Yet apparently the Administration is maintaining that its views on domestic policy are also "classified." This is an unjustifiable position.

It is equally unjustifiable to claim that Administrator Reilly cannot accept my invitation to testify about matters such as the science of global warming, the sources of greenhouse gases, and potential domestic mitigation measures. The State Department also claims that it cannot report to Congress on the factual issue of what commitments and actions other nations have taken to address global warming. I cannot comprehend how these matters might be government secrets.

I request that you provide me, in writing, by the end of business on January 14, a full explanation and justification for the refusal to testify on global warming. I am attaching to this letter my letters of invitation to you, Dr. Bromley, Secretary Watkins, and Administrator Reilly. I expect that you will address each request for information raised in each letter and set forth in detail why that information cannot be presented to members of Congress at this time.

With every good wish, I am,

Sincerely,


HENRY A. WAXMAN
Member of Congress

HAW/pbs

cc: Dr. D. Allan Bromley
Admiral James D. Watkins
The Honorable William K. Reilly

Withdrawal/Redaction Sheet

(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
03. Memo	From D. Allan Bromley, Ede Holiday to John Sununu Re: Climate Change Framework Convention Meeting at 9:30 Wednesday (2 pp.)	1/23/91	P /5	

Collection:

Record Group: Bush Presidential Records
Office: Chief of Staff to the President, Office of the
Series: Sununu, John, Files
Subseries: Issues Files
WHORM Cat.:
File Location: Global Warming 1991 [4]

Open on Expiration of PRA
 (Document Follows)
 By JP (NLGB) on 10/28/05

Date Closed: 1/4/2005	OA/ID Number: 29159-003
FOIA/SYS Case #: 1998-0004-F[2]	Appeal Case #:
Re-review Case #: 2005-0426-S	Appeal Disposition:
P-2/P-5 Review Case #:	Disposition Date:
AR Case #:	MR Case #:
AR Disposition:	MR Disposition:
AR Disposition Date:	MR Disposition Date:

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 P-6 Release would constitute a clearly unwarranted invasion of
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 (b)(4) Release would disclose trade secrets or confidential or financial
 information [(b)(4) of the FOIA]
 (b)(6) Release would constitute a clearly unwarranted invasion of
 personal privacy [(b)(6) of the FOIA]
 (b)(7) Release would disclose information compiled for law enforcement
 purposes [(b)(7) of the FOIA]
 (b)(8) Release would disclose information concerning the regulation of
 financial institutions [(b)(8) of the FOIA]
 (b)(9) Release would disclose geological or geophysical information

THE WHITE HOUSE

WASHINGTON

January 23, 1991

Rec'd 1/23

8:25 AM

MEMORANDUM FOR GOVERNOR SUNUNU

FROM:

D. ALLAN BROMLEY
EDE HOLIDAY

SUBJECT:

Climate Change Framework Convention Meeting at
9:30 Wednesday morning

A meeting has been scheduled for Wednesday, January 23 at 9:30 A.M. in your office to obtain your approval, in concept, of the DPC paper on Global Climate Change and a brochure highlighting the environmental achievements of the Bush Administration. If you approve, we will distribute these papers to members of the DPC for their written comments and clearance.

Thereafter, we suggest that you meet with a group of advisers on Friday to give final approval to the strategy for the Framework Convention, to approve the final draft of the accomplishments brochure and to consider the more sensitive strategic questions raised by the upcoming negotiations -- questions we did not think it prudent to raise in the DPC paper, such as:

- o Will publishing a brochure highlighting U.S. accomplishments towards stabilizing emissions of greenhouse gases actually undercut the Administration's position that there is insufficient scientific and economic evidence to justify negotiations over targets and timetables?
- o What would have to change in the science, economics or politics of global climate change to warrant reconsidering our opposition to some form of targets and timetables?
- o If the U.S. ultimately acquiesces to some regime of targets and timetables, when should the Administration make this concession -- and how should it be portrayed?
- o What should the U.S. do if other countries do not support the comprehensive approach or if other countries support the comprehensive approach without granting any credit to the U.S. for phasing out CFCs under the Montreal protocol?
- o Should the President address the opening session of the climate change negotiations either in person or by video tape?

Participants in this morning's meeting will include Dick Darman, Boyden Gray, Roger Porter, Michael Deland, Bob Grady, Ken Yale, Teresa Gorman and Richard Porter. Bob Grady took the initiative to prepare the draft U.S. accomplishments brochure, with the assistance of OSTP and other agencies.

THE WHITE HOUSE

WASHINGTON

January 22, 1991

MEMORANDUM FOR THE DOMESTIC POLICY COUNCIL

FROM: The Global Change Working Group

SUBJECT: Framework Convention on Climate Change

ISSUE:

Negotiators representing the United States at the first negotiating session of the Framework Convention on Climate Change on February 4, 1991 require guidance on three issues:

- (1) Aspects of the strategy U.S. representatives should follow during the negotiations;
- (2) Whether we should press other nations to adopt the "comprehensive approach;" and
- (3) Whether a document outlining U.S. accomplishments should be released at the first negotiating session.

BACKGROUND:

1. The General Situation.

Formal negotiations on a framework convention will take place, over the next 18 months, under the auspices of the United Nations General Assembly. Although differences exist regarding the purpose of the Convention, it is our understanding that the Convention should establish an institutional basis for international cooperation on climate change including the conduct of scientific research and the exchange of climate change information. It will also provide the legal and logistical structure for future protocols or annexes (if any) containing specific commitments. The Convention is expected to be ready for signing at the June 1992 U.N. Conference on Environment and Development in Brazil.

President Bush has invited other nations to meet in Washington for the first negotiating session. This is scheduled to take place February 4 to 14, 1991. The first negotiating session will focus on organizational and procedural issues. This paper provides background on the question of climate change and addresses three issues that need to be considered prior to the negotiations.

2. Previous International Action.

The World Meteorological Organization and the United Nations Environment Programme set up the Intergovernmental Panel on

Climate Change (IPCC) in 1987 as a vehicle to assess scientific information pertaining to climate change, impacts of such change, and possible strategies to assist in responding to potential changes. The U.S. participated in and accepted the activities of the IPCC.

At the Second World Climate Conference in November 1990, the IPCC adopted an interim report. This report addressed four major areas of climate change: (1) research; (2) the impacts of potential change; (3) response strategies; and (4) legal measures to implement response strategies, including possible elements of a framework convention on climate change. This report forms the basis for the negotiations on a framework convention on climate change.

The Second World Climate Conference agreed that the scientific conclusions set out by the IPCC reflect the international consensus of scientific understanding of climate change, including these key points:

- o "Emissions resulting from human activities are substantially increasing atmospheric concentrations of greenhouse gases. These increases will enhance the natural greenhouse effect, resulting on average in an additional warming of the Earth's surface."
- o "Without actions to reduce emissions, global warming is predicted to reach 2 to 5 degrees C over the next century, a rate of change unprecedented in the past 10,000 years."
- o "The warming is expected to be accompanied by a sea level rise of 65 cm (+/- 35 cm) by the end of the next century."
- o Substantial scientific uncertainty continues regarding the details of climate change. To narrow the uncertainties, on-going research is being conducted in high priority areas, such as oceans, clouds, carbon cycle, polar ice sheet, and sea ice.

Some policy makers do not share the certainty reflected by the predictions published in the IPCC report, because of the unsettled state of the scientific analysis.

3. The Science of Climate Change.

Studies show that concentrations of greenhouse gases have increased. However, the causes of this increase--including both natural and human factors, as well as the way these may affect regional climate patterns and the earth's temperature regulation process--continue to be unclear. Certain gases, such as carbon

dioxide, methane, nitrous oxide, and chlorofluorocarbons (CFC's), increase the retention of heat in the atmosphere.

Natural processes are responsible for twenty times the amount of greenhouse gas fluctuations than those caused by human activities. For instance, even though nitrous oxide is emitted by the manmade process of burning fossil fuels and using nitrogen fertilizers, it is also emitted by the natural aerobic decomposition of organic matter in oceans and soils and by bacteria. Nevertheless, significant changes in atmospheric concentrations are being caused by human-related activities, largely reflecting increases in industrialization.

The earth adapts to changes in greenhouse gas concentrations through a complex system that naturally regulates global temperatures. One result of this natural regulatory process may be changing climate patterns and higher average temperatures. This system is not only affected by "sources" of greenhouse gas emissions, but also by "sinks" that sequester concentrations of these gases. The system also includes the radiation of energy into space.

Although scientific research on the relation between the emission of greenhouse gases and climate change has focussed on global warming, this is only one of several interrelated climate phenomena that may be affected by such emissions. Other climate phenomena that may be affected include the patterns and amounts of precipitation, the patterns and severity of storms, as well as the mean sea level. Each of these climate phenomena may involve significant fluctuations in temperature over wide regions of the earth's surface. It is important to note that the effects of climate change may vary by region. Changes in temperature and precipitation may cause adverse effects in some areas of the world while resulting in beneficial effects in other areas.

Computer models have been developed to predict the effects on climate of different concentrations of greenhouse gases. Nevertheless, these computer models are not yet able to reflect the natural system of temperature regulation with much accuracy. As a result, scientists are not able to agree on the magnitude, spatial distribution, and timing of any climate changes caused by increased concentrations of greenhouse gases and the effect of natural mitigating factors. The computer models are particularly poor guides to regional variations of climate changes. These changes are the basis upon which economic impact studies are made, and are key to the development of responsible policy decisions.

4. The Economics of Climate Change.

Cost-benefit analyses of proposals for reducing emissions compare the costs of such proposals with any benefits they would produce

by altering climate processes. These benefits would equal the total costs of projected climate changes (often called the costs of not acting) only for proposals that promise to stabilize the climate. Most emission limitations that have been proposed internationally would reduce natural and human emissions only slightly and would therefore have only a minor effect on climate processes.

Economic studies of climate change issues have only just begun and little is yet known. For example, there are few quantitative analyses of the cost of sea level rise. Nor has there been much study of the impact that future climate changes may have on the agriculture, forestry and fishing industries, which are sensitive to climate variations. These industries amount to only 3 percent of the U.S. GNP, but they represent a much larger part of the economies of developing nations.

Studies based on historical data regarding carbon dioxide emissions suggest that stabilization or small reductions would impose costs on the order of 1 percent of GNP for industrialized countries by the turn of the century and that those costs would rise over time. Other studies based on analyses of particular technologies suggest that, in principle at least, costs could be more modest. Advances in technology could lower baseline emissions, costs of reduction, and the tendency of costs to rise over time.

5. Energy Issues in Climate Change.

Even though human activities cause only a fraction of greenhouse gas emissions, international talks have focused on reducing man-made emissions, especially emissions from the use of fossil fuel. The U.S. produced almost 6 billion tons of carbon dioxide from fossil fuels in 1988. Because this was about 25 percent of all man-made carbon dioxide emissions world-wide, the U.S. has become a large target for criticism from other countries despite our positive record on overall greenhouse gas emission control. It is worth noting that the U.S. also produces about 25 percent of the world's GNP, so that its share of man-made carbon dioxide emissions compares with its share of production.

THE CLIMATE CONVENTION NEGOTIATIONS:

A framework convention establishes general obligations and procedures for carrying out these obligations. Specific commitments are usually included in subsequent annexes or protocols to a convention. Nevertheless, several countries are pressing to include specific obligations for targets and timetables for stabilizing emissions of certain gases in the convention or in protocols negotiated simultaneously with the convention.

We have taken the position that such commitments are premature and should be negotiated only after signing a framework convention. Even then commitments should be made only if analyses demonstrate that they are necessary and will result in net benefits. The model is the Vienna Convention (March 22, 1985) on ozone depletion and the subsequent Montreal Protocol (September 16, 1987). We are uncertain of the level of support the U.S. will receive on our position and may have to reconsider if other countries fail to support us.

1. The Process.

The climate change negotiations will be carried out through the auspices of the Intergovernmental Negotiating Committee, serviced by a United Nations Secretariat. Following the first session here in Washington, most of the negotiating sessions will be held at U.N. facilities in Geneva, with one or possibly more sessions in Nairobi. Sessions will be one to two weeks in length, and will be held every three or four months through 1991. Sessions will be scheduled as needed in 1992. Jean Ripert of France is likely to be elected to chair the negotiations.

2. The U.S. Delegation.

The U.S. delegation for the first session will be headed by Curtis "Buff" Bohlen, Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs. The alternate head of delegation will be Robert A. Reinstein, Deputy Assistant Secretary of State for Environment, Health and Natural Resources. Reinstein will function as negotiator for this and subsequent sessions. The negotiating team is expected to include 12-15 representatives of the agencies with relevant energy, environmental, scientific and economic expertise and interest in this issue. Federal government agency involvement with the framework convention is being coordinated by the Department of State. White House coordination of the negotiations is being provided by the Office of Science and Technology Policy.

3. Agenda for the First Session.

Although a draft agenda has not yet been circulated by the U.N. Secretariat, the following work-plan is anticipated for the nine-day session:

- o Organizational matters (1 day);
- o Initial country statements (2 days);
- o Establishment of subgroups and preparation of the legal negotiating text (5 days); and
- o Other matters such as defining the relationship between the IPCC and these talks (1 day).

Countries will propose text they wish to see included in the convention. Language not agreed to by all the parties will be bracketed. Little attempt will be made to resolve differences about the text during the first session.

The U.S. will propose several non-controversial provisions, particularly in the area of scientific and economic research and cooperation. More importantly, as discussed in question 2 below, the U.S. will seek to convince other countries that they should adopt the comprehensive approach in the text of the framework agreement.

A summary of other countries' positions on the global change issue and their approach to the framework convention negotiations is attached in Appendix A.

4. Elements for Possible Inclusion in the Framework Convention.

In addition to certain non-controversial elements of the framework convention identified by the IPCC, we expect several controversial elements to be proposed as well.

-- Targets and Timetables: Several countries will try to force a debate about targets and timetables for reductions of greenhouse gas emissions, particularly carbon dioxide emissions from the burning of fossil fuels, over the next 18 months. All other OECD countries, except Turkey, have made statements arguing that such obligations should be undertaken now, either as part of the convention itself or in protocols negotiated simultaneously with the convention.

-- The Precautionary Principle: Many countries will suggest putting an article on the "Precautionary Principle" into the framework convention. As yet, there is no commonly accepted definition of this principle. Some believe it merely reiterates the need to prevent pollution. Others hold that it imposes a burden of proof, i.e., that an activity cannot be undertaken unless proof can be shown that it will not harm the environment.

-- Financial assistance: Consistent with the Houston Economic Declaration, a general commitment to promote financial assistance for developing countries will be negotiated in the framework convention. Developing countries will undoubtedly propose that this include a commitment to provide "new and additional" funding, a commitment that we oppose. The United States will argue that the newly established Global Environmental Facility in the World Bank is the appropriate mechanism through which any multilateral assistance should be processed.

-- Development and transfer of technology: The developing countries have often called for technology transfer on a "preferential and noncommercial basis." Although this language

raises the problem of protection of intellectual property rights, there is a wide range of technologies for which this issue does not arise. U.S. negotiators intend to highlight the value of existing cooperation programs.

QUESTION 1: Should the following strategy be adopted to guide U.S. representatives at the first negotiation session?

1. Propose specific language on scientific cooperation and monitoring consistent with the comprehensive approach.
2. Oppose specific targets and timetables for greenhouse gas emission reduction--particularly carbon dioxide.
3. Oppose extreme statements of the "Precautionary Principle."
4. Oppose commitment to new and additional financial assistance.
5. Explore ways of promoting technology transfer that will be advantageous to the U.S., taking full account of market forces and the protection of intellectual property rights.
6. Highlight steps already taken to show U.S. commitment to act. (See Question 3 for further elaboration).

Over the past year, the U.S. has taken a prudent approach to the climate change issue. Other countries have been willing to commit themselves to specific targets and timetables for reducing greenhouse gas emissions with little regard, in some cases, for either the cost or the lack of information necessary to craft an effective plan.

The U.S. is widely perceived as entering these negotiations in an isolated position, since it is the only major developed country that has not committed itself to a timetable for achieving specific greenhouse gas reductions. Therefore, to buttress the prudence of our approach we will need to have a well-defined negotiating plan to take with us to the table in February.

The U.S. can bolster its position on targets and timetables by pointing out the scientific uncertainties as well as the likely costs, administrative complexities, and possible trade problems that could arise from the imposition of large taxes on the carbon content of fossil fuels--the primary means for achieving major reductions. We have solid economic and scientific research already under way and partially completed that could be used to back up this position.

To address the doubt expressed by other countries concerning the sincerity of our commitment on the climate change issue, we may wish to consider signals that would show the U.S. commitment to act. Indeed, we are already taking steps--albeit steps justified for other reasons such as energy security, clean air and other

environmental concerns--that address climate issues and that can be used to improve the U.S. bargaining position. (Question 3 sets forth a specific proposal in this regard).

Pros:

- o This strategy highlights steps already taken that demonstrate U.S. leadership, and underscores the prudence of the U.S. approach for addressing global climate change.
- o The positions outlined are consistent with past U.S. negotiations on the issue.
- o The strategy emphasizes the importance of reliable scientific and economic research as the basis of any action.
- o Avoiding specific commitments on timetables and levels of reduction until subsequent protocols provides more time to gather the scientific and economic data necessary to make informed decisions.
- o The approach is supported by some other countries (including Canada and some developing countries) and by some environmental leaders.

Cons:

- o This strategy may be considered a delaying tactic by other countries, by environmental groups and by the media.
- o If our position is seen as too obstructionist, it may reduce our negotiating leverage on this issue.
- o The media is likely to continue its criticism of the Administration on this issue.

