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THE WHITE HOUSE --CLOSE HOLD--
WASHINGTON

November 5, 1990

MEMORANDUM FOR GOVERNOR SUNUNU

FROM: D. ALLAN BROMLEY 
SUBJECT: Second World Climate Conference

A preparatory committee completed the latest draft ministerial declaration today. Throughout the discussions the U.S. took a positive tone, while being tough on the issues. Many nations, including the European countries, indicated that they did not want to isolate the U.S.. This is reflected in the substantial revisions and additional language in the final draft that address U.S. concerns.

Attached is a copy of the current draft declaration (Tab A) and a statement from the scientific and technical session that took place from October 29 to November 2 (Tab B). The next session is the November 6 to 7 "ministerial" meeting.

The draft ministerial declaration produced in Geneva in September was used as the basis for changes. The U.S. prepared, alternative draft was circulated along with different alternative drafts from the Saudis, Latin Americans, and Norwegians. Although the U.S. draft was not adopted as the vehicle for changes, it was cited as a good example of language that is more ministerial in tone and content. As a result, much of the technical language in the September draft was dropped and agreements were reached on language which largely satisfies concerns of the U.S. delegation. Some bracketed language troublesome to the U.S. remains, but this is expected to be resolved in the next two days.

The U.S. delegation was successful in some specific areas.

PARAGRAPH 7. The precautionary principle, which requires action irrespective of the level of scientific uncertainty, presented some of the most contentious language. It was essential that the U.S. change the language or it would have been impossible to sign the declaration. The section addressing the precautionary principle has been revised to provide for "cost-effective measures" in the face of scientific uncertainty.

Some specific problems remain in the draft ministerial declaration.

PARAGRAPH 12. The draft contains bracketed language listing the European countries and their concerted "regional" plan to take action on targets and timetables. This isolates the U.S. The Europeans worked hard for this language. In exchange, the U.S. included language in the same paragraph to "acknowledge the initiatives of the United States which will have significant effects on limiting emissions of greenhouse gases." The

U.S. language will be used as a bargaining chip to remove the European community language. Other language in the paragraph reflects points won by the U.S. in negotiations.

PARAGRAPH 15. Language concerning financial resources for developing countries is as follows: "we recommend that adequate and additional financial resources should be mobilized. . ." leaving the process, criteria and characteristics of the resources broad enough that it should not be a problem. However, this is one area which should be monitored through the end of the conference.

PARAGRAPH 21. Bracketed language focuses on reductions in energy-related CO₂ emissions, and could serve to steer away from our efforts to develop the comprehensive approach; however, paragraph 14 appears to counterbalance this CO₂ focus, recommending that "all greenhouse gases, sources and sinks be considered in the most comprehensive manner possible."

PARAGRAPH 28. Bracketed language includes the consideration of the "feasibility of forestry options" as part of the scope of global framework negotiations. The President made a commitment in the Houston G-7 Summit to have a Forestry Convention by 1992. There is a consensus within the Administration that the forestry issue should be put on a different track or it will get bogged down in the climate negotiations, which could extend beyond 1992.

Other issues need to be monitored.

Other paragraphs containing specific U.S. interests that need to be monitored, but which are acceptable at this point, include:

1. Uncertainty issue: Paragraphs 2, 5, 6, and 8.
2. Economics: Paragraph 20.
3. Targets and timetables: Paragraphs 10, 11, 12, and 13.

Maynard

SECOND WORLD CLIMATE CONFERENCE
SCIENTIFIC & TECHNICAL
PORTION

S&T/SWOC/No.: 13

SECOND WORLD CLIMATE CONFERENCE

CONFERENCE STATEMENT
SCIENTIFIC/TECHNICAL SESSIONS

FOREWORD

1. The Second World Climate Conference was convened in Geneva, Switzerland, from 29 October through 7 November, 1990, under the sponsorship of the World Meteorological Organization; the United Nations Environment Programme; the United Nations Educational, Scientific, and Cultural Organization and its Intergovernmental Oceanographic Commission; the Food and Agriculture Organization; and the International Council of Scientific Unions. This Statement was adopted by the participants in the scientific and technical sessions from 29 October to 3 November 1990, on the basis of the presentations at the Conference, the deliberations of task groups of participants organized to address various problem areas, and plenary discussions involving all participants. The scientific and technical sessions involved more than 700 participants from over 100 countries.

2. The Conference discussed the results of the first decade of work under the World Climate Programme (WCP), the First Assessment Report of the Intergovernmental Panel on Climate Change (August, 1990) and the development of the International Geosphere-Biosphere Programme (IGBP) and other relevant global programmes. In particular, the Conference considered the role, priorities, and programme structure for the future development of the World Climate Programme.

SUMMARY STATEMENT

1. Climate issues reach far beyond atmospheric and oceanic sciences, affecting every aspect of life on this planet. The issues are increasingly pivotal in determining future environmental and economic well-being. Variations of climate have profound effects on natural and managed systems, the economies of nations and the well-being of people everywhere. A clear scientific consensus has emerged on estimates of the range of global warming which can be expected during the 21st century (paragraph B). If the increase of greenhouse gas concentrations is not limited, the predicted climate change would place stresses on natural and social systems unprecedented in the past 10,000 years.

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2. At the First World Climate Conference in 1979, nations were urged "to foresee and to prevent potential man-made changes in climate that might be adverse to the well-being of humanity". This Conference concludes that, notwithstanding scientific and economic uncertainties, nations should now take steps towards reducing sources and increasing sinks of greenhouse gases through national actions and negotiation of a global convention on climate change, and related legal instruments, with the long-term goal of halting the build-up of greenhouse gases at a level that minimizes risks to society and natural ecosystems. A major international observational and research effort will be essential to strengthen the knowledge-base on climate processes and human interactions, and to provide the basis for operational climate monitoring and prediction. The remaining uncertainties must not be the basis for deferring societal response to these risks. Many of the actions that would reduce risk are also desirable on other grounds.

PART I. MAIN CONCLUSIONS AND RECOMMENDATIONS

A. Greenhouse Gases and Climate Change

1. Emissions resulting from human activities are substantially increasing atmospheric concentrations of the greenhouse gases. These increases will enhance the natural greenhouse effect, resulting on average in an additional warming of the Earth's surface. The Conference agreed that this and other scientific conclusions set out by the IPCC reflect the international consensus of scientific understanding of climate change. 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. The warming is expected to be accompanied by a sea level rise of 65 cm + 35 cm by the end of the next century. There remain uncertainties in predictions, particularly in regard to the timing, magnitude and regional patterns of climate change.

2. Climate change and sea level rise would seriously threaten low-lying islands and coastal zones. Water resources, agriculture and agricultural trade, especially in arid and semi-arid regions, forests, and fisheries are especially vulnerable to climate change. Climate change may compound existing serious problems of the global mismatch between resources, population and consumption. In many cases the impacts will be felt most severely in regions already under stress, mainly in developing countries.

3. Global warming induced by increased greenhouse gas concentrations is delayed by the oceans; hence, much of the change is still to come. Inertia in the climate system due to the influence of the oceans, the biosphere and the long residence times of some greenhouse gases means that climate changes that occur may persist for centuries.

4. Natural sources and sinks of greenhouse gases are sensitive to a change in climate. Although many of the response or feedback processes are poorly understood, it appears likely that, as climate warms, these feedbacks will lead to an overall increase rather than a decrease in greenhouse gas concentrations.

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5. The historical growth in emissions has been a direct consequence of the increase of human population, rising incomes, the related exploitation of fossil fuels by industrialized societies and the expansion of agriculture. Under "business-as-usual" assumptions*, it is projected that emissions will continue to grow in the future as a consequence of a projected doubling of energy consumption in the first half of the 21st century and an expected doubling of population by the latter half. As a result, the effect of human-induced greenhouse gas concentrations on the earth's radiation balance would by 2025 correspond to a doubling of carbon dioxide unless remedial actions are taken.

6. Over the last decade, emissions of carbon dioxide (CO₂) contributed 55% of the increased radiative forcing produced by greenhouse gases from human activities. The CFCs contributed about 24% of the past decade's changes, and methane 15%, with the balance due to other greenhouse gases. With controls on CFCs, the relative importance of CO₂ emissions will increase, provided the substitutes for CFCs have minimal greenhouse warming potential. Some 75% of total CO₂ emissions have come from the industrialized countries.