QUESTION 2: Should U.S. negotiators press other nations to adopt the "comprehensive approach" in the Framework Convention?

Over the past year, the U.S. has actively promoted a "comprehensive approach" to greenhouse gases. Under this approach, all gases would be placed on an equal footing based on a scientifically determined "greenhouse potential index"--an index taking into account the intrinsic molecular greenhouse efficiency of each gas, its average residence time in the atmosphere and other relevant considerations.

This approach is preferable because: (1) other gases than carbon dioxide are greenhouse gases, some of which are less costly to

regulate (such as CFC's); (2) it would ensure that developing nations contribute to the international effort; (3) it lays the groundwork for a market approach (nationally and internationally) to reduce emissions at the lowest possible cost; (4) it avoids problems inherent in attempting to develop individual protocols for each greenhouse gas, and (5) it focuses attention on the potential for expanding sinks that sequester greenhouse gas emissions.

Pros:

- o Promotes an innovative approach to the issue of climate change enhances U.S. leadership in the negotiations.
- o Moves the climate change issue away from a narrow focus on carbon dioxide which places a disproportionate burden on energy and transportation sectors of the economy.
- o It is a more valid approach, from a scientific perspective, than other approaches.
- o Focussing on the total picture, including both sinks and sources, increases the flexibility of efforts to limit the effects of greenhouse gases.

Cons:

- o Some countries may portray our strong support for this approach as a ploy for avoiding the reduction of carbon dioxide.
- o May involve measurement requirements too sophisticated for some countries to handle.
- o Scientific uncertainties regarding characteristics and behavior of some of the gases make it difficult to calculate exactly comparable indices at this time.
- o Methods for monitoring and reducing emissions of greenhouse gases from sources such as forestry, bovine animals, and pipelines are still being developed.
- o May become a tactical bargaining chip that could be used to pressure the U.S. into accepting targets and timetables.

QUESTION 3: Should a document be released at the first negotiating session outlining U.S. accomplishments that reduce greenhouse gas emissions?

Although we have opposed specific timetables and targets for reducing emissions, the U.S. has already taken steps that address

the possibility of global climate change, such as the global change research program, the Clean Air Act, phasing out CFC's, and the tree initiative. In fact our efforts are unmatched by any other country. Nevertheless, the U.S. was portrayed as anti-environment at earlier climate change conferences principally because of our lack, to date, of initiatives in the energy sector. This situation might change if attention is directed to our achievements. For this reason, we are developing a publication to highlight U.S. accomplishments which could be distributed at the first negotiating session.

The document could be framed as a U.S. "Action Plan" on climate change. While it would be comprised of steps already approved or on their way to being implemented, it is important not to frame the document solely as an "accomplishments" brochure, lest there be an attempt to discount actions already taken in order to press for future commitments. Similar brochures have been prepared and distributed by other countries at past conferences. A draft for such a document is attached in Appendix B.

Pros:

- o The concrete steps taken by the U.S. compare well with the largely rhetorical policy pursued by critics of the Administration.
- o A quality document would demonstrate our rigorous interest in the global climate change issue without breaking new policy ground.
- o The U.S. would no longer be the only country without an "Action Plan."

Cons:

- o Could become the focus of a negative campaign by being portrayed as papering over the U.S. unwillingness to make new international commitments.
- o May raise questions about why the U.S. still refuses to endorse targets and timetables--if the U.S. is so close to achieving targets others only talk about, why does it continue to resist targets?
- o Could provide fodder for manipulation by countries or interest groups with opposing views of the United States.

Attachments

Country Targets and Timetables

Australia

Cabinet announced target 11 October of stabilizing CO₂, CH₄, N₂O at 1988 levels by 2000, reducing 20 percent by 2005, provided no net adverse effect on Australian competitiveness if other major developed nations do not take similar actions.

Austria

Urged at February IPCC plenary that industrialized countries stabilize by 2000 as first step; no specific domestic target set.

Belgium

Said at IEA meeting in July that it had begun taking actions that would lower emissions, but had not yet conducted the analysis necessary to justify establishing a target. Supported US position at Bergen.

Brazil

President Collor noted in June World Environment Day speech the need for specific commitments for the stabilization and reductions of CO₂ emissions per capita. He implied, but did not explicitly state, that he was referring foremost to the fossil fuel emissions of developed countries.

Canada

Pledged in June to stabilize CO₂ at 1988 levels by 2005.

China

Strongly implies that it favors targets for developed countries, opposes them for LDCs. Projects substantial CO₂ emissions growth.

Denmark

National energy plan calls for 20 percent CO₂ reduction by 2005.

EC Commission

Favors stabilization of CO₂ at 1990 levels by year 2000, significant reduction by 2005.

Finland

Urged at IPCC February plenary that industrialized countries stabilize by year 2000 as first step, no specific domestic target set.

France

Proposed in September a three-tiered global strategy to converge per capita CO2 emissions rates by early 21st century. Under this plan, France would stabilize its emissions at or below 2.0 tons per capita by 2000 (up to a 10 percent increase from current levels), provided that other major industrialized countries agree to stabilize their emissions.

Germany

Cabinet announced in June non-binding commitment to reduce CO2 emissions 25 percent from 1987 levels in former West German area by 2005.

India

Opposes targets for developing countries.

Israel

Opposes targets.

Italy

Supports stabilization of CO2 at 1990 levels by 2000 as part of EC-wide initiative. No domestic target set.

Japan

Announced action plan 19 October to stabilize CO2 emissions per capita at 1990 levels by 2000. Methane emissions will also be capped at current levels. Gross CO2, N2O, and other greenhouse gas emissions will be stabilized by 2000 if feasible.

Malta

Supports targets and timetables; no domestic target set.

Mexico

Appreciates unilateral commitments by industrialized countries to stabilize emissions by 2000. Believes obligations should be equitably differentiated according to

countries' respective responsibilities for causing and combatting climate change and their level of development.

Netherlands

Parliament passed in September revised National Environmental Policy Plan, calling for stabilization of CO2 emissions at 1989-90 average by 1994-95, 3 to 5 percent reduction by 2000. Government officials describe commitment as binding.

New Zealand

Environment minister announced plans in September to reduce CO2 emissions 20 percent from 1990 levels by 2005.

Norway

National goal is stabilization at 1987 levels by 2000, provided other countries take similar actions.

Portugal

Opposes targets.

Saudi Arabia

Favors stabilization by 2000 target for industrialized countries; no domestic target set.

Spain

Would support EC stabilization target if scaled to current per capita emissions so as to be equitable among EC members.

Sweden

Parliamentary mandate to stabilize CO2 at 1988 levels. Supported call at IPCC February plenary for stabilization by 2000.

Switzerland

Urged at IPCC February plenary that industrialized countries stabilize emissions by year 2000 as first step; no domestic target set.

United Kingdom

Prime Minister Thatcher announced in May that the UK would enact a strategy to achieve a stabilization of CO2 emissions at 1990 levels by 2005, provided other major industrialized countries take similar steps.

USSR

Opposes targets.

Venezuela

Opposes targets.

Note: Only the government of the Netherlands describes its target as binding.

DRAFT

THE WHITE HOUSE

WASHINGTON

January 21, 1991

MEMORANDUM FOR THE DOMESTIC POLICY COUNCIL

FROM: The Global Change Working Group

SUBJECT: Framework Convention on Climate Change

ISSUE:

Negotiators representing the United States at the first negotiating session of the Framework Convention on Climate Change on February 4, 1991 require guidance on three issues:

- (1) Aspects of the strategy U.S. representatives should follow during the negotiations;
- (2) Whether we should press other nations to adopt the "comprehensive approach;" and
- (3) Whether a document outlining U.S. accomplishments should be released at the first negotiating session.

BACKGROUND:

1. The General Situation.

Formal negotiations on a framework convention will take place, over the next 18 months, under auspices of the United Nations General Assembly. The purpose of the Convention will be to establish an institutional basis for international cooperation in the conduct of scientific research, and in the exchange of information on global climate change. It will also provide the legal and logistical structure for any future protocols or annexes containing specific commitments. The Convention is expected to be ready for signing at the June 1992 U.N. Conference on Environment and Development in Brazil.

President Bush has invited other nations to meet in Washington for the first negotiating session. This is scheduled to take place February 4 to 14, 1991. The first negotiating session will focus on organizational and procedural issues. This paper provides background on the question of climate change and addresses three issues that need to be considered prior to the negotiations.

2. Previous International Action.

The World Meteorological Organization and the United Nations Environment Programme set up the Intergovernmental Panel on Climate Change (IPCC) in 1987 as a vehicle to assess scientific

information pertaining to climate change, impacts of such change, and possible strategies to assist in responding to potential changes. The U.S. participated in and endorsed the activities of the IPCC.

At the Second World Climate Conference in November 1990, the IPCC adopted an interim report. This report addressed four major areas of climate change: (1) research; (2) the impacts of potential change; (3) response strategies; and (4) legal measures to implement response strategies, including possible elements of a framework convention on climate change. This report forms the basis for the negotiations on a framework convention on climate change.

The Second World Climate Conference agreed that the scientific conclusions set out by the IPCC reflect the international consensus of scientific understanding of climate change, including these key points:

- o "Emissions resulting from human activities are substantially increasing atmospheric concentrations of greenhouse gases. These increases will enhance the natural greenhouse effect, resulting on average in an additional warming of the Earth's surface."
- o "Without actions to reduce emissions, global warming is predicted to reach 2 to 5 degrees C over the next century, a rate of change unprecedented in the past 10,000 years."
- o "The warming is expected to be accompanied by a sea level rise of 65 cm (+/- 35 cm) by the end of the next century."
- o There are substantial scientific uncertainties in the details of climate change. To narrow the uncertainties, research is being conducted in high priority areas, such as oceans, clouds, carbon cycle, polar ice sheet, and sea ice.

Some policy makers do not share the certainty reflected by the predictions published in the IPCC report, because of the unsettled state of the scientific analysis.

3. The Science of Climate Change.

Studies show that concentrations of greenhouse gases have increased. However, the causes of this increase--including both natural and human factors, as well as the way these may affect regional climate patterns and the earth's temperature regulation process--continue to be unclear. Certain gases, such as carbon dioxide, methane, nitrous oxide, and chlorofluorocarbons (CFC's),

increase the retention of heat in the atmosphere. Natural processes are responsible for twenty times the amount of greenhouse gas fluctuations than those caused by human activities. Nevertheless, significant changes in atmospheric concentrations are being caused by human-related activities, largely reflecting increases in industrialization.

The earth adapts to changes in greenhouse gas concentrations through a complex system that naturally regulates global temperatures. One result of this natural regulatory process may be changing climate patterns and higher average temperatures. This system is not only affected by "sources" of greenhouse gas emissions, but also by "sinks" that sequester concentrations of these gases. The system also includes the radiation of energy into space.

Although scientific research on the relation between the emission of greenhouse gases and climate change has focussed on global warming, this is only one of several interrelated climate phenomena that may be affected by such emissions. Other climate phenomena that may be affected include the patterns and amounts of precipitation, the patterns and severity of storms, as well as the mean sea level. Each of these climate phenomena involve significant fluctuations in temperature over wide regions of the earth's surface. It is important to note that the effects of climate change may vary by region. Changes in temperature and precipitation may cause adverse effects in some areas of the world while resulting in beneficial effects in other areas.

Computer models have been developed to predict the effects on climate of different concentrations of greenhouse gases. Nevertheless, these computer models are not yet able to reflect the natural system of temperature regulation with much accuracy. As a result, scientists are not able to agree on the magnitude, spatial distribution, and timing of any climate changes caused by increased concentrations of greenhouse gases and the effect of natural mitigating factors. The computer models are particularly poor guides to regional variations of climate changes. These changes are the basis upon which economic impact studies are made, and are key to the development of responsible policy decisions.

4. The Economics of Climate Change.

Economic studies compare the costs of reducing emissions to the costs of not acting. The costs of not acting do not translate directly into the possible benefits of reducing emissions. For example, the limitation of emissions proposed by some countries would reduce natural and human emissions only slightly and would therefore have only a minor effect on climate processes.

Economic studies of climate change issues have only just begun

and little is yet known. For example, there are few quantitative analyses of the cost of sea level rise. Nor has there been much study of the impact that future climate changes may have on the agriculture, forestry and fishing industries, which are sensitive to climate variations. These industries amount to only 3 percent of the U.S. GNP, but they represent a much larger part of the economies of developing nations.

Studies based on historical data regarding carbon dioxide emissions suggest that stabilization or small reductions would impose costs on the order of 1 percent of GNP for industrialized countries by the turn of the century and that those costs would rise over time. Other studies based on analyses of particular technologies suggest that, in principle at least, costs could be more modest. Advances in technology could lower baseline emissions, costs of reduction, and the tendency of costs to rise over time.

5. Energy Issues in Climate Change.

Even though human activities cause only a fraction of greenhouse gas emissions, international talks have focused on reducing man-made emissions, especially emissions from the use of fossil fuel. The U.S. produced almost 6 billion tons of carbon dioxide from fossil fuels in 1988. This was about 25 percent of all man-made carbon dioxide emissions world-wide and has drawn criticism from other countries despite our positive record on overall greenhouse gas emission control.

THE CLIMATE CONVENTION NEGOTIATIONS:

A framework convention establishes general obligations and procedures for carrying out these obligations. Specific commitments are usually included in subsequent annexes or protocols to a convention. Nevertheless, several countries are pressing to include specific obligations for targets and timetables for stabilizing emissions of certain gases in the convention or in protocols negotiated simultaneously with the convention.

We have taken the position that such commitments are premature and should be negotiated after signing of a framework convention. Even then commitments should be made only if analyses demonstrate that they are necessary and will result in net benefits. We may have to reconsider our position if other countries fail to support us.

1. The Process.

The climate change negotiations will be carried out through a forum provided by the Intergovernmental Negotiating Committee, serviced by a United Nations Secretariat. Following the first

session here in Washington, most of the negotiating sessions will be held at U.N. facilities in Geneva, with one or possibly more sessions in Nairobi. Sessions will be one to two weeks in length, and will be held every three or four months through 1991. Sessions will be scheduled as needed in 1992. Jean Ripert of France is likely to be elected to chair the negotiations.

2. The U.S. Delegation.

The U.S. delegation for the first session will be headed by Curtis "Buff" Bohlen, Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs. The alternate head of delegation will be Robert A. Reinstein, Deputy Assistant Secretary of State for Environment, Health and Natural Resources. Reinstein will function as negotiator for this and subsequent sessions. The negotiating team is expected to include 12-15 representatives of the agencies with relevant energy, environmental, scientific and economic expertise and interest in this issue. Federal government agency involvement with the framework convention is being coordinated by the Department of State. White House coordination of the negotiations is being provided by the Office of Science and Technology Policy.

3. Agenda for the First Session.

Although a draft agenda has not yet been circulated by the U.N. Secretariat, the following work-plan is anticipated for the nine-day session:

- o Organizational matters (1 day);
- o Initial country statements (2 days);
- o Establishment of subgroups and preparation of the legal negotiating text (5 days); and
- o Other matters such as defining the relationship between the IPCC and these talks (1 day).

Countries will propose text they wish to see included in the convention. Language not agreed to by all the parties will be bracketed. Little attempt will be made to resolve differences about the text during the first session.

The U.S. will propose several non-controversial provisions, particularly in the area of scientific and economic research and cooperation. More importantly, as discussed in question 2 below, the U.S. will seek to convince other countries that they should adopt the comprehensive approach in the text of the framework agreement.

A summary of other countries' positions on the global change issue and their approach to the framework convention negotiations is attached in Appendix A.

4. Elements for Possible Inclusion in the Framework Convention.

In addition to the non-controversial elements of the framework convention which were identified by the IPCC, we expect several controversial elements to be proposed as well.

-- Targets and Timetables: Several countries will try to force a debate about targets and timetables for reductions of greenhouse gas emissions, particularly carbon dioxide emissions from the burning of fossil fuels, over the next 18 months. All other OECD countries, except Turkey, have made statements arguing that such obligations should be undertaken now, either as part of the convention itself or in protocols negotiated simultaneously with the convention.

-- The Precautionary Principle: Many countries will suggest including an article on the so-called "Precautionary Principle" in the framework convention. There is, however, no definition of this principle that is universally accepted. Some have described it as merely a statement reiterating the need to prevent pollution. Others have taken the position that it requires affirmative proof that an activity will not harm the environment before it can be undertaken.

-- Financial assistance: Consistent with the Houston Economic Declaration, a general commitment to promote financial assistance for developing countries will be negotiated in the framework convention. Developing countries will undoubtedly propose that this include a commitment to provide "new and additional" funding, a commitment that we oppose. The United States will argue that the newly established Global Environmental Facility in the World Bank is the appropriate mechanism through which any multilateral assistance should be processed.

-- Development and transfer of technology: The developing countries have often called for technology transfer on a "preferential and noncommercial basis." Although this language raises the problem of protection of intellectual property rights, there is a wide range of technologies for which this issue does not arise. U.S. negotiators intend to highlight the value of existing cooperation programs.

QUESTION 1: Should the following strategy be adopted to guide U.S. representatives at the first negotiation session?

1. Propose specific language on scientific cooperation and monitoring consistent with the comprehensive approach.
2. Oppose specific targets and timetables for greenhouse gas emission reduction--particularly carbon dioxide.
3. Oppose general statements of the "Precautionary

Principle."

4. Oppose commitment to new and additional financial assistance.
5. Explore ways of promoting technology transfer that will be advantageous to the U.S., taking full account of market forces and the protection of intellectual property rights.

Over the past year, the U.S. has taken a prudent approach to the climate change issue. Other countries have been willing to commit themselves to specific targets and timetables for reducing greenhouse gas emissions with little regard for either the cost or the lack of information necessary to craft an effective plan.

Some will argue that the U.S. enters these negotiations in an isolated position, alleging that it is the only major developed country that has not committed itself to a timetable for achieving specific greenhouse gas reductions. To buttress our prudent approach, we will therefore need to have a well-defined negotiating plan to take to the table in February.

The U.S. can bolster its position on targets and timetables by pointing out the scientific uncertainties as well as the likely costs, administrative complexities, and possible trade problems that could arise from the imposition of large taxes on the carbon content of fossil fuels--the primary means for achieving major reductions). We have solid economic and scientific research already under way and partially completed that could be used to back up this position.

To address the doubt expressed by other countries concerning the sincerity of our commitment in the climate change issue, we may wish to consider signals that would show the U.S. commitment to act. Indeed, we are already taking steps--albeit steps justified for other reasons such as energy security, clean air and other proven environmental concerns--that address climate issues and that can be used to improve the U.S. bargaining position.

Pros:

- o This strategy underscores U.S. leadership in addressing global climate change.
- o The positions outlined are consistent with past U.S. negotiations on the issue.
- o The strategy emphasizes the importance of reliable scientific and economic research as the basis of any action.
- o Avoiding specific commitments on timetables and levels of reduction until subsequent protocols provides more time to gather the scientific and economic data necessary to make

informed decisions.

- o The approach is supported by some other countries (including Canada and some developing countries) and by some environmental leaders.

Cons:

- o This strategy may be considered a delaying tactic by other countries, by environmental groups and by the media.
- o If our position is seen as too passive, it may reduce our leadership position on this issue.
- o The media is likely to continue its criticism of the Administration on this issue.

QUESTION 2: Should U.S. negotiators press other nations to adopt the "comprehensive approach" in the Framework Convention?

Over the past year, the U.S. has actively promoted a "comprehensive approach" to greenhouse gases. Under this approach, all gases would be placed on an equal footing based on a scientifically determined "greenhouse potential index"--an index taking into account the intrinsic molecular greenhouse efficiency of each gas, its average residence time in the atmosphere and other relevant considerations.

This approach is preferable because: (1) other gases than carbon dioxide are greenhouse gases, some of which are less costly to regulate (such as CFC's); (2) it would encourage developing nations to contribute to limiting the emission of greenhouse gases; (3) it lays the groundwork for a market approach (nationally and internationally) to maximize emission reductions at the lowest possible cost; (4) it avoids problems inherent in attempting to develop individual protocols for each greenhouse gas, and (5) it focuses attention on the potential for expanding sinks that sequester greenhouse gas emissions.

Pros:

- o Promoting an innovative approach to the issue of climate change enhances U.S. leadership in the negotiations.
- o Moves the climate change issue away from a narrow focus on carbon dioxide that places a disproportionate burden on energy and transportation sectors of the economy.
- o It is more scientifically valid than other approaches.

- o Focussing on the total picture, including both sinks and sources, increases the flexibility of efforts to limit the effects of greenhouse gases.

Cons:

- o Some countries may portray our strong support for this approach as a ploy for avoiding the reduction of carbon dioxide.
- o May be considered too complicated for some countries to implement.
- o Scientific uncertainties regarding characteristics and behavior of some of the gases make it difficult to calculate exactly comparable indices at this time.
- o Methods for monitoring and reducing emissions of greenhouse gases from sources such as forestry, bovine animals, and pipelines are still being developed.

QUESTION 3: Should a document be released at the first negotiating session outlining U.S. accomplishments that reduce greenhouse gas emissions?

Although we have opposed specific timetables and targets for reducing emissions, the U.S. has already taken steps that address the possibility of global climate change, such as the global change research program, the Clean Air Act, phasing out CFC's, and the tree initiative. In fact our efforts are unmatched by any other country. Nevertheless, the U.S. has been portrayed as anti-environment at earlier climate change conferences. This situation might change if attention is directed to our achievements. For this reason, we are developing a publication to highlight U.S. accomplishments which could be distributed at the first negotiating session.

The document could be framed as a U.S. "Action Plan" on climate change. While it would be comprised of steps already approved or on their way to being implemented, it is important not to frame the document solely as an "accomplishments" brochure, lest there be an attempt to discount actions already taken in order to press for future commitments. Similar brochures have been prepared and distributed by other countries at past conferences. A draft for such a document is attached in Appendix B.

Pros:

- o The concrete steps taken by the U.S. compares well with the largely rhetorical policy pursued by critics of the Administration, both at home and abroad.

- o A quality document would demonstrate our interest in the global climate change issue without breaking new policy ground.
- o The U.S. would no longer be the only country without an "Action Plan."

Cons:

- o Could become the focus of a negative campaign by being portrayed as papering over the U.S. unwillingness to make international commitments.
- o May raise questions about why the U.S. still refuses to endorse targets and timetables--if the U.S. is so close to achieving targets others only talk about, why does it continue to resist targets?
- o Could provide fodder for manipulation by countries or interest groups with opposing views of the United States.

Attachments

POSITIONS ON CO₂ EMISSION TARGETS

		Base Year (when specified)
Stabilization by 1995:	Netherlands	1989-90
Stabilization by 2000:	Australia	1988
	Austria	
	EC Commission	1990
	Finland	
	Italy	1990
	Japan	1990
	Norway	1987
	Sweden	1988
	Switzerland	
Stabilization at ~ 10% over current levels by 2000:	France	
Stabilization by 2005:	Canada	1988
	United Kingdom	1990
3-5% reduction by 2000:	Netherlands	1989-90
20% reduction by 2005:	Australia	1988
	Denmark	
	New Zealand	1990
25% reduction by 2005:	Germany	1987
Support targets for industrialized countries, weaker or no targets for LDCs:	Brazil	
	China	
	India	
	Malta	
	Mexico	
	Saudi Arabia	
Oppose targets:	Israel	
	USSR	
	Venezuela	

Country Targets and Timetables

Australia

Cabinet announced target 11 October of stabilizing CO₂, CH₄, N₂O at 1988 levels by 2000, reducing 20 percent by 2005, provided no net adverse effect on Australian competitiveness if other major developed nations do not take similar actions.

Austria

Urged at February IPCC plenary that industrialized countries stabilize by 2000 as first step; no specific domestic target set.

Belgium

Said at IEA meeting in July that it had begun taking actions that would lower emissions, but had not yet conducted the analysis necessary to justify establishing a target. Supported US position at Bergen.

Brazil

President Collor noted in June World Environment Day speech the need for specific commitments for the stabilization and reductions of CO₂ emissions per capita. He implied, but did not explicitly state, that he was referring foremost to the fossil fuel emissions of developed countries.

Canada

Pledged in June to stabilize CO₂ at 1988 levels by 2005.

China

Strongly implies that it favors targets for developed countries, opposes them for LDCs. Projects substantial CO₂ emissions growth.

Denmark

National energy plan calls for 20 percent CO₂ reduction by 2005.

EC Commission

Favors stabilization of CO₂ at 1990 levels by year 2000, significant reduction by 2005.

Finland

Urged at IPCC February plenary that industrialized countries stabilize by year 2000 as first step, no specific domestic target set.

France

Proposed in September a three-tiered global strategy to converge per capita CO2 emissions rates by early 21st century. Under this plan, France would stabilize its emissions at or below 2.0 tons per capita by 2000 (up to a 10 percent increase from current levels), provided that other major industrialized countries agree to stabilize their emissions.

Germany

Cabinet announced in June non-binding commitment to reduce CO2 emissions 25 percent from 1987 levels in former West German area by 2005.

India

Opposes targets for developing countries.

Israel

Opposes targets.

Italy

Supports stabilization of CO2 at 1990 levels by 2000 as part of EC-wide initiative. No domestic target set.

Japan

Announced action plan 19 October to stabilize CO2 emissions per capita at 1990 levels by 2000. Methane emissions will also be capped at current levels. Gross CO2, N2O, and other greenhouse gas emissions will be stabilized by 2000 if feasible.

Malta

Supports targets and timetables; no domestic target set.

Mexico

Appreciates unilateral commitments by industrialized countries to stabilize emissions by 2000. Believes obligations should be equitably differentiated according to

countries' respective responsibilities for causing and combatting climate change and their level of development.

Netherlands

Parliament passed in September revised National Environmental Policy Plan, calling for stabilization of CO2 emissions at 1989-90 average by 1994-95, 3 to 5 percent reduction by 2000. Government officials describe commitment as binding.

New Zealand

Environment minister announced plans in September to reduce CO2 emissions 20 percent from 1990 levels by 2005.

Norway

National goal is stabilization at 1987 levels by 2000, provided other countries take similar actions.

Portugal

Opposes targets.

Saudi Arabia

Favors stabilization by 2000 target for industrialized countries; no domestic target set.

Spain

Would support EC stabilization target if scaled to current per capita emissions so as to be equitable among EC members.

Sweden

Parliamentary mandate to stabilize CO2 at 1988 levels. Supported call at IPCC February plenary for stabilization by 2000.

Switzerland

Urged at IPCC February plenary that industrialized countries stabilize emissions by year 2000 as first step; no domestic target set.

United Kingdom

Prime Minister Thatcher announced in May that the UK would enact a strategy to achieve a stabilization of CO2 emissions at 1990 levels by 2005, provided other major industrialized countries take similar steps.

USSR

Opposes targets.

Venezuela

Opposes targets.

Note: Only the government of the Netherlands describes its target as binding.

Withdrawal/Redaction Sheet

(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
06a. Memo	From D. Allan Bromley to John Sununu Re: Global Climate Change (3 pp.)	1/22/91	P/5	

Collection:

Record Group: Bush Presidential Records
Office: Chief of Staff to the President, Office of the
Series: Sununu, John, Files
Subseries: Issues Files
WHORM Cat.:
File Location: Global Warming 1991 [4]

Open on Expiration of PRA
 (Document Follows)

By JP (NLGB) on 10/28/05

Date Closed: 1/4/2005	OA/ID Number: 29159-003
FOIA/SYS Case #: 1998-0004-F[2]	Appeal Case #:
Re-review Case #: 2005-0426-S	Appeal Disposition:
P-2/P-5 Review Case #:	Disposition Date:
AR Case #:	MR Case #:
AR Disposition:	MR Disposition:
AR Disposition Date:	MR Disposition Date:

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

- P-1 National Security Classified Information [(a)(1) of the PRA]
- P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
- P-3 Release would violate a Federal statute [(a)(3) of the PRA]
- P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
- P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [(a)(5) of the PRA]
- P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Removed as a personal record misfile.

Freedom of Information Act - [5 U.S.C. 552(b)]

- (b)(1) National security classified information [(b)(1) of the FOIA]
- (b)(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]
- (b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]
- (b)(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]
- (b)(6) Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]
- (b)(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]
- (b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
- (b)(9) Release would disclose geological or geophysical information

THE WHITE HOUSE

WASHINGTON

January 22, 1991

MEMORANDUM FOR GOVERNOR SUNUNU

FROM: D. ALLAN BROMLEY *Duan*

SUBJECT: Global Climate Change

Attached is a paper on remaining issues that need clarification prior to the negotiating session on a framework convention on climate change, scheduled to begin here on February 4.

I would like to schedule some time with you today to review the paper and discuss future steps. This could include discussion in a small group, or the full Domestic Policy Council.

The first document is in a form that could go to the DPC if you so decide. The second provides some data on the current positions of other countries and the third is a very rough cut at an accomplishment paper that I believe to be important in getting the accomplishments of the Bush Administration before the public — both domestic and international — with our spin for a change rather than leaving the environmental activists with a clear field in which to work us over. Both in terms of our investment in new understanding of the phenomenon — both scientific and economic — and of concrete action rather than talk, we have a record unmatched by any other time in the President's recent paper credit. I am sure that the working of up.

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MEMORANDUM FOR C

FROM: D

SUBJECT: G

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THE WHITE HOUSE
WASHINGTON

DRAFT

January 21, 1991

MEMORANDUM FOR THE DOMESTIC POLICY COUNCIL

FROM: The Global Change Working Group

SUBJECT: Framework Convention on Climate Change

ISSUE:

Negotiators representing the United States at the first negotiating session of the Framework Convention on Climate Change on February 4, 1991 require guidance on three issues:

- (1) Aspects of the strategy U.S. representatives should follow during the negotiations;
- (2) Whether we should press other nations to adopt the "comprehensive approach;" and
- (3) Whether a document outlining U.S. accomplishments should be released at the first negotiating session.

BACKGROUND:

1. The General Situation.

Formal negotiations on a framework convention will take place, over the next 18 month, under auspices of the United Nations General Assembly. The purpose of the Convention will be to establish an institutional basis for international cooperation in the conduct of scientific research, and in the exchange of information on global climate change. It will also provide the legal and logistical structure for any future protocols or annexes containing specific commitments. The Convention is expected to be ready for signing at the June 1992 U.N. Conference on Environment and Development in Brazil.

President Bush has invited other nations to meet in Washington for the first negotiating session. This is scheduled to take place February 4 to 14, 1991. The first negotiating session will focus on organizational and procedural issues. This paper provides background on the question of climate change and addresses three issues that need to be considered prior to the negotiations.

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Although scientific research on the relation between the emission of greenhouse gases and climate change has focussed on global warming, this is only one of several interrelated climate phenomena that may be affected by such emissions. Other climate phenomena that may be affected include the patterns and amounts of precipitation, the patterns and severity of storms, as well as the mean sea level. Each of these climate phenomena involve significant fluctuations in temperature over wide regions of the earth's surface. It is important to note that the effects of climate change may vary by region. Changes in temperature and precipitation may cause adverse effects in some areas of the world while resulting in beneficial effects in other areas.

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Studies based on historical data regarding carbon dioxide emissions suggest that stabilization or small reductions would impose costs on the order of 1 percent of GNP for industrialized countries by the turn of the century and that those costs would rise over time. Other studies based on analyses of particular technologies suggest that, in principle at least, costs could be more modest. Advances in technology could lower baseline emissions, costs of reduction, and the tendency of costs to rise over time.

5. Energy Issues in Climate Change.

Even though human activities cause only a fraction of greenhouse gas emissions, international talks have focused on reducing man-made emissions, especially emissions from the use of fossil fuel. The U.S. produced almost 6 billion tons of carbon dioxide from fossil fuels in 1988. This was about 25 percent of all man-made carbon dioxide emissions world-wide and has drawn criticism from other countries despite our positive record on overall greenhouse gas emission control.

THE CLIMATE CONVENTION NEGOTIATIONS:

A framework convention establishes general obligations and procedures for carrying out these obligations. Specific commitments are usually included in subsequent annexes or protocols to a convention. Nevertheless, several countries are pressing to include specific obligations for targets and timetables for stabilizing emissions of certain gases in the convention or in protocols negotiated simultaneously with the convention.

We have taken the position that such commitments are premature and should be negotiated after signing of a framework convention. Even then commitments should be made only if analyses demonstrate that they are necessary and will result in net benefits. We may have to reconsider our position if other countries fail to support us.

1. The Process.

The climate change negotiations will be carried out through a forum provided by the Intergovernmental Negotiating Committee, serviced by a United Nations Secretariat. Following the first

session here in Washington, most of the negotiating sessions will be held at U.N. facilities in Geneva, with one or possibly more sessions in Nairobi. Sessions will be one to two weeks in length, and will be held every three or four months through 1991. Sessions will be scheduled as needed in 1992. Jean Ripert of France is likely to be elected to chair the negotiations.

2. The U.S. Delegation.

The U.S. delegation for the first session will be headed by Curtis "Buff" Bohlen, Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs. The alternate head of delegation will be Robert A. Reinstein, Deputy Assistant Secretary of State for Environment, Health and Natural Resources. Reinstein will function as negotiator for this and subsequent sessions. The negotiating team is expected to include 12-15 representatives of the agencies with relevant energy, environmental, scientific and economic expertise and interest in this issue. Federal government agency involvement with the framework convention is being coordinated by the Department of State. White House coordination of the negotiations is being provided by the Office of Science and Technology Policy.

3. Agenda for the First Session.

Although a draft agenda has not yet been circulated by the U.N. Secretariat, the following work-plan is anticipated for the nine-day session:

- o Organizational matters (1 day);
- o Initial country statements (2 days);
- o Establishment of subgroups and preparation of the legal negotiating text (5 days); and
- o Other matters such as defining the relationship between the IPCC and these talks (1 day).

Countries will propose text they wish to see included in the convention. Language not agreed to by all the parties will be bracketed. Little attempt will be made to resolve differences about the text during the first session.

The U.S. will propose several non-controversial provisions, particularly in the area of scientific and economic research and cooperation. More importantly, as discussed in question 2 below, the U.S. will seek to convince other countries that they should adopt the comprehensive approach in the text of the framework agreement.

A summary of other countries' positions on the global change issue and their approach to the framework convention negotiations is attached in Appendix A.

4. Elements for Possible Inclusion in the Framework Convention.

In addition to the non-controversial elements of the framework convention which were identified by the IPCC, we expect several controversial elements to be proposed as well.

-- Targets and Timetables: Several countries will try to force a debate about targets and timetables for reductions of greenhouse gas emissions, particularly carbon dioxide emissions from the burning of fossil fuels, over the next 18 months. All other OECD countries, except Turkey, have made statements arguing that such obligations should be undertaken now, either as part of the convention itself or in protocols negotiated simultaneously with the convention.