7. The above emissions can be expected to change the planet's atmosphere and climate, and a clear scientific consensus has been reached on the range of changes to be expected. Although this range is large, it is prudent to exercise, as a precautionary measure, actions to manage the risk of undesirable climate change. In order to stabilize atmospheric carbon dioxide concentrations by the middle of the 21st century at about 50% above pre-industrial concentrations, a continuous world-wide reduction of net carbon dioxide emissions by 1 to 2% per year starting now would be required. The Intergovernmental Panel on Climate Change (IPCC) also considered three other emissions scenarios, which would not lead to stabilization of CO₂ concentrations in the 21st century. A 15-20% reduction in methane emissions would stabilize atmospheric concentrations of that gas.

8. This Conference concludes that technically feasible and cost-effective opportunities exist to reduce CO₂ emissions in all countries. Such opportunities for emissions reductions are sufficient to allow many industrialized countries to stabilize CO₂ emissions from the energy sector and to reduce these emissions by at least 20 percent by 2005. The measures include increasing the efficiency of energy use and employing alternative fuels and energy sources. As additional measures to achieve further cost-effective reductions are identified and implemented, even greater decreases in emissions would be achieved in the following decades. In addition, reversing the current net losses in forests would increase storage of carbon. The economic and social costs and benefits of such measures should be urgently examined by all nations. An internationally coordinated assessment should be undertaken through the IPCC.

* "Business-as-usual" assumes that few or no steps are taken to limit greenhouse gas emissions. Energy use and clearing of tropical forests continue and fossil fuels, in particular coal, remain the world's primary energy source. The Montreal protocol comes into effect but without strengthening and with less than 100 percent compliance.

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9. Countries are urged to take immediate actions to control the risks of climate change with initial emphasis on actions that would be economically and socially beneficial for other reasons as well. Nations should launch negotiations on a climate change convention and related legal instruments, without delay and with the aim of signing such a convention in 1992.

B. Use of Climate Information in Assisting Sustainable Social and Economic Development

Climate data, analyses, and eventually climate predictions can contribute substantially to enhancing the efficiency and security of economic and developmental activities in environmentally sustainable ways. These benefits are particularly important in food and wood production, water management, transportation, energy planning and production (including assessment of potential resources of biomass, hydropower, solar and wind energy), urban planning and design, human health and safety, combatting of drought and land degradation, and tourism. This requires both data on the climate system, and its effective application. Data acquisition, collection, management and analysis must be more vigorously supported in all countries and special assistance provided to developing countries through international cooperation. Transfer of techniques for applying climate information should be accelerated through more widespread use of software (e.g. CLICOM) for readily available personal computers and other means. Further development of methods for predicting short-term variations in climate and the environmental and social impacts should be vigorously pursued. These advances would provide enormous economic and other welfare benefits in coping with droughts, prolonged rain, and periods of severe hot and cold weather. Such predictions will require major steps forward in ocean-atmosphere-biosphere observing systems. Much greater efforts are needed to increase involvement in these fields by developing countries, especially through increased education and training.

C. Priorities for Enhanced Research and Observational Systems

1. A consensus exists among scientists as summarized in the Report of Working Group I of the IPCC that climate change will occur due to increasing greenhouse gases. However, there is substantial scientific uncertainty in the details of projections of future climate change. Projections of future regional climate and climate impacts are much less certain than those on a global scale. These uncertainties can only be narrowed through research addressing the following priority areas:

- clouds and the hydrological cycle
- greenhouse gases and the global carbon and biogeochemical cycles
- oceans: physical, chemical and biological aspects; and exchanges with the atmosphere
- paleo-climatic studies
- polar ice sheets and sea ice
- terrestrial ecosystems.