-- The Precautionary Principle: Many countries will suggest including an article on the so-called "Precautionary Principle" in the framework convention. There is, however, no definition of this principle that is universally accepted. Some have described it as merely a statement reiterating the need to prevent pollution. Others have taken the position that it requires affirmative proof that an activity will not harm the environment before it can be undertaken.

-- Financial assistance: Consistent with the Houston Economic Declaration, a general commitment to promote financial assistance for developing countries will be negotiated in the framework convention. Developing countries will undoubtedly propose that this include a commitment to provide "new and additional" funding, a commitment that we oppose. The United States will argue that the newly established Global Environmental Facility in the World Bank is the appropriate mechanism through which any multilateral assistance should be processed.

-- Development and transfer of technology: The developing countries have often called for technology transfer on a "preferential and noncommercial basis." Although this language raises the problem of protection of intellectual property rights, there is a wide range of technologies for which this issue does not arise. U.S. negotiators intend to highlight the value of existing cooperation programs.

QUESTION 1: Should the following strategy be adopted to guide U.S. representatives at the first negotiation session?

1. Propose specific language on scientific cooperation and monitoring consistent with the comprehensive approach.
2. Oppose specific targets and timetables for greenhouse gas emission reduction--particularly carbon dioxide.
3. Oppose general statements of the "Precautionary

Principle."

4. Oppose commitment to new and additional financial assistance.
5. Explore ways of promoting technology transfer that will be advantageous to the U.S., taking full account of market forces and the protection of intellectual property rights.

Over the past year, the U.S. has taken a prudent approach to the climate change issue. Other countries have been willing to commit themselves to specific targets and timetables for reducing greenhouse gas emissions with little regard for either the cost or the lack of information necessary to craft an effective plan.

Some will argue that the U.S. enters these negotiations in an isolated position, alleging that it is the only major developed country that has not committed itself to a timetable for achieving specific greenhouse gas reductions. To buttress our prudent approach, we will therefore need to have a well-defined negotiating plan to take to the table in February.

The U.S. can bolster its position on targets and timetables by pointing out the scientific uncertainties as well as the likely costs, administrative complexities, and possible trade problems that could arise from the imposition of large taxes on the carbon content of fossil fuels--the primary means for achieving major reductions). We have solid economic and scientific research already under way and partially completed that could be used to back up this position.

To address the doubt expressed by other countries concerning the sincerity of our commitment in the climate change issue, we may wish to consider signals that would show the U.S. commitment to act. Indeed, we are already taking steps--albeit steps justified for other reasons such as energy security, clean air and other proven environmental concerns--that address climate issues and that can be used to improve the U.S. bargaining position.

Pros:

- o This strategy underscores U.S. leadership in addressing global climate change.
- o The positions outlined are consistent with past U.S. negotiations on the issue.
- o The strategy emphasizes the importance of reliable scientific and economic research as the basis of any action.
- o Avoiding specific commitments on timetables and levels of reduction until subsequent protocols provides more time to gather the scientific and economic data necessary to make

informed decisions.

- o The approach is supported by some other countries (including Canada and some developing countries) and by some environmental leaders.

Cons:

- o This strategy may be considered a delaying tactic by other countries, by environmental groups and by the media.
- o If our position is seen as too passive, it may reduce our leadership position on this issue.
- o The media is likely to continue its criticism of the Administration on this issue.

QUESTION 2: Should U.S. negotiators press other nations to adopt the "comprehensive approach" in the Framework Convention?

Over the past year, the U.S. has actively promoted a "comprehensive approach" to greenhouse gases. Under this approach, all gases would be placed on an equal footing based on a scientifically determined "greenhouse potential index"--an index taking into account the intrinsic molecular greenhouse efficiency of each gas, its average residence time in the atmosphere and other relevant considerations.

This approach is preferable because: (1) other gases than carbon dioxide are greenhouse gases, some of which are less costly to regulate (such as CFC's); (2) it would encourage developing nations to contribute to limiting the emission of greenhouse gases; (3) it lays the groundwork for a market approach (nationally and internationally) to maximize emission reductions at the lowest possible cost; (4) it avoids problems inherent in attempting to develop individual protocols for each greenhouse gas, and (5) it focuses attention on the potential for expanding sinks that sequester greenhouse gas emissions.

Pros:

- o Promoting an innovative approach to the issue of climate change enhances U.S. leadership in the negotiations.
- o Moves the climate change issue away from a narrow focus on carbon dioxide that places a disproportionate burden on energy and transportation sectors of the economy.
- o It is more scientifically valid than other approaches.

- o Focussing on the total picture, including both sinks and sources, increases the flexibility of efforts to limit the effects of greenhouse gases.

Cons:

- o Some countries may portray our strong support for this approach as a ploy for avoiding the reduction of carbon dioxide.
- o May be considered too complicated for some countries to implement.
- o Scientific uncertainties regarding characteristics and behavior of some of the gases make it difficult to calculate exactly comparable indices at this time.
- o Methods for monitoring and reducing emissions of greenhouse gases from sources such as forestry, bovine animals, and pipelines are still being developed.

QUESTION 3: Should a document be released at the first negotiating session outlining U.S. accomplishments that reduce greenhouse gas emissions?

Although we have opposed specific timetables and targets for reducing emissions, the U.S. has already taken steps that address the possibility of global climate change, such as the global change research program, the Clean Air Act, phasing out CFC's, and the tree initiative. In fact our efforts are unmatched by any other country. Nevertheless, the U.S. has been portrayed as anti-environment at earlier climate change conferences. This situation might change if attention is directed to our achievements. For this reason, we are developing a publication to highlight U.S. accomplishments which could be distributed at the first negotiating session.

The document could be framed as a U.S. "Action Plan" on climate change. While it would be comprised of steps already approved or on their way to being implemented, it is important not to frame the document solely as an "accomplishments" brochure, lest there be an attempt to discount actions already taken in order to press for future commitments. Similar brochures have been prepared and distributed by other countries at past conferences. A draft for such a document is attached in Appendix B.

Pros:

- o The concrete steps taken by the U.S. compares well with the largely rhetorical policy pursued by critics of the Administration, both at home and abroad.

- o A quality document would demonstrate our interest in the global climate change issue without breaking new policy ground.
- o The U.S. would no longer be the only country without an "Action Plan."

Cons:

- o Could become the focus of a negative campaign by being portrayed as papering over the U.S. unwillingness to make international commitments.
- o May raise questions about why the U.S. still refuses to endorse targets and timetables--if the U.S. is so close to achieving targets others only talk about, why does it continue to resist targets?
- o Could provide fodder for manipulation by countries or interest groups with opposing views of the United States.

Attachments

POSITIONS ON CO₂ EMISSION TARGETS

		Base Year (when specified)
Stabilization by 1995:	Netherlands	1989-90
Stabilization by 2000:	Australia	1988
	Austria	
	EC Commission	1990
	Finland	
	Italy	1990
	Japan	1990
	Norway	1987
	Sweden	1988
	Switzerland	
Stabilization at ~ 10% over current levels by 2000:	France	
Stabilization by 2005:	Canada	1988
	United Kingdom	1990
3-5% reduction by 2000:	Netherlands	1989-90
20% reduction by 2005:	Australia	1988
	Denmark	
	New Zealand	1990
25% reduction by 2005:	Germany	1987
Support targets for industrialized countries, weaker or no targets for LDCs:	Brazil	
	China	
	India	
	Malta	
	Mexico	
	Saudi Arabia	
Oppose targets:	Israel	
	USSR	
	Venezuela	

Country Targets and Timetables

Australia

Cabinet announced target 11 October of stabilizing CO₂, CH₄, N₂O at 1988 levels by 2000, reducing 20 percent by 2005, provided no net adverse effect on Australian competitiveness if other major developed nations do not take similar actions.

Austria

Urged at February IPCC plenary that industrialized countries stabilize by 2000 as first step; no specific domestic target set.

Belgium

Said at IEA meeting in July that it had begun taking actions that would lower emissions, but had not yet conducted the analysis necessary to justify establishing a target. Supported US position at Bergen.

Brazil

President Collor noted in June World Environment Day speech the need for specific commitments for the stabilization and reductions of CO₂ emissions per capita. He implied, but did not explicitly state, that he was referring foremost to the fossil fuel emissions of developed countries.

Canada

Pledged in June to stabilize CO₂ at 1988 levels by 2005.

China

Strongly implies that it favors targets for developed countries, opposes them for LDCs. Projects substantial CO₂ emissions growth.

Denmark

National energy plan calls for 20 percent CO₂ reduction by 2005.

EC Commission

Favors stabilization of CO₂ at 1990 levels by year 2000, significant reduction by 2005.

Finland

Urged at IPCC February plenary that industrialized countries stabilize by year 2000 as first step, no specific domestic target set.

France

Proposed in September a three-tiered global strategy to converge per capita CO2 emissions rates by early 21st century. Under this plan, France would stabilize its emissions at or below 2.0 tons per capita by 2000 (up to a 10 percent increase from current levels), provided that other major industrialized countries agree to stabilize their emissions.

Germany

Cabinet announced in June non-binding commitment to reduce CO2 emissions 25 percent from 1987 levels in former West German area by 2005.

India

Opposes targets for developing countries.

Israel

Opposes targets.

Italy

Supports stabilization of CO2 at 1990 levels by 2000 as part of EC-wide initiative. No domestic target set.

Japan

Announced action plan 19 October to stabilize CO2 emissions per capita at 1990 levels by 2000. Methane emissions will also be capped at current levels. Gross CO2, N2O, and other greenhouse gas emissions will be stabilized by 2000 if feasible.

Malta

Supports targets and timetables; no domestic target set.

Mexico

Appreciates unilateral commitments by industrialized countries to stabilize emissions by 2000. Believes obligations should be equitably differentiated according to

countries' respective responsibilities for causing and combatting climate change and their level of development.

Netherlands

Parliament passed in September revised National Environmental Policy Plan, calling for stabilization of CO2 emissions at 1989-90 average by 1994-95, 3 to 5 percent reduction by 2000. Government officials describe commitment as binding.

New Zealand

Environment minister announced plans in September to reduce CO2 emissions 20 percent from 1990 levels by 2005.

Norway

National goal is stabilization at 1987 levels by 2000, provided other countries take similar actions.

Portugal

Opposes targets.

Saudi Arabia

Favors stabilization by 2000 target for industrialized countries; no domestic target set.

Spain

Would support EC stabilization target if scaled to current per capita emissions so as to be equitable among EC members.

Sweden

Parliamentary mandate to stabilize CO2 at 1988 levels. Supported call at IPCC February plenary for stabilization by 2000.

Switzerland

Urged at IPCC February plenary that industrialized countries stabilize emissions by year 2000 as first step; no domestic target set.

United Kingdom

Prime Minister Thatcher announced in May that the UK would enact a strategy to achieve a stabilization of CO2 emissions at 1990 levels by 2005, provided other major industrialized countries take similar steps.

USSR

Opposes targets.

Venezuela

Opposes targets.

Note: Only the government of the Netherlands describes its target as binding.

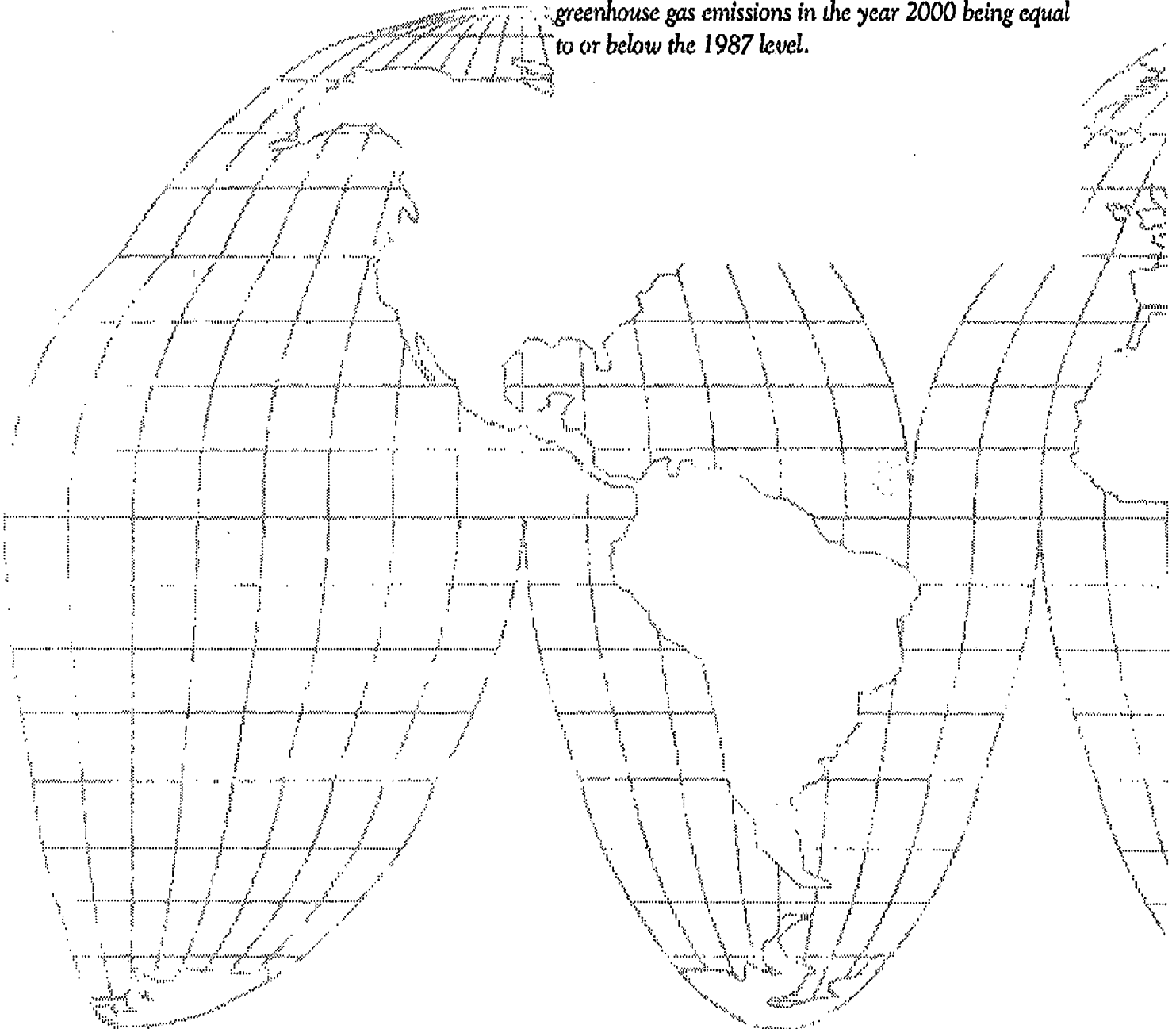
Still under revision

America's Climate Change Strategy



An Action Agenda

The actions which are currently included in the U.S. Climate Change Strategy will result in U.S. greenhouse gas emissions in the year 2000 being equal to or below the 1987 level.



Not
Final

LEADERSHIP AND ACTION

President Bush has established the comprehensive strategy for action and leadership outlined on the following pages. This strategy flows from his commitment to economic growth and to responsible stewardship of our planet. It is built upon a series of actions which will have broad ranging benefits — from curbing air pollution, to conserving energy, to restoring forest lands — and which will help curb greenhouse gas emissions.

The U.S. believes that any successful global climate change strategy must be:

- **comprehensive**, incorporating all relevant greenhouse gases, their sources and sinks;
- **long term**, taking into account the full range of social, economic, and environmental consequences of proposed actions for this and future generations;
- **flexible**, built on many diverse actions (including market incentives) and readily adjustable as knowledge is improved through a robust research and development program; and
- **integrated**, designed to involve all nations and dynamically reflect and incorporate each nation's unique circumstances into the development of a truly global response strategy.

The actions which are currently included in the U.S. Climate Change Strategy will result in U.S. greenhouse gas emissions in the year 2000 being equal to or below the 1987 level. In addition, the U. S. has essentially stabilized its emissions of carbon dioxide (CO₂) over the last 15 years despite a growth in economic output of about 50 percent. During this same period, global carbon dioxide emissions have increased substantially.

This U.S. Strategy for Climate Change includes many specific actions:

- eliminating stratospheric ozone depleting compounds which are also strong greenhouse gases;
- increasing forest greenhouse gas sinks;
- directly controlling various greenhouse gases and their precursors which are also air pollutants;
- reducing utility and other industrial emissions in a way that strongly encourages energy efficiency;
- encouraging energy efficiency in such areas as buildings, appliances, and lighting; and
- increasing the use of renewable and non-fossil sources of energy.

Integral to the U.S. Climate Change Strategy is the world's largest program of research and development:

- to increase our scientific understanding of climate change and to provide a sound knowledge base for making major public decisions.
- to develop and to accelerate the adoption of economically sound,



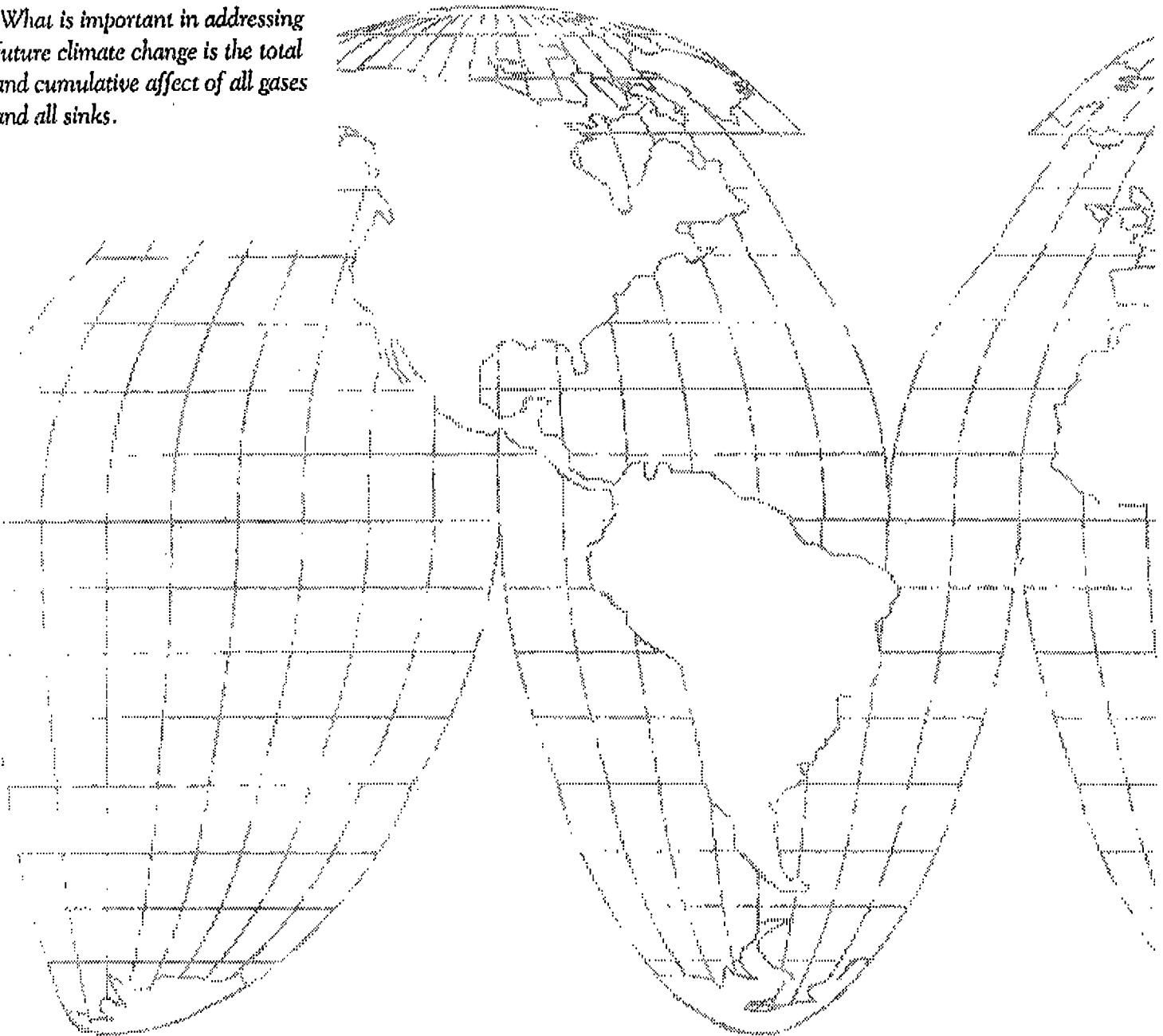
environmentally beneficial, and energy efficient technologies.

In total, the U.S. proposes to invest over 2 billion dollars in these R & D efforts next year alone.

In August 1990, the Intergovernmental Panel on Climate Change (IPCC) stated in its Overview: "A comprehensive strategy addressing all aspects of the problem and reflecting environmental, economic, and social costs and benefits is necessary." The President of the United States has established such a comprehensive strategy. The United States, today, is working to curb emissions, promote economic growth, and exercise leadership in meeting our shared responsibilities as stewards of the planet.

The United States is taking action.

What is important in addressing future climate change is the total and cumulative affect of all gases and all sinks.



Not FINAL

THE COMPREHENSIVE APPROACH TO CLIMATE CHANGE

The science and economics of human interactions with the global climate involve multiple trace gases affected by activities in every sector of human society. Each of these greenhouse gases is emitted from a variety of sources and is trapped or affected by "sinks" in different ways. Each gas has a different residence time in the atmosphere, a different ability to trap heat, and different potential impacts on the environment. What is important in addressing future climate change is the total and cumulative affect of all gases and all sinks.

In November, the government ministers at the Second World Climate Conference (SWCC) declared: "We recommend that in the elaboration of response strategies, over time, all greenhouse gases, sources, and sinks be considered in the most comprehensive manner possible ..."

The "Comprehensive Approach" has several advantages:

- It provides flexibility for each nation to develop a diverse, innovative, cost-effective mix of measures to meet its global responsibilities in a manner tailored to its own domestic circumstances; and
- It is designed to employ the results of integrated scientific and economics research on a comprehensive basis, using the results of our research investment to maximize benefits to the environment and humanity.

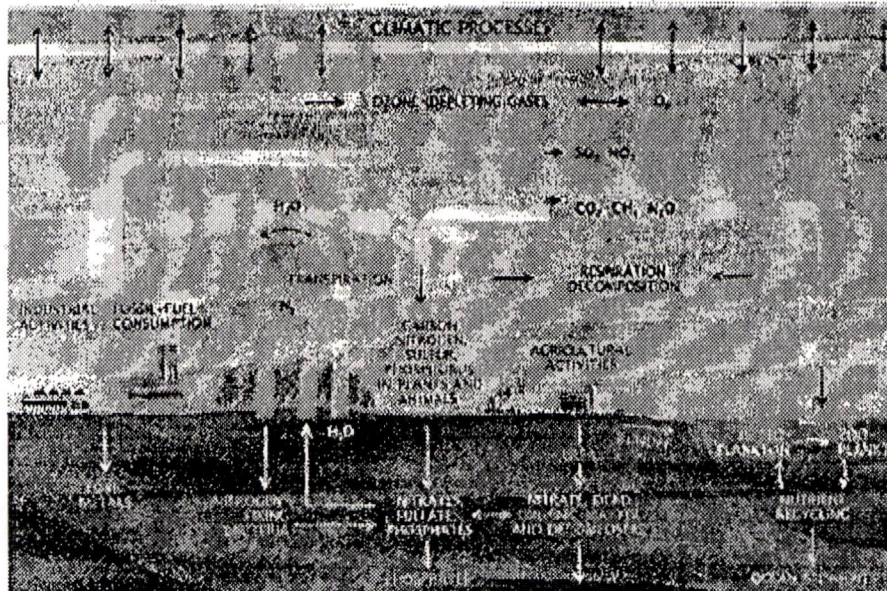
The relative benefit from a unit reduction in the net emissions of each greenhouse gas can be approximated by a measure of "global warming potential" based on the radiative behavior of the gas in the current atmosphere. The Intergovernmental Panel on Climate Change (IPCC) has calculated such a relative measure,

giving carbon dioxide a value of 1 and expressing all other gases in terms of carbon dioxide equivalents. This "index" enables a comparison of the contributions of different gases, their sources and sinks. (See chart opposite)

The costs of achieving a given reduction in the added greenhouse effect will vary from gas to gas and will vary depending on which sources or which sinks of any given gas are affected. Using the Comprehensive Approach, maximum reduction in net emissions or atmospheric concentrations can be achieved for any given level of investment.

If emissions limits were designed to apply piecemeal to one greenhouse gas or economic sector, economic actors could simply adjust to such narrowly focused regulation by shifting to unregulated activities that could continue to contribute to potential climate change.

A comprehensive approach, on the other hand, matches the scientific, economic, and environmental nature of the whole climate system.



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THE BOTTOM LINE

Implementation of President's Comprehensive Climate Change Strategy will result in United States greenhouse gas emissions in the year 2000 being equal to or below 1987 levels.

The specific actions which will contribute to this result include:

- Phasing out CFCs and other ozone-depleting compounds which are also greenhouse gases.
- Putting a permanent ceiling on sulphur dioxide emissions, at sharply reduced levels and allowing freedom of choice in meeting the ceilings, thereby encouraging energy efficiency and reducing greenhouse gas emissions. Under the recently enacted Clean Air Act Amendments, utilities were given the flexibility to make reductions by any means — a powerful incentive for energy saving measures.
- Reducing, under the Clean Air Act, air pollutants which are either greenhouse gases themselves (nitrogen oxides) or greenhouse gas precursors (volatile organic compounds, carbon monoxide and nitrogen oxides).
- Initiating a program to plant a billion trees a year and to make other forest improvements (Enhancing sinks)

• Implementing a number of programs aimed directly at speeding the adoption of energy efficient technologies and practices in homes and businesses.

• Promoting the use of and accelerating research into non-fossil fuel energy sources, such as solar, nuclear, and alternative fuels.

The results of these currently planned U.S. actions are illustrated by Chart 1, which shows projected U. S. greenhouse gas emissions for the year 2000. The estimate is based on calculations made by the U.S.

Environmental Protection Agency.

Chart 2 shows an alternative estimate based upon a different economic model prepared by researchers at Harvard University.

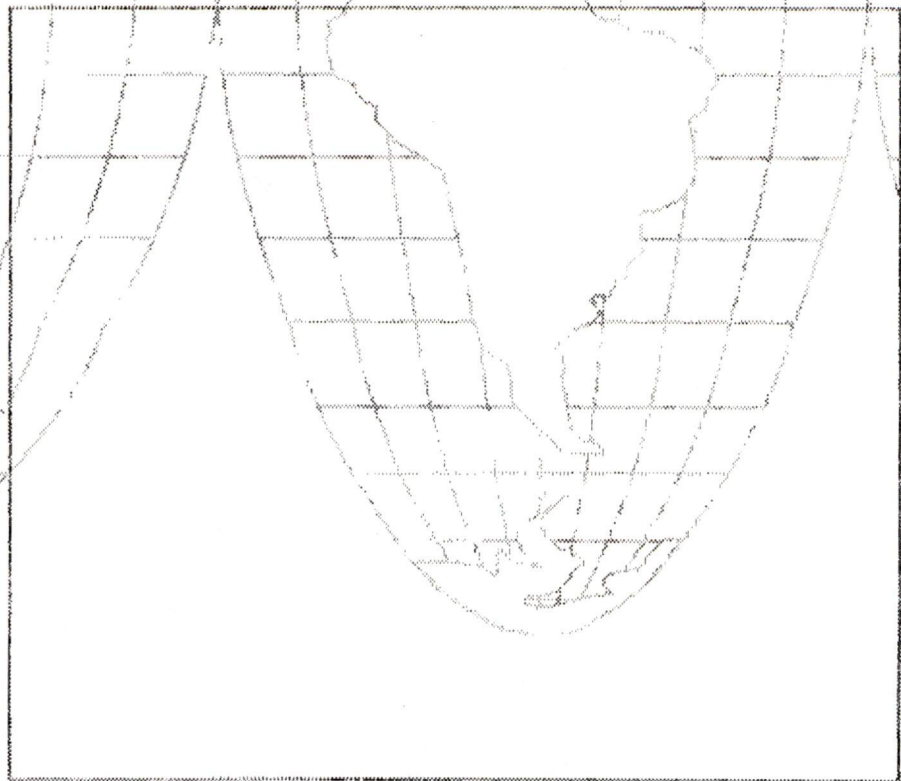


CHART 1

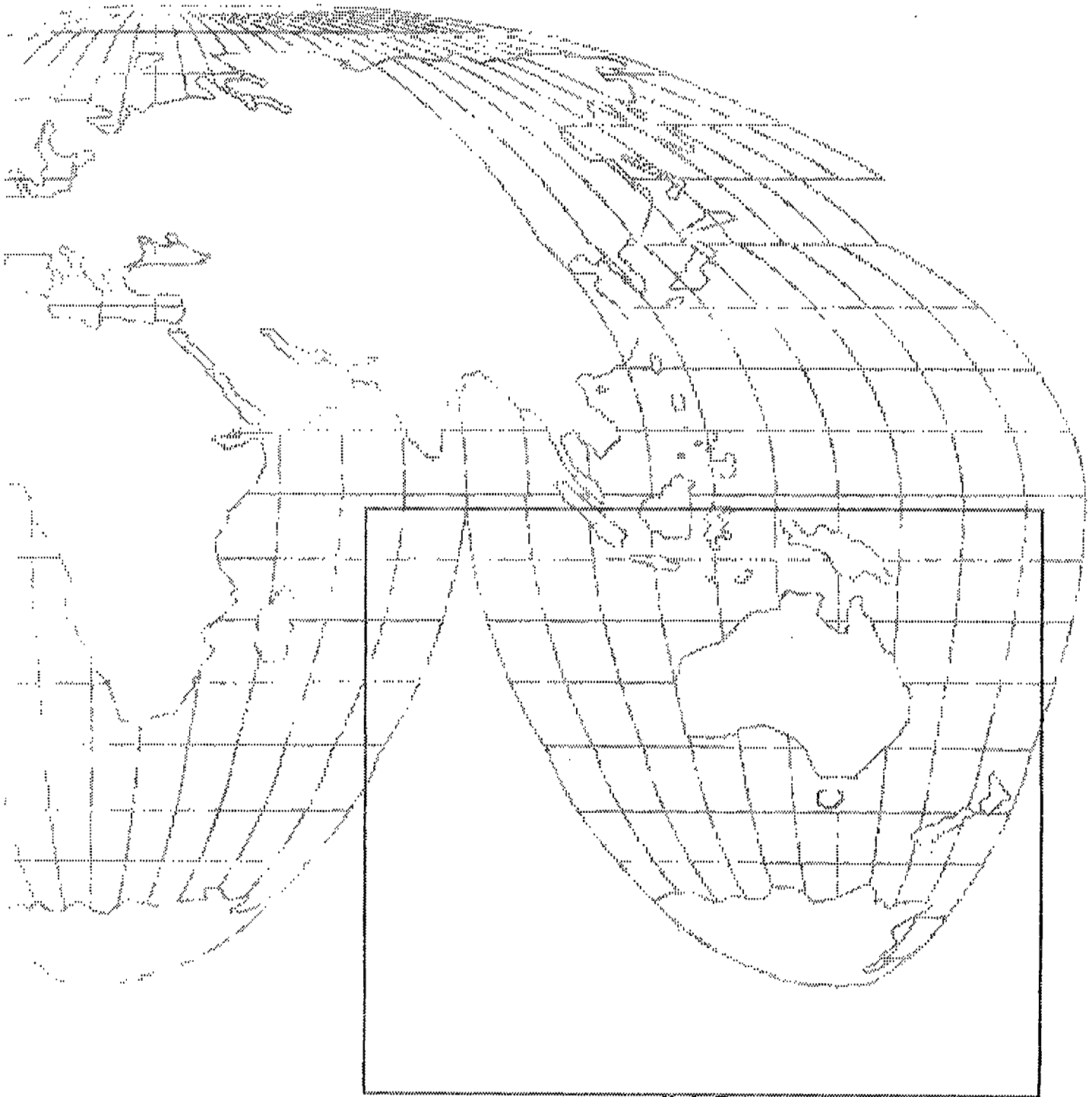


CHART 2

PHASING OUT CFC's

The United States has long taken a leadership role in addressing the problem of stratospheric ozone depletion. In 1978 the U. S. banned the use of CFCs as propellants in spray can products. Such use was considered a low value use which could be forgone given the potential damage which it was believed that CFCs might be causing. All other countries, with one or two exceptions, continued to use CFCs as propellants.

At the London Meeting of Parties to the Montreal Protocol the U. S. supported a complete world-wide phase-out of CFCs, halons, and certain other ozone depleting substances such as carbon tetrachloride and methyl chloroform. The Protocol was amended to achieve that objective.