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2. These subjects are being addressed by national programmes, the World Climate Research Programme and the International Geosphere-Biosphere Programme. Increased national support and substantially increased funding of these programmes is required if progress on the necessary time scale is to be made in reducing these uncertainties.
3. Present observational systems for monitoring the climate system are inadequate for operational and research purposes. They are deteriorating in both industrialized and developing regions. Of special concern is the inadequacy of observation systems in large parts of the southern hemisphere.
4. High priority must be placed on providing high-quality, long-term data for climate-related studies. Data should be available at no more than the cost of reproduction and distribution. A full and open exchange of global and other data sets needed for climate-related studies is required.
5. There is an urgent need to create a Global Climate Observing System (GCOS) modelled on the World Weather Watch Global Observing System and the Integrated Global Ocean Service System and including both space-based and surface-based observing components. GCOS should also include the data communications and other infrastructure necessary to support operational climate forecasting.
6. GCOS should be designed to meet the needs for:
 - (a) climate system monitoring, climate change detection and response monitoring, especially in terrestrial ecosystems
 - (b) data for application to national economic development, and
 - (c) research towards improved understanding, modelling and prediction of the climate system.
7. The main components of such a GCOS would be:
 - (1) an improved World Weather Watch Programme;
 - (2) the establishment of a global ocean observing system (GCOS) of physical, chemical and biological measurements;
 - (3) the maintenance and enhancement of monitoring programmes of other key components of the climate system, such as the distribution of important atmospheric constituents (including the Global Atmosphere Watch), changes in terrestrial ecosystems, clouds and the hydrological cycle, the earth's radiation budget, ice sheets, and precipitation over the oceans.
8. The further development and implementation of the GCOS concept should be pursued with urgency by scientists, governments and international organizations. All countries must ensure a full and open exchange of the data sets needed for climate system research, process and impact studies, and modelling.

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9. The impacts of climate variability on human socio-economic systems have provided major constraints to development. Climate change may compound these constraints. In semi-arid regions of Africa, drought episodes have been directly responsible for major human disasters. Research undertaken during the first decade of the WCP and through other international and national programmes has improved drought early warning systems including FAO's Global Early Warning System and increased the reliability of climate impact analyses. But much more remains to be done. Intensified efforts are required to refine further our ability to predict short-term climate variability, anticipate climate impacts, and identify rational strategies to mitigate or prevent adverse effects. The threat of climate change brings new challenges to the future well-being of people. This requires greater efforts to understand impacts of climate change. Mitigation and adaptation strategies are also essential. Immediate steps to be taken include:

- (a) national and regional analyses of the impacts of climate variability and change on society, and study of the range of response and adaptation options available.
- (b) closer co-operation and communication among natural and social scientists, to ensure that climate considerations are accounted for in development planning.
- (c) significant increases in resources to carry out impact/adaptation studies.

10. Improvements in energy efficiency and non-fossil fuel energy technologies are of paramount importance, not only to reduce greenhouse gas emissions but to move to more sustainable development pathways. Such advances will require research and development, as well as technology transfer and co-development.

11. A specific initiative would create a network of regional, interdisciplinary research centres, located primarily in developing countries, and focussing on all of the natural science, engineering and social science disciplines required to support fully integrated studies of global change and its impacts. The centres would conduct research and training on all aspects of global change and study the interaction of regional and global policies.

D. Public Information

People need better information on the crucial role climate plays in development and the additional risks posed by climate change. Governments, intergovernmental and non-governmental organizations should give more emphasis to providing accurate public information on climate issues. The public information and education and training component in the WCP and IGRP must also be expanded.

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PART II

Specific Issues:

1. Water

1.1 Among the most important impacts of climate change will be its effects on the hydrological cycle and water management systems, and through these, on socio-economic systems. Increases in incidence of extremes, such as floods and droughts, would cause increased frequency and severity of disasters.

1.2 The design of many costly structures to store and convey water, from large dams to small drainage facilities, is based on analyses of past records of climatic and hydrological parameters. Some of these structures are designed to last 50-100 years or even longer. Records of past climate and hydrological conditions may no longer be a reliable guide to the future. The design and management of both structural and non-structural water resource systems should allow for the possible effects of climate change.

1.3 Data systems and research must be strengthened to predict water resources impacts, detect hydrological changes, and improve hydrological parameterization in global climate models.

1.4 Transfer of existing and novel technologies, for more efficient use of water for irrigation, should be made available to developing countries in semi-arid zones.

2. Agriculture and Food

2.1 Important uncertainties remain regarding the prediction of the magnitude and nature of potential impacts of changing climate and higher CO₂ levels on global food security. The potential impact on food production in developing countries (with more than half the world's population) could be more uncertain than recent reviews suggest.

2.2 High priority should therefore be given to research on the direct effects of rising CO₂ concentrations on food and fibre crop productivity and equal priority should be given to research on agricultural emissions so as to determine agriculture's present and potential role as a source of and sink for greenhouse gases, and to clarify the costs and possible trade-offs arising from limitation measures.

2.3 New or strengthened institutional mechanisms are required to upgrade natural resource inventories, research strategies and extension services to raise agricultural productivity and minimize emissions. These mechanisms should include collaborative programmes between FAO and international and national agencies with stress on interdisciplinary activities on the food security implications.

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3. Oceans, Fisheries, and Coastal Zones

3.1 Shorter term variations in the earth's climate are determined by the coupled ocean - atmosphere system. Coastal zones and their associated high biological productivity, including fisheries, are especially affected. Thus, an improved data base of oceanic parameters is considered indispensable for operational climate forecasting. It is recommended that a global ocean observing and data management system be developed for improving predictions of climate change. Research on the ocean will provide quantification of the feedback loops in climate processes. Observation and research on the El Nino - Southern Oscillation phenomena, on upwelling areas and on biological productivity of the open sea are also important.

3.2 Coastal zones, which are the source of most of the global fish catch, are especially susceptible to effects of global warming and sea level rise. Predicting the impact of changes would be of enormous benefit to the increasing number of people living in coastal areas. Thus, it is also recommended that a programme of coastal zone research and monitoring be established to identify the effects of climate change on the coast and coastal ecosystems, and to assess the vulnerability of various natural and managed ecosystems such as coral reefs, mangroves and coastal aquaculture.

3.3 Action should be taken now to develop coastal zone adaptation strategies and policies.

4. Energy

4.1 In order to stabilize atmospheric concentrations of greenhouse gases while allowing for growth in emissions from developing countries, industrialized countries must implement reductions even greater than those required, on average, for the globe as a whole. However, even where very large technical and economic opportunities have been identified for reducing energy-related greenhouse gas emissions, and even where there are significant and multiple benefits associated with these measures, implementation is being slowed and sometimes prevented by a host of barriers. These barriers exist at all levels - at the level of consumers, energy equipment manufacturers and suppliers, industries, utilities, and governments. Overcoming the barriers obstructing least-cost approaches to meeting energy demands will require responses from all parts of society - individual consumers, industry, governments, and non-governmental organizations.

4.2 Developing countries also have an important role in limiting climate change. Maintaining development as a principal objective, energy and development paths can be chosen that have the additional benefit of reducing radiative forcing.

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5. Land Use and Urban Planning

Population growth, increasing urbanization, and competing demands for finite areas of arable land will produce increasingly severe problems of food supply, energy production, and water resources. Climate changes may exacerbate these problems in some regions. Prudent planning will require baseline analyses of land use, quality and quantity of water resources, and the vulnerability of urbanized societies to environmental change. In particular, improved adaptation of urban areas to local climatic regimes needs to be achieved by more appropriate design of their layouts and building densities, and of building construction through modifications of building and planning regulations. Because conurbations make a major contribution to energy-related greenhouse gas emissions, the design and efficiency of all aspects of urban systems should be enhanced.

6. Health and Human Dimensions

6.1 The direct impact of climate change on people, their health and cultural heritage, could be severe. There is likely to be increased health inequity between peoples of developing and developed countries. Climatic change could result in creating environmental refugees with associated increases of ill-health, disease and death among them.

6.2 Global warming is likely to shift the range of favourable conditions for certain pests and diseases, causing additional stresses on people, particularly those of the semi-arid tropics. It must be appreciated however that serious problems may arise in all parts of the world.

6.3 Research into how human behaviour contributes to and responds to climate change must have increased emphasis. Public awareness and education programmes are particularly essential in this regard.