BEYOND THE MONTREAL PROTOCOL

The U. S. has enacted legislative provisions in the recent Clean Air Act amendments which will phase down U. S. production and consumption of these ozone depleting compounds more quickly than the amended Montreal Protocol provisions. (See charts opposite)

For each and every one of these compound groups and gases, the Clean Air Act reduces the allowed U. S. production and consumption between now and the final phase-out date substantially below what the Protocol permits. (For example, see chart — regarding CFC production)

Between now and the phase-out dates the U. S., under the mandates of the Clean Air Act, must reduce U.S. production below what is permitted by the Montreal Protocol by the following amounts:

THE U.S. IS AHEAD OF SCHEDULE

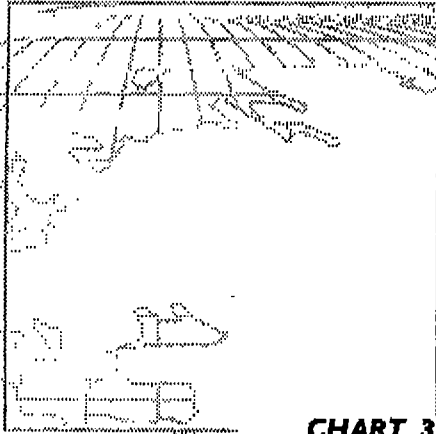
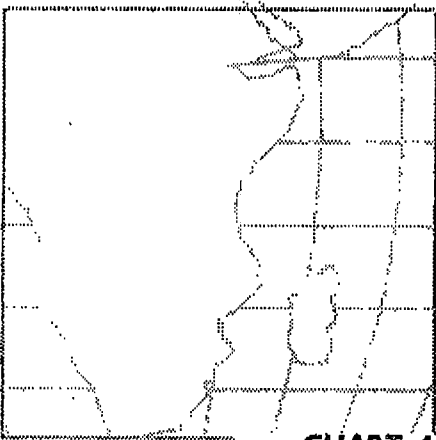
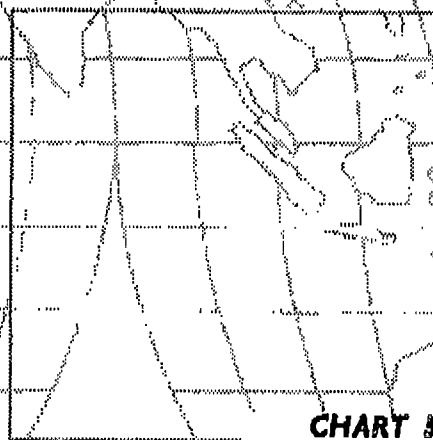
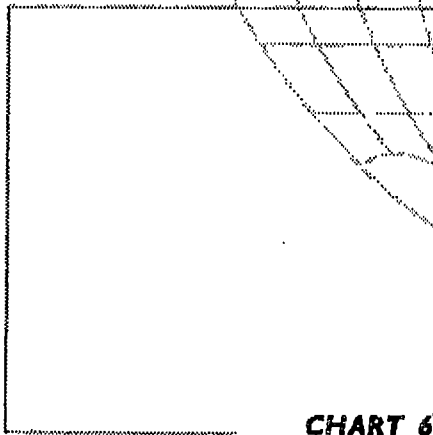
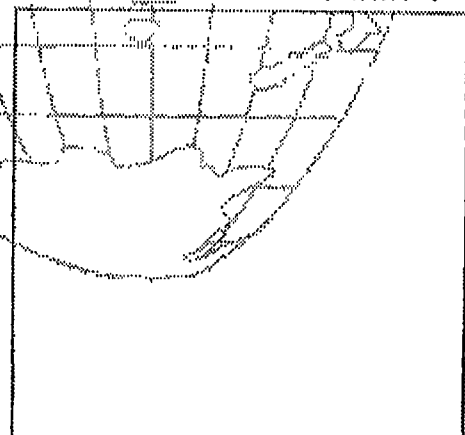
In addition to the more restrictive phase-out schedules required by the Clean Air Act, the 1989 Reconciliation Act enacted a tax on ozone-depleting chemicals during the period of phase-out. The tax rates for each compound are its ozone depleting potential (ODP) multiplied by \$1.37 per pound in 1990 and 1991, \$1.67 in 1992, \$2.65 in 1993 and 1994, and an increase of an additional \$0.45 in each year after 1994.

This tax has already helped to reduce U. S. CFC production in the 12-month period ending June 30, 1990 to 23 % below the levels permitted by the Montreal Protocol and other U.S. law.

While these actions by the United States are justified by their benefits relating to stratospheric ozone depletion, they are also very highly significant for climate change. CFCs, halons, and carbon tetrachloride are extremely powerful greenhouse gases, thousands of times more powerful than carbon dioxide. Methyl chloroform is also a strong greenhouse gas that is in wide use. (See discussion of Comprehensive Approach above)

"Cumulative Near-term reductions in Clean Air Act Below the Montreal Protocol"

Major CFCs	19%
Halons	32%
Other CFCs	22%
Carbon Tetrachloride	13%
Methyl Chloroform	20%

Major CFCs**CHART 3****Halons****CHART 4****Carbon Tetrachloride****CHART 5****Methyl Chloroform****CHART 6****Other CFCs****CHART 7**

THE 1990 CLEAN AIR ACT AMENDMENTS

The 1990 Clean Air Act Amendments, signed by the President in November 1990, will achieve substantial reductions of greenhouse gases and their chemical precursors, such as volatile organic compounds, carbon monoxide, and nitrogen oxides, in addition to reducing emissions of the more familiar pollutants such as sulfur dioxide. Moreover, the Act will result in direct carbon dioxide reductions due to more efficient electricity generation. When converted into equivalent units of carbon emissions and taken together, these reductions will amount to a 16% decrease in greenhouse gases from these affected sources between the years 1987 and 2000.

The most dramatic reductions will come from electrical utilities. Under the Act, utilities, which must reduce sulfur dioxide (SO₂) emissions by 10 million tons below 1980 levels, are given flexibility to choose how to achieve these reductions. Utilities are thus free to choose cost-effective conservation measures to achieve compliance. This powerful conservation stimulus will sharply reduce carbon dioxide (CO₂) emissions from this sector.

Further, the Act requires utilities to reduce their nitrogen oxide emissions by two million tons under the acid rain provisions. These provisions also contain strong incentives for both electric utilities and industrial sources to adopt advanced, energy efficient technologies that will lower overall emissions, including carbon dioxide.

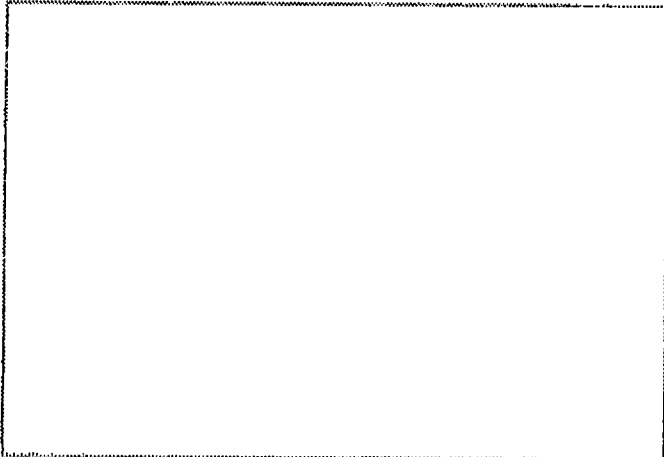
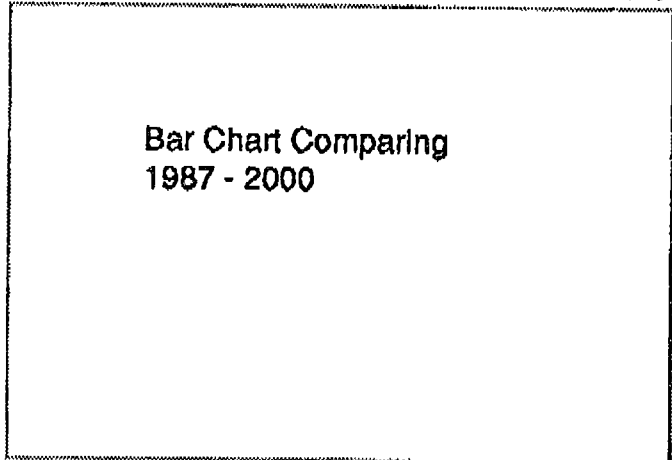
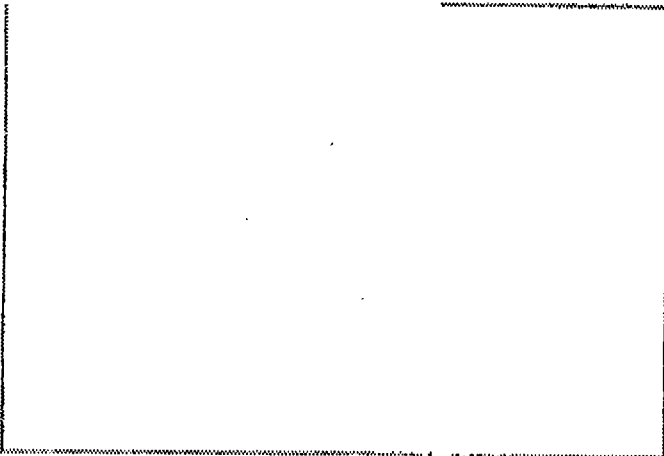
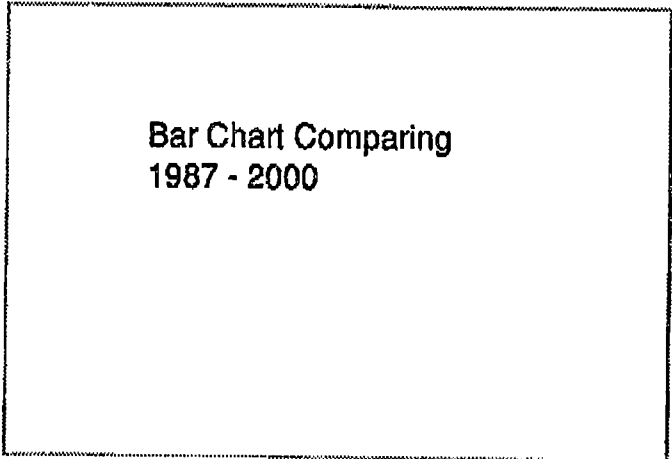
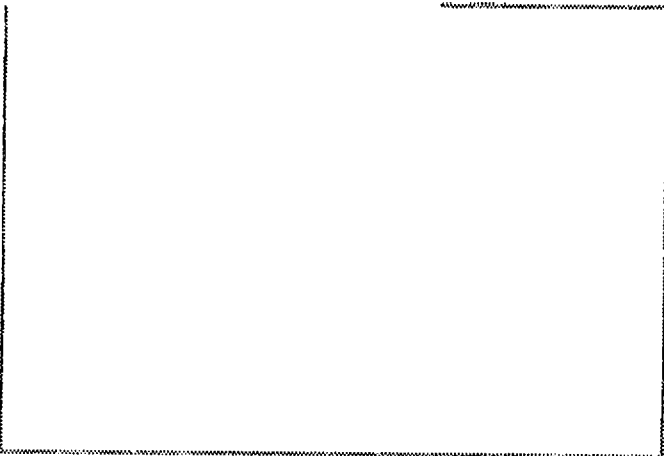
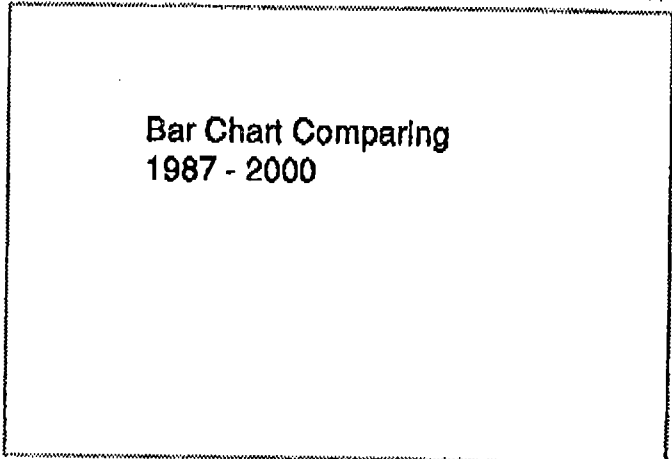
The Act is also expected to induce oil-burning utilities to switch to natural gas, which produces fewer greenhouse gases than does oil.

Substantial reductions in either greenhouse gases or their chemical precursors will also result from new controls on stationary and mobile sources mandated by the new Act in order to bring cities into attainment of national air quality standards. A wide variety of stationary sources of volatile organic compounds will be required to reduce emissions by adding controls or by changing production processes. Newly tightened automobile emission standards will further reduce emissions of hydrocarbons, carbon monoxide, and nitrogen oxides, and new controls on gasoline evaporation will greatly cut volatile organic emissions. In addition, gasoline itself will be reformulated to reduce its volatility, thus reducing volatile organic emissions at the source.

The Act will dramatically expand the introduction of clean-burning alternative fuels into the U.S. transportation sector. Several large states and the fleets of America's major cities are expected to introduce fuels and vehicle technology which will emit fewer greenhouse gases. Beginning in model year 1994, new tailpipe emissions standards for hydrocarbons, carbon monoxide, and nitrogen oxides will be phased in. Auto manufacturers will also have to reduce refueling emissions. Gasoline volatility will be

reduced and cleaner fuels will be required in the nine cities with the worst ozone problems and in 41 areas during the winter months when carbon monoxide standards are exceeded. A clean fuel car pilot program in California will use combinations of vehicle technology and cleaner fuels to meet tight standards. Twenty-six areas will have to limit emissions from centrally-fueled fleets of 10 or more vehicles.

Regulations are also being proposed under the new source performance standards of the Clean Air Act to require capture of pollutant gases which are given off by landfills. The purpose of the regulations is to capture air toxics and volatile organic compounds which are the chemical precursors of greenhouse gas ozone. Methane will also be captured and flared. Greenhouse gas emissions in the year 2000 will be reduced by an estimated 44 million tons of carbon equivalent.

Carbon Monoxide**CHART 8****CHART 9****VOC's****CHART 10****CHART 11****NO2****CHART 12****CHART 13**

ENHANCING NATURAL SINKS

The term "sinks" of greenhouse gases is meant to include human and natural activities, processes, and phenomena that remove greenhouse gases from the atmosphere or reduce their atmospheric lifetimes. Examples include forests, soils and oceans. The IPCC recognized the importance of sinks in a report of its Response Strategies Work Group (RSWG): "The RSWG reviewed potential measures for mitigating climate change... These measures include those which limit emissions from greenhouse gas sources (such as energy production and use), those which increase the use of natural sinks (such as immature forests and other biomass) for sequestering greenhouse gases, as well as those measures aimed at protecting reservoirs such as existing forests."

Reforestation

The President has included in both his FY 1991 and FY 1992 Budgets a major, multiyear reforestation proposal to plant one billion trees per year on 1.5 million acres and to improve forest management practices on an additional 180,000 acres per year. This initiative will encompass cities and towns across America, as well as rural private, non-industrial forest lands. It comes in addition to reforestation which Federal agencies normally do on lands under their jurisdiction.

One purpose of this initiative is to improve the condition of private, non-industrial forest lands which are often now in poor condition due to low levels of management and investment. Improving these lands will increase benefits from soil protection, wildlife, wood products, and recreation.

This initiative will also have significant climate change benefits through the carbon which growing trees (sinks) remove from the air and store both as plant tissue and in the soil. The estimates of carbon removed from the atmosphere by the trees to be planted under the initiative are 9 million metric tons of carbon annually by the year 2000, growing to 50 million tons per year by 2010. (See chart 8)

Global Forest Convention

The President proposed at the Summit of Industrialized Nations in July 1990 at Houston to begin negotiations as expeditiously as possible on a global convention on forests, aiming for completion and signing by 1992.

The world's forests absorb carbon dioxide as well as provide many benefits in the form of timber and fiber, soil and water protection, wildlife habitat, recreation and other valuable outputs. They provide the habitat for some 80% of the planets remaining unknown and unspecified gene pool—a completely irreplaceable and potentially

enormously valuable heritage for all humankind. Temperate zone forests are being damaged by air pollution stresses and tropical forests are being rapidly lost.

The U.S. believes that the convention should emphasize market-based mechanisms and flexibility to achieve sound, sustainable forest use, to improve the health and vigor of forests, to encourage reforestation, and to increase the value of forests as sources of income and jobs.

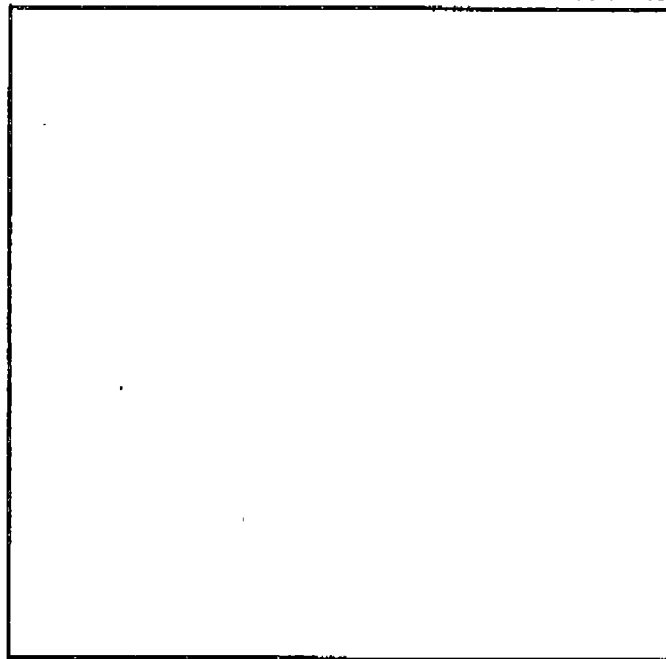
Areas suggested for international cooperation and joint action include research and monitoring; education, training, and technical assistance; reforestation and rehabilitation; reform of the Tropical Forestry Action Plan; reduction of air pollution; bilateral and multilateral assistance; debt-for nature swaps; removal of harmful subsidies.

To put the power of trees as "sinks" into perspective, consider the example of an acre of improved stock of southern pine planted on a high quality site in the southeastern U. S. In the 15th year after planting these trees would take up between 5700 and 6200 pounds of carbon per acre. While the amount taken up declines thereafter as the trees mature, additional carbon continues to be taken up.

(See chart 9)

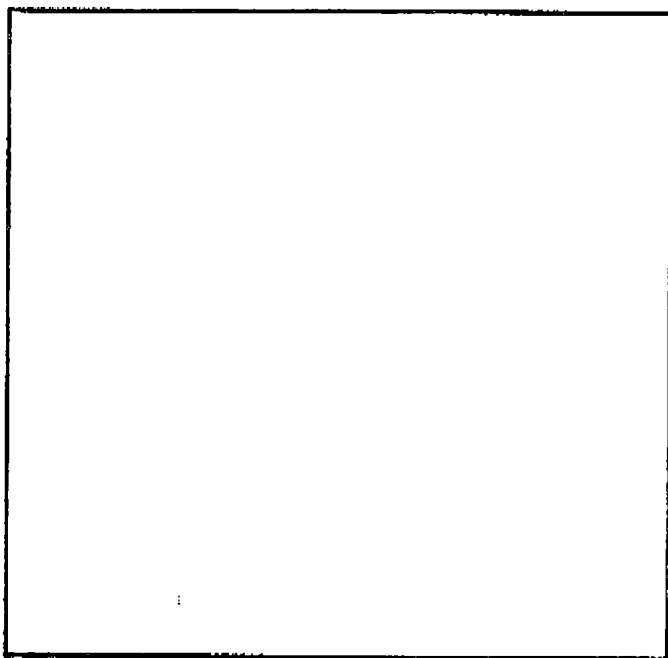
Reductions in Carbon

CHART 15



Carbon Sequestration by Age

CHART 16



ENERGY INITIATIVES: *Efficiency*

The Administration is currently developing and will announce shortly a National Energy Strategy that will further contribute to the greenhouse gas emissions reductions cited here. Certain National Energy Strategy initiatives have been included in some of the calculations in this document.