7. Environment and Development

7.1 Climate change, superimposed on population pressures, excessive consumption, and other stresses on the environment imperils the sustainability of socio-economic development throughout the world. In addition, slowing climate change will give countries more time to enhance their prospects for sustainable development. The developed countries need to reduce emissions and assist the developing countries to adopt new, clean technologies.

7.2 Climate change has such important implications for the sustainability of development that policy responses, including measures to reduce greenhouse gases, measures to reduce deforestation, and the commitment of financial and other resources, are justified for that reason alone. Economic policies, such as subsidies and trade restraints, can distort markets so they harm the environment and contribute to global warming and sea level rise. There is an imperative need for development policies that not only reduce global warming trends but also increase economic and social resilience.

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8. Forests

While increasing forest cover can contribute to the slowing of global climate change, this is not the major cure for the problem.

Five priority actions are recommended:

Firstly, assessing national opportunities to increase forest carbon storage commensurate with national resource development policies, developing an approach by 1992 and completing assessment by 1995.

Secondly, managing the world's forests to optimize biomass and resultant carbon storage in addition to the maintenance of sustainable yields of forest products, biological diversity, water quality and the many other values that forests provide.

Thirdly, accelerating research to assess the added contribution that forests can make to atmospheric CO₂ reduction and the impacts of climate change on the world's forests.

Fourthly, designing and implementing international monitoring systems to determine conditions and changes in forest ecosystems in response to anticipated climate changes.

Finally, supporting the development of a proposed international instrument on conservation and development of the world's forest linked with the proposed climate and biodiversity conventions.

PART III

Organizational and Policy Issues for International Activities

1. The future structure of the WCP

1.1 The organizational framework for international scientific research is in place, constituted by the WCRP, emphasizing the physical aspects, and the IGBP, covering bio-geochemical aspects.

1.2 The World Climate Data Programme, renamed the World Climate System Monitoring Programme, should be redefined to take into account new objectives.

1.3 Additional elements of the new WCP (WCP-2) should cover adaptation and mitigation, and education.

1.4 Governments should establish national committees for the WCP to mobilize support for national activities and to coordinate efforts. The UN agencies and ICSU should work towards ensuring regular contact and exchange of information with national committees.

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1.5 The mechanism established for overall coordination of the WCP, involving meetings of the chairs of steering bodies for the various components, should be actively supported by WMO, the other UN bodies concerned and ICSU. Annual meetings of Executive Heads should consider their recommendations.

1.6 Restructuring and strengthening of the WCP will also be necessary to support new activities, such as the development of the proposed GOOS. The Conference recommended that a proposal for the new structure of WCP be formulated and presented to the Eleventh World Meteorological Congress, May 1991, and at appropriate meetings of other participating agencies.

2. Special needs of the developing countries

2.1 As stated in the IPOC report, industrialized and developing countries have a common but differentiated responsibility for dealing with the problems of climate change. The problem is largely the consequence of past patterns of economic growth in the industrial countries. However, in future the much needed economic growth in the developing countries could play an important role in determining the rate of climate change.

2.2 Developing countries are being asked to participate in the alleviation of the legacy of environmental damage from prior industrialization. If they are to avoid the potentially disastrous course followed by industrialized countries in the past, they need to adopt modern technologies early in the process of development, particularly in regard to energy efficiency. They also must be full partners in the global scientific and technical effort that will be required. It is clear that developing countries must not go through the evolutionary process of previous industrialization but rather, must "leapfrog" ahead directly from a status of under-development through to efficient, environmentally benign, technologies presently found only in the most advanced industrial economies.

2.3 Although developing countries have collaborated in providing data, and participated to a degree in meetings and research, they have benefited to a lesser extent from the analyses developed from their contributions, and even less so from the applications derived therefrom.

2.4 Therefore, a massive and sustained flow of scientific and technological expertise towards the development of the intellectual resources, technical and institutional capacity of the developing countries is a necessary complement to the efforts of those countries.

2.5 Developing countries should be assisted to build up their capabilities

- to monitor, assess and apply climate information;
- to prepare inventories of greenhouse gases emissions and future emissions projections;
- to identify impacts of potential global warming;

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- to prepare cost estimates and priorities for response strategies to adapt and mitigate problems posed by climate change;
- to participate in the World Climate Programme.
- o The mechanisms of the transfer of technology and provision of technical assistance and co-operation to developing countries should take into account considerations such as the need for preferential and assured access, intellectual property rights, the environmental soundness of such technology and the financial implications.
- o Taking note that industry plays a significant role in the development and transfer of science and technology, efforts by industry to promote further the development and transfer of environmentally sound technologies should be encouraged, and policies to encourage such efforts should be formulated.
- o Additional financial resources will have to be channelled to developing countries for those activities which contribute both to limiting greenhouse gas emissions and/or adapting to any adverse effects of climate change, and promoting economic development. Areas for co-operation and assistance could include the efficient use of energy, land use planning, forest management, soil and water conservations, strengthening of observational systems and scientific and technological capabilities.

3. Co-operation in international research

3.1 The existing and planned research projects of the WCRP and the IGBP address the highest priority scientific issues related to the understanding and prediction of climate variability and change.

3.2 These programmes should be implemented completely and rigorously. It is particularly important that adequate funding including long term funding be provided.

3.3 In view of the progress made in climate research, it is now timely to proceed to the detailed design of an operational global climate observing system, together with the data communications and other infrastructure needed to support operational climate forecasting. Governments should enter into early discussions aimed at international cooperation in operational climate forecasting and climate change research.

4. Co-ordinated International Activities

4.1 The Conference endorsed the three streams of international activity:

- a. continuing global measurement and research efforts through the WCP, IGBP, and other related international programmes.

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- b. Assessment functions of a continuing IPCC to support negotiation and administration of a Convention.
- c. Development of a Convention on Climate Change for governmental action.

4.2 The UN Conference on Environmental and Development (Brazil 1992) provides a valuable opportunity to relate the above three themes to all the other environment/development issues and objectives being examined by the Conference. It is therefore essential that the three streams should interact effectively with UNCED.

4.3 It is proposed that the sponsoring agencies for the SWOC consider the possibility of holding a Third World Climate Conference at an appropriate time about 2000 AD.

5. Policy Development

5.1 The development of policy regarding climate change requires on the part of policy makers an understanding of the underlying science and a weighing of the scientific uncertainties associated with the prediction of climate change and its likely impacts. An important aspect of future work is therefore a continued dialogue between scientists and policy makers.

5.2 It is essential that all parties to any Convention and related legal instruments should, under its obligations, participate fully in the free exchange and flow of information necessary for the development and technical input of the convention. Such a convention should include a technical annex to provide for:

- International co-operation in research, systematic observation and exchange of related information;
- Adjustments based on up-dates of scientific knowledge;
- Strengthening national scientific and environmental capabilities of developing countries.

November 15, 1990

MEMORANDUM FOR THE PRESIDENT

FROM: D. ALLAN BROMLEY

SUBJECT: Sea Level Rise

I have been advised by the NSC that the issue of sea level rise was raised on your recent trip to the Pacific Islands. As this is likely to become an increasingly visible issue, I thought it might be useful to provide you with an up-to-date summary of the most recent published scientific information on sea level rise - the articles which are serving as the basis for present public discussions on this issue - as well as some possible constructive responses to inquiries regarding sea level rise.

The most recently published scientific conclusions on sea level rise which presently serve as the basis for public discussions on the issue:

- (1) National Academy of Sciences, National Research Council, Sea-Level Change, 1990

"...On the basis of estimates of global warming of the atmosphere and ocean resulting from increasing concentrations of carbon dioxide and other greenhouse gases, it is possible to make an approximate forecast of global rise in sea level during the next 100 years... One hundred years from now it is likely that sea level will be 0.5 to 1 meter higher than it is at present...."

- (2) Second World Climate Conference Scientific/Technical Statement, November 1990 (Endorsing the same conclusions of the IPCC Working Group I)

"...Without actions to reduce emissions, global warming is predicted to reach 2 to 5 degrees C over the next century..the warming is expected to be accompanied by a sea level rise of 65 cm +/- 35 cm by the end of the next century...."