The U.S. strategy for action includes a number of other energy efficiency measures, in addition to the Clean Air Act's strong incentives to save and use energy efficiently due to the utility emissions cap and the flexibility in complying given to utilities.

Level Playing Field Between Electricity Supply and Demand Reduction

In some cases utilities can meet demands for energy services without any additional greenhouse gas emissions by investing in energy efficiency rather than by increasing electricity supply. Utilities in only 15 states are now fully able to recover costs from such investments, including energy saving measures as well as new supply. Absent such efficiency measures, new capacity requirements by the year 2000 are projected at more than 100,000 MW.

The U.S. will work with the States to identify regulatory barriers that discourage utility investment in energy efficiency. Utility planning techniques will be developed to consider all alternatives and their costs. The U.S. will provide training, information dissemination, and other types of technology transfer activities. These actions will reduce greenhouse gas emissions in the year 2000 by 9 million metric tons carbon equivalent.

Encourage use of energy efficient building standards.

Both the U.S. and the private sector have developed standards that would achieve 20-25% energy savings in buildings. They could save \$5 billion over 20 years from the new buildings built in a single year.

The U.S. will promote voluntary use of these standards through training programs, design manuals and computer-aided design systems. It will encourage State and local governments to use the standards in their building codes. These actions to encourage adoption of the most energy efficient modern technology in residential and commercial building will reduce greenhouse gas emissions in 2000 by 8.2 million metric tons of carbon equivalent.

Use of the modern standard in public housing assistance programs will reduce greenhouse gas emissions by 800,000 metric tons carbon equivalent in 2000.

More efficient new appliance standards

Large appliances account for over two thirds of home energy usage, excluding space heating. In the past three years, the U.S. has imposed energy efficiency standards on many of the most energy-intensive appliances, including refrigerator/freezers, clothes washers, dryers, and dishwashers. These standards should achieve annual energy savings of 7-8% relative to projected use by the year 2000, and 14-15% relative to projected use by the year 2010.

The imposition of appliance standards has already resulted in a reduction of greenhouse gas emission. As older appliances are replaced with new, environmentally friendly models, the greenhouse gas reductions will increase dramatically. By the year 2000, DOE anticipates an annual reduction of 5.0 million tons of carbon equivalent from projected greenhouse gas emission due to these standards; the annual reduction will more than double to 10.6 million tons of carbon equivalent in 2010.

Expand national energy audit capabilities and use:

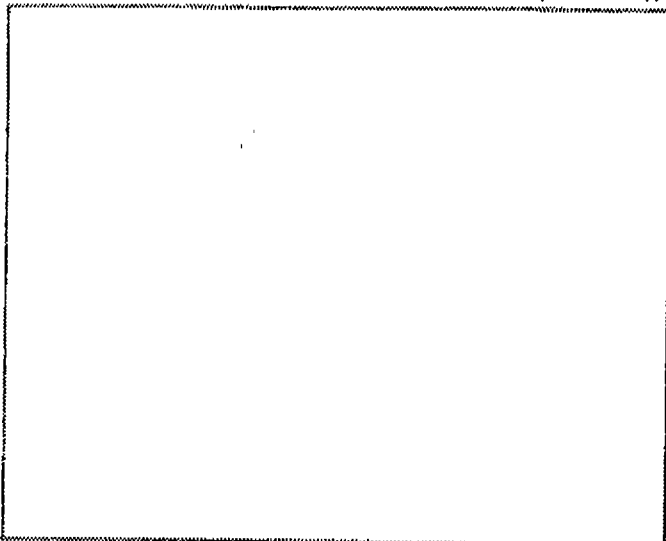
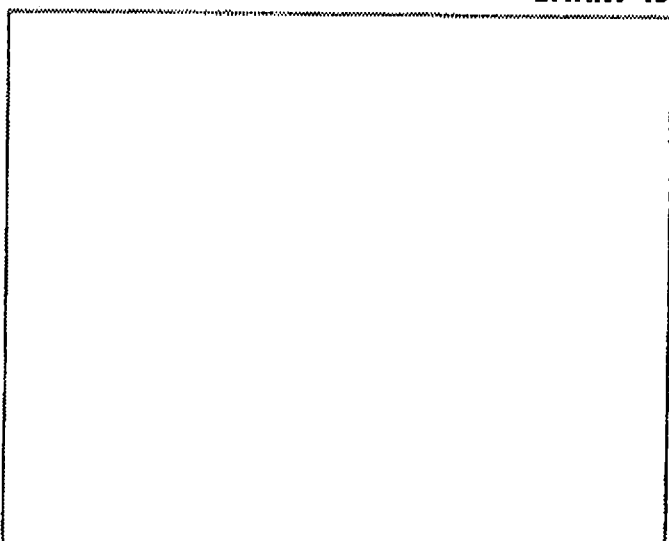
Industry, with some 350,000 separate establishments, uses 24.7 Quads of energy annually. Many options exist for low-cost quick payoff energy saving investments, but smaller firms often lack the information, expertise, and specialized resources to do energy audits of their plants.

The U.S. will increase its program to train engineers in energy audit and diagnostic methods from the current 13 engineering schools to 40 nationwide in the year 2000. This will reduce greenhouse gas emissions in the year 2000 by 6 million metric tons carbon equivalent.

More efficient lighting in federal facilities:

Twenty-five percent of federal agency energy use is for lighting of facilities. Budget constraints, lack of adequate information by facility managers, and restrictive procurement practices have slowed adoption of efficient new technologies.

The U.S. will identify energy savings options in Federal facilities. Project plans, procurement methods, and financing options will be developed to overcome the barriers to improve lighting efficiency. This will reduce greenhouse gases in the year 2000 by 1.4 million metric tons carbon equivalent.

Savings in Emissions**CHART 17****\$ Equivalents****CHART 18**

ENERGY INITIATIVES: *Renewables and Non-fossil Fuels*

Accelerate the transfer of photovoltaic technology to U.S. commercial production:

Recent laboratory research has achieved photovoltaic efficiencies of over 30%. With such efficiencies and improved manufacturing, today's \$4-5 prices per peak watt could be cut in half.

The U.S. will start an intensive effort with industry to understand potential improvements in photovoltaic processes. Industry joint ventures to provide practical solutions and maximize transfer of results will be encouraged. The U.S. will also provide cost-shared technical assistance to adapt manufacturing improvement techniques to specific processes. By the year 2000, greenhouse gas emission reductions will begin to phase in at 500,000 metric tons of carbon equivalent.

Expand nuclear energy capacity:

As the Nation enters the 1990s, nuclear power is the second largest source of U.S. electricity, providing almost 20 percent of America's electricity needs, and nuclear power causes no greenhouse gases.

Because of the availability of nuclear power the nation was able to avoid the use of large amounts of fossil fuels in 1989. In terms of the displacement of fossil fuels, nuclear power can take credit for reduced utility emissions of carbon dioxide—a major "greenhouse" gas—by 20 percent, or approximately 128 million tons. In overall terms, nuclear energy plants cut

U.S. emissions of carbon dioxide by nine percent. Worldwide, nuclear energy reduced these emissions by more than seven percent.

A comprehensive strategy for nuclear energy is being developed as a part of the National Energy Strategy and is supported in the President's Fiscal Year 1992 budget. This strategy includes:

- Developing advanced light water reactors that will incorporate passive safety features in a standardized (modular) design. This will reduce the time needed to license new plants, while assuring that safety issues are adequately addressed. The U.S. is currently supporting first-of-a-kind engineering work that will assist companies in their efforts to have the Nuclear Regulatory Commission certify the safety of standardized designs.
- Conducting research and development on advanced reactor concepts with safety features that go beyond even the standardized designs ("to be intrinsically safe") currently before the Nuclear Regulatory Commission. High temperature gas cooled reactors use specially coated fuel elements that will not fail even under the high temperatures that could occur in an accident. Liquid metal reactors use liquid sodium as the heat exchange medium. Researchers have demonstrated that both reactor types can shut themselves down safely under conditions that would be extremely serious for present-day reactors.

- Reforming the nuclear licensing process through consolidation of the redundant aspects of the construction and operating licensing processes, without compromising nuclear safety concerns.
- Developing a long-term solution to the nuclear waste problem by developing a permanent repository, possibly an interim retrievable storage facility.

DOE is funding programs that are supporting growth in nuclear energy capacity and the life extension of many currently operating plants. According to analysis done for the National Energy Strategy, support from DOE is expected to result in adding new nuclear capacity by 2000 and to have On-line 264 GWe of new nuclear capacity, compared with 120 GWe today. Again, because nuclear power allows the nation to avoid the use of fossil fuels, such an expansion of nuclear use would result in yet a further substantial reduction in CO₂ emissions.

Increase transportation use of alternative fuels.

Use of oxygenated fuels, such as ethanol, can reduce urban smog levels, tropospheric ozone, and emissions of CO₂.

U.S. research has demonstrated the technical feasibility of the processes to produce ethanol from non-food domestic resources such as wood or herbaceous crops.

The U.S. will expand current research programs in alternative fuels to include cost-shared joint ventures aimed at reducing the cost of ethanol from non-food resource. This effort will be coordinated with industry vehicle and engine development programs.

ENERGY INITIATIVES: *Conservation and Renewable R&D*

The U.S. is funding a large research and development program for conservation and renewable energy. In Fiscal Year 1992 this effort is increased by 18 percent to a level of \$495 million.

In the long run, an adequate response to climate change will require the use of new technologies that conserve energy or that provide energy without causing greenhouse gas emissions. These technologies will be needed in all of the economy's sectors.

R&D for energy efficiency in transportation includes work on high temperature internal combustion engines, gas turbine engines, fuel cells and a new initiative for electric vehicles. Air transportation energy efficiency work includes research in hybrid laminar flow, composite materials, improved terminal operations, and improved air traffic control.

Alternative-fuel vehicle demonstration and a scale-up of a wood-to-ethanol process are being done. An initiative to address the problem of combustion emissions in waste-to-energy plants is being started.

Buildings energy efficiency research focuses on the interactions of energy systems, and the efficient use advanced window technologies and building materials to control light and heat entering a building.

Industrial energy efficiency R&D includes funding for more efficient steel, aluminum, and paper processes. A scale-up and test of the use of concentrated solar energy to detoxify liquid wastes will also be done.

The U.S. is proposing to initiate, in the fiscal year 1992 budget, a new joint auto industry—government consortium to develop a battery for electric vehicles. Improved batteries that could extend vehicle range to 120-200 miles could enable electric vehicles to capture as much as 20 percent of the market by 2030. Fuel-cell-powered electric vehicles offer the potential to achieve up to 50 percent efficiencies.

Total FY 1992 funding for research in new energy saving technologies is over \$900 million.

TRENDS: CO2 Emissions

U. S. emissions in 1988 were only 2.7 % above the 1973 level, despite the fact that real U. S. GDP, in 1985 dollars, grew by 48 percent over that period.

[[[NEW CHART]]] (ADD CHART REGARDING 2.7% ABOVE)

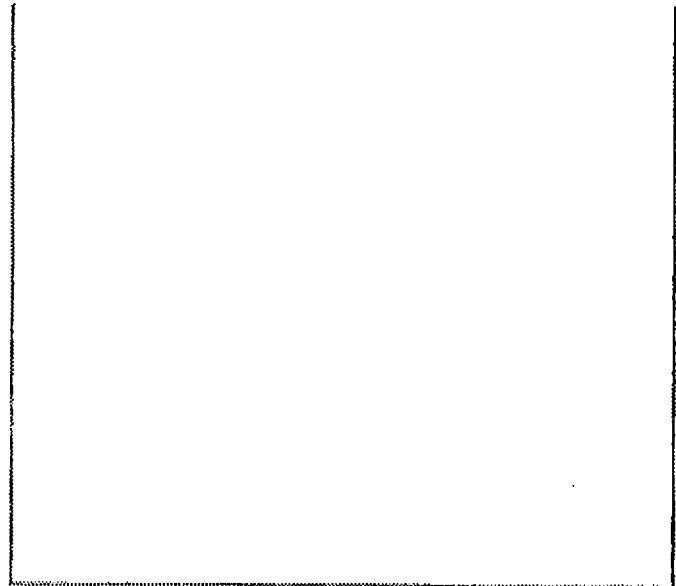
Chart 12 compares the U. S. trend to countries with substantial growth in emissions. Chart 13 compares the U. S. trend to countries with moderate growth or decline in emissions.

A key unanswered question about responding to the climate change issue is how to achieve economic growth in developing countries and economic reform in formerly centrally-planned countries without massive increases in greenhouse gas emissions.

Chart 12 compares the recent U. S. emissions trend with countries which contain most of the world's population, have trends of rapidly growing CO2 emissions, and are likely to have substantial emissions-generating economic growth in the coming decades.

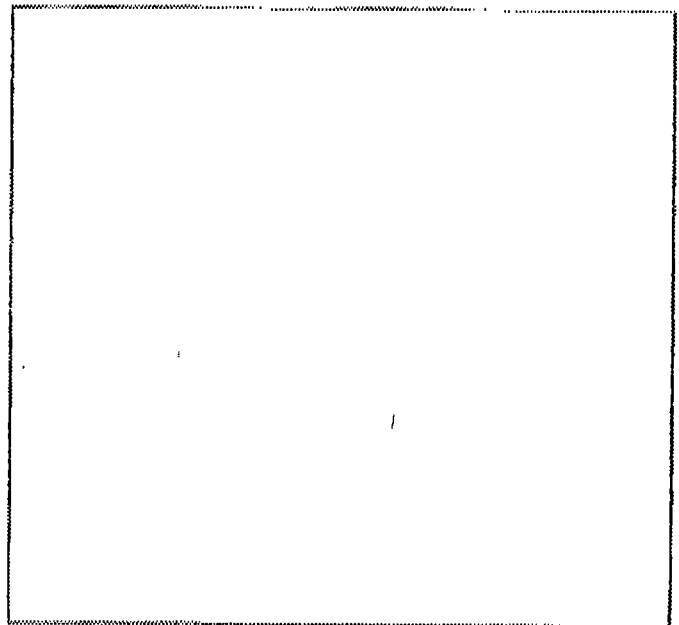
CO2 Per GDP

CHART 19

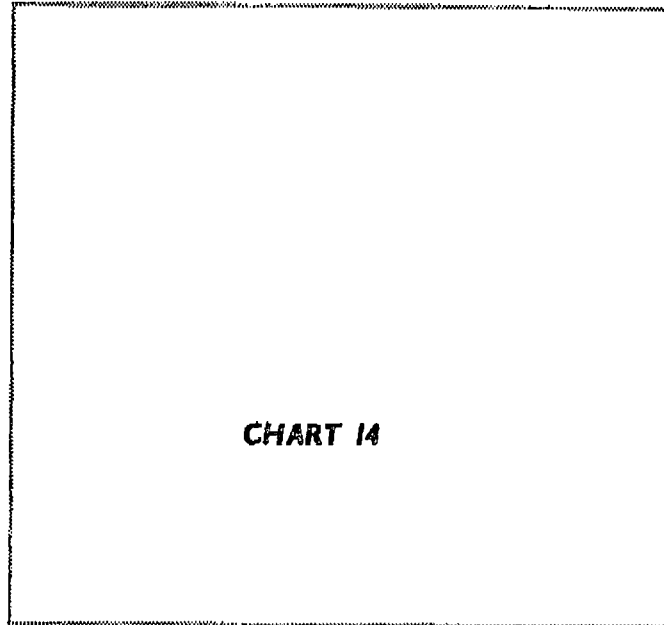


2.7% Chart

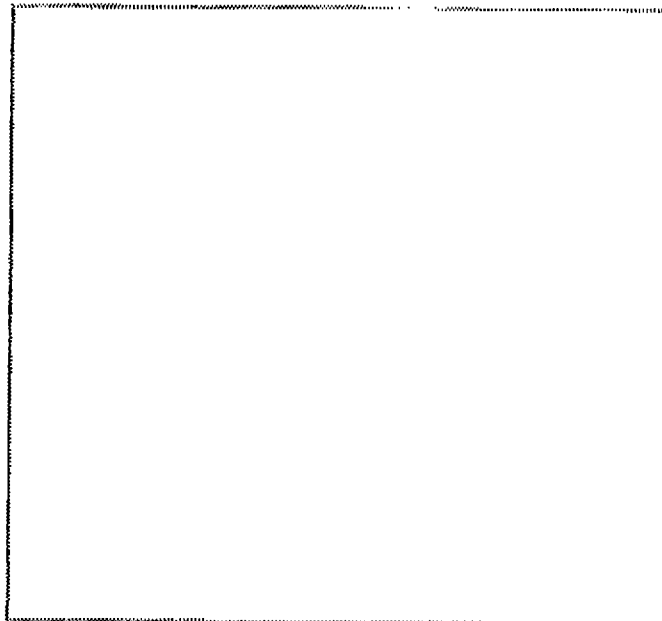
CHART 20



Trends in Carbon Dioxide Emmisions
U.S. & Moderate Growth or Decline

CHART 21

Trends in Carbon Dioxide Emmisions
U.S. & High Growth Decline

CHART 22

TRENDS: *Energy intensity*

Chart 19 compares United States energy consumption per unit of gross domestic product (GDP) with Canada, Japan, France, Italy, West Germany and the United Kingdom - the other G-7 countries.

However, as shown in Chart 20, the United States has improved its energy use/GDP ratio since 1970, averaging an annual improvement of 2 percent per year. In 1988 the U. S. used only 70.9 % as much energy per unit of GDP as it used in 1970.

The United States' rate of improvement in the industrial energy use/gross product originating (GPO) ratio has been greater than most other G-7 countries, averaging close to 3 percent per year since 1975 (Chart 22).

Since the early 1970s, the United States has improved its heating efficiency on an energy used per square foot per degree day basis. The U.S. used in 1987 only 68.4% of the energy used per square foot in 1972. Today, U.S. energy use in dwellings per square foot per degree day is much lower than most other G-7 countries.

Energy Consumption per GDP

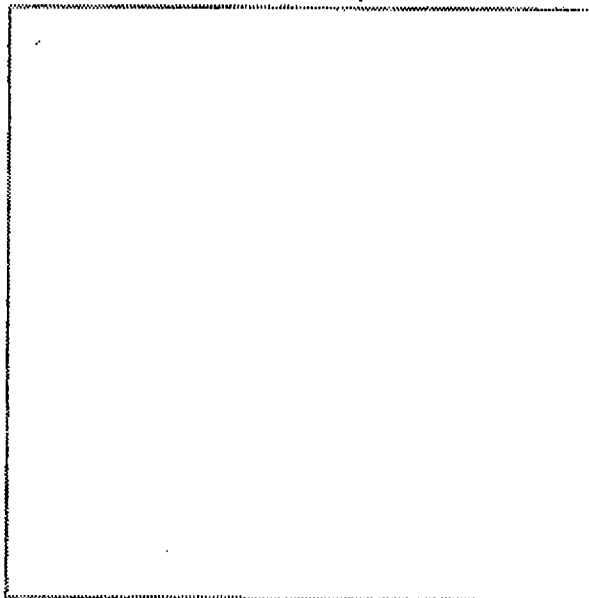


CHART 23

Energy Per GPO 1986

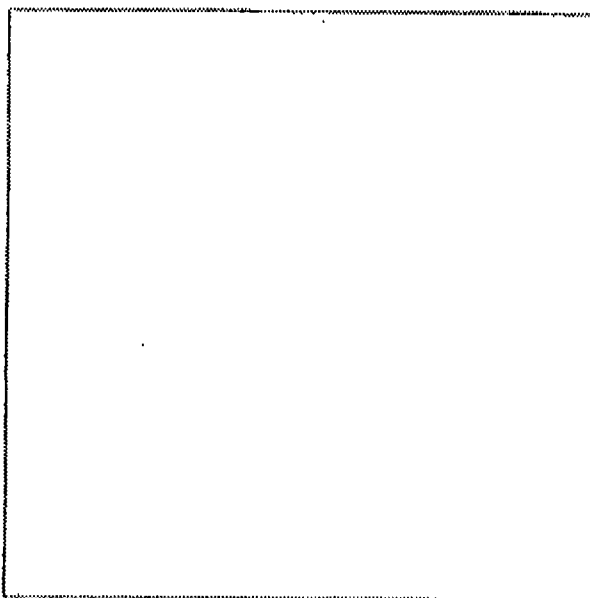
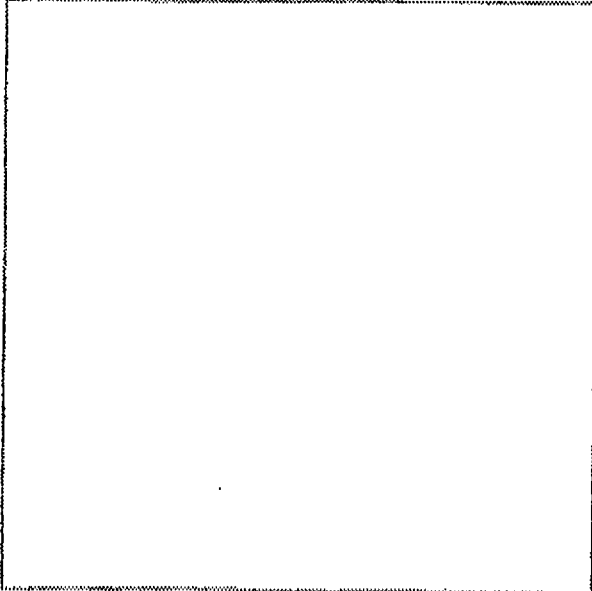
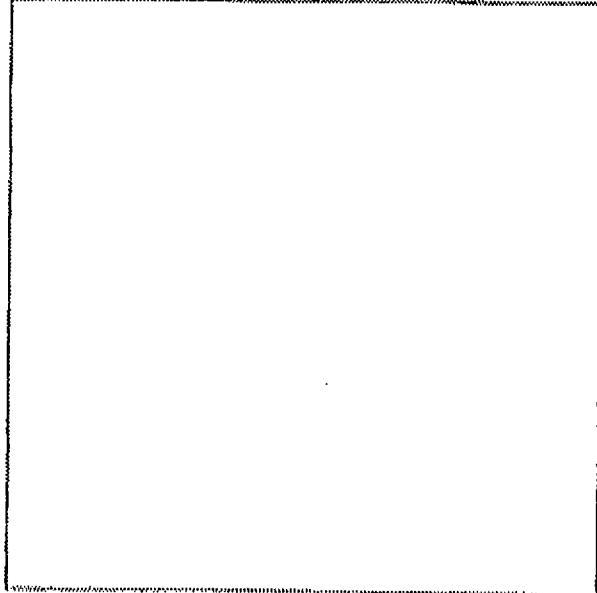
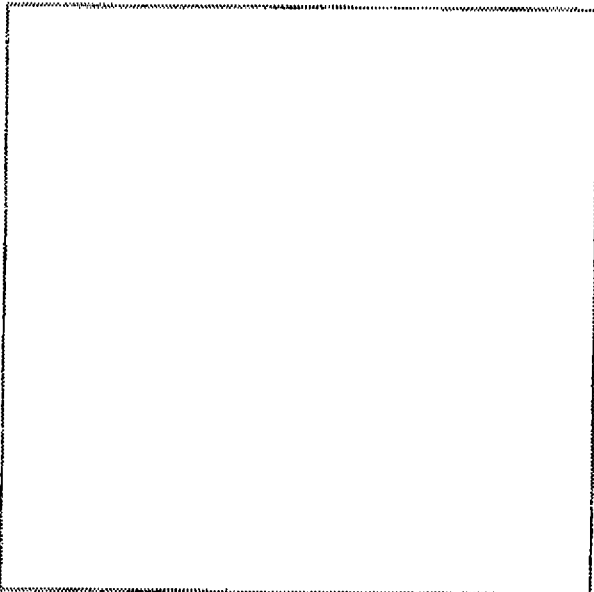


CHART 24

Energy Per GDP 1988**CHART 25****Population Density Per SM 1988****CHART 27****Savings in Energy Per GPO ('86-'77)****CHART 26**

TRENDS: *Transportation*

Population density in the United States is 5 to 10 times less than in many of the other G-7 countries. With such a low density, the U. S. spatial spread between work and home often makes mass transit systems impractical. Distribution of economic activities across a wide continent requires substantial energy consumption for moving people and freight long distances. (chart 23) Transportation energy consumption per capita (Chart 24) is highest in the United States and Canada and substantially lower in the G-7 countries with high population densities.

New car fuel efficiencies in the United States are now roughly even with those of most of the other G-7 countries (Chart 25), despite much more demanding U. S. emissions and auto safety standards. The U. S. 1987 miles per gallon ratio was 28.3, within a relatively narrow range from Japan at 27.7 to the United Kingdom at 31.8. The U. S. from 1973 to 1987 increased its new car fuel economy by 100 percent. (chart 26)

New Car Fuel Economy

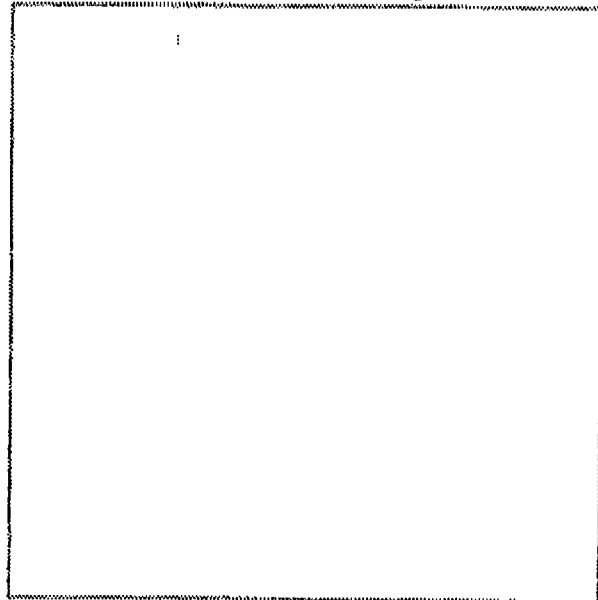
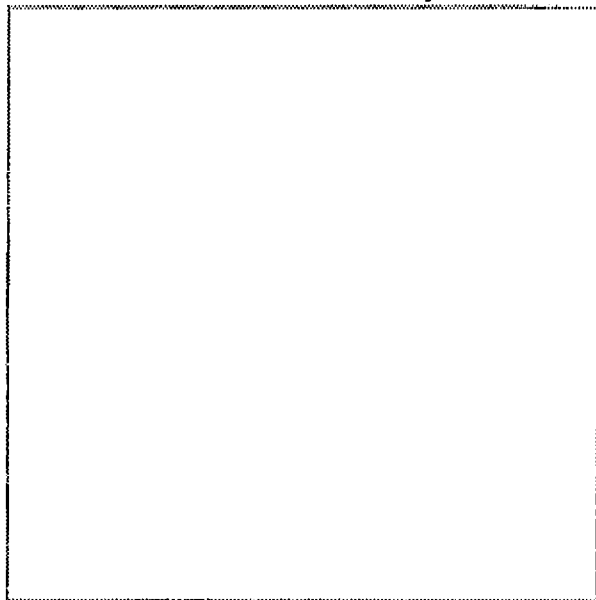
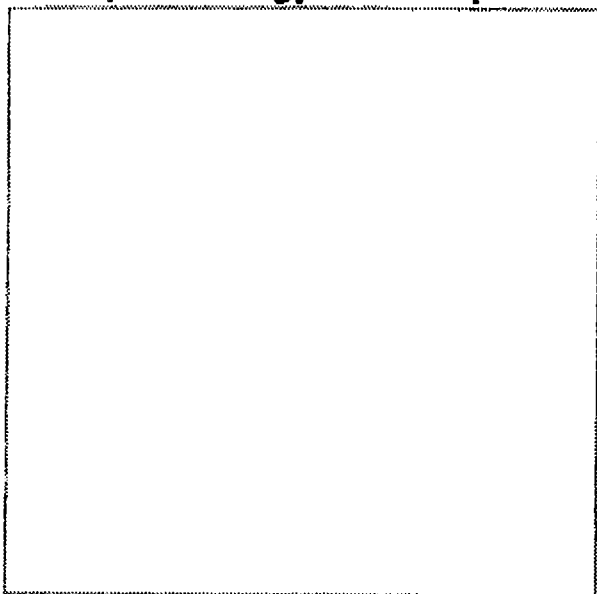


CHART 28

New Car Fuel Efficiency

**CHART 30**

Transport Energy Consumption

**CHART 31**

TRENDS: *Pollution Expenditures*

United States' declines in emissions of volatile organic compounds, carbon monoxide, CFCs, and, to some degree, the stabilization of carbon dioxide emissions over the period from the early 1970s to the present can be attributed to U. S. investment to protect and to clean up the environment. U. S. spending for all pollution control purposes over the period is shown in Chart 17. It has grown by 100 percent from 1972 to 1989.

U. S. pollution control spending has historically been larger compared to the country's Gross Domestic Product than spending by other countries for which data is available. Chart 18 shows pollution control spending as a percentage of Gross Domestic Product.

Pollution Control as % of GDP

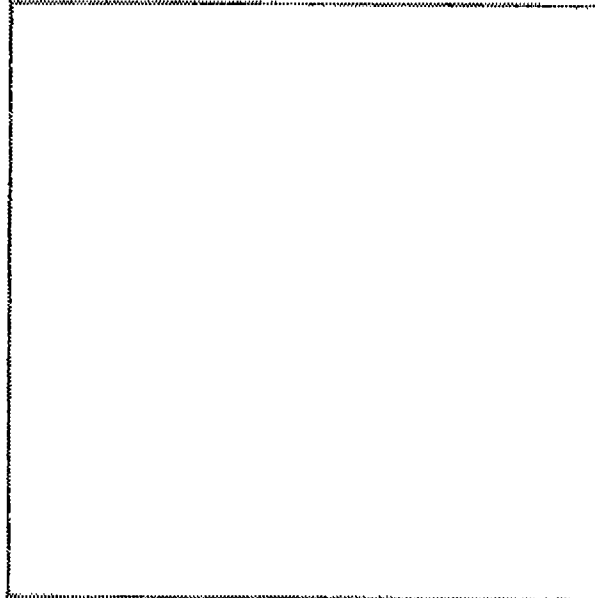


CHART 32

U.S. Pollution Control Expenditures

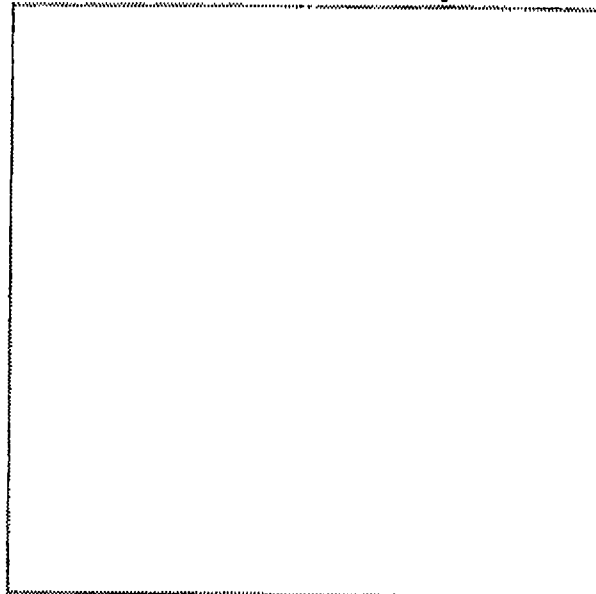


CHART 33

GLOBAL CHANGE RESEARCH

The Intergovernmental Panel on Climate Change (IPCC) stated that, "To reduce the current scientific uncertainties in each of these areas (as listed below) will require internationally coordinated research, the goal of which is to improve our capability to observe, model, and understand the global climate system. Such a program of research will reduce scientific uncertainties and assist in the formulation of sound national and international response strategies".

The U.S. Global Change Research Program (US/GCRP) has been developed as a central component of the United State's approach to global change, and more specifically to address these IPCC identified uncertainties.

In FY 1992, the U.S. plans to invest almost \$1.2 billion in this Program, which virtually doubles the U.S. commitment to the research program of the US/GCRP since it was initiated in FY 1990 (see chart below).

U.S. scientists have lead the development of an international global change research program. Other countries have joined the U.S. in a coordinated research effort to address critical scientific uncertainties, through such international programs as the World Climate Research Programme ((WCRP) and the International Geosphere-Biosphere Programme (IGBP). The total international research program, for which the U.S. provides about 50% of the financial support, is coordinated through United Nations scientific bodies (i.e., WMO,

IOC, and UNEP), through the International Council of Scientific Unions (ICSU), and through the recently established International Group of Funding Agencies for Global Change Research (IGFA).

The central task of the US/GCRP is to develop predictive understanding of the Earth's system's processes, particularly the climate aspects. It is the intent of the US/GCRP to provide leaders of government with the best possible scientific information as inputs to environmental policy decisions.

The highest priorities for the US/GCRP in FY 1992 are to:

1. Enhance scientific research efforts that seek to *reduce the scientific uncertainties* identified during the IPCC scientific and impact assessments. Specifically, the USGCRP research will focus on understanding the processes affecting:
 - *changing concentrations of greenhouse gases*, which are implicated in future global warming predictions;
 - *clouds and radiative balance*, which strongly influence the magnitude of climate change at global and regional scales;
 - *oceans*, which influence the timing and patterns of climate change;
 - *land-surface hydrology*, which affects regional climate change and water availability;
 - *polar ice sheets*, which affect predictions of global sea level changes; and
 - *ecological dynamics*, which are impacted by and respond to climate change.

2. Enhance scientific research to support the development and implementation of a *comprehensive approach* to greenhouse gas emissions reductions, specifically a focus on:

- *sources and sinks of greenhouse gases;*
- *development of a quantitative index of radiative forcing; and*
- *use of economic models to generate future scenarios that cover multiple greenhouse gases and multiple sectors.*

The ultimate goals of the US/GCRP are to (1) Obtain a predictive understanding of the interactive physical, chemical, biological, geological, and social processes that regulate natural and human-induced changes in the total Earth system and, (2) Provide a strong scientific basis for national and international policy-making related to changes in the global environment and their regional impacts.

Growth in Budget chart

Master Graphic illustrating the
US/GCRP