- (3) IPCC Working Group III (Response Strategies Working Group) Report on Strategies for Adaptation to Sea Level Rise, November 1990. (Attachment A)
This report is the first survey on a global scale of adaptive options for coastal areas in response to a possible acceleration of sea level rise and the implications of these options.

"Global climate change may raise sea level as much as one metre over the next century and, in some areas, increase the frequency and severity of storms. Hundreds of thousands of square kilometers of coastal wetlands and other lowlands could be inundated..."

"...Some nations are particularly vulnerable. Eight to ten million people live within one metre of high tide in each of the unprotected river deltas of

Bangladesh, Egypt, and Vietnam. Half a million people live in archipelagos and coral atoll nations that lie almost entirely within three metres of sea level, such as the Maldives, the Marshall Islands, Tuvalu, Kiribati, and Tokelau. Other archipelagos and island nations in the Pacific, Indian Ocean and Caribbean could lose much of their beaches and arable lands, which would cause severe economic and social disruption...."

Possible responses to future inquiries on the sea level issue:

The concern that you heard expressed on your trip to the Pacific Islands by some of the leaders of the small island nations stems from the increasing amount of scientific literature being published, such as those listed above, on sea level rise.

These leaders, many of whom live on small islands with less than three meters total elevation, clearly feel particularly vulnerable to this possible effect of global warming. This concern was reiterated in a speech by the Prime Minister of Tuvalu at the Second World Climate Conference two weeks ago. (Attachment B)

Because we here in the U.S. (1) have a solid history of high quality observation and research programs on sea level as well as activities which are currently underway and planned under your U.S. Global Change Research Program (USGCRP) for 1991 and beyond, and (2) have been active participants in many international programs such as the IPCC process, we can discuss a number of constructive actions we are already taking to deal with the issue of climate change and sea level rise. A summary of these actions follows:

(1) The issue of understanding and monitoring sea level is a high priority in your US Global Change Research Program. A few examples of specific USGCRP activities related to sea level rise are:

- . Increased deployment of the global sea level stations. (To measure absolute sea level. NASA, NOAA, DOD)
- . Global ice sheet observations. (To monitor changes in ice sheets and ice caps by remote sensing. DOI, NASA, NSF, NOAA)
- . Regional glacier monitoring. (DOI)
- . Studies of atmospheric and oceanic circulation based in part on coupled numerical models. (Estimate ocean temperature (thermal expansion) and air temperature (surface ice melting) DOE, NASA, NSF, NOAA)
- . Study the geologic record to reconstruct past sea level histories and causes. (NSF, DOI, NOAA)

(2) We in the U.S. have been full partners in the international process which has been examining this issue - for example, in the three IPCC working groups (science, impacts, and responses) In particular, we participated, as one of the 70 countries involved, in the production of the Report of the Coastal Zone Management Subgroup of the IPCC Working Group III called Strategies of Adaptation to Sea Level Rise,

just published in November 1990. This document recommends:

"...for coastal nations to begin the process of adapting to sea level rise not because there is an impending catastrophe, but because there are opportunities to avoid adverse impacts by action now, opportunities that may be lost if the process is delayed...."

There are ten recommendations for more specific actions in the categories of (a) national coastal planning, (b) international cooperation, and (c) research, data and information.

Through these and other programs like these, the U.S. is continuing to work with colleagues in the international community to provide the best information for well-informed and thoughtful decision-making on this subject.

Comment on the recent NASA paper you referred to in the Pacific Islands trip

Finally, I thought it might be useful to comment on the article to which you referred during your trip to the islands, "Precise Monitoring of Global Temperature Trends from Satellites". This article is a perfect example of one of the most recent developments by our scientific community on the global change issue, which provides useful information to the global warming/sea level rise issue. As you know, the article's significant result was that they have developed a technique (passive microwave radiometry from satellites) which provides accurate estimates of global atmospheric temperatures needed for a better understanding of climate change and the climate system.

While their ten-year temperature record is too short for use at this time in any analysis of climate change, the use of this technique will provide relatively precise determination of the locations and magnitudes of temperature change events.

I hope this background information is useful to your discussions. If you have any questions, please do not hesitate to call.

November 15, 1990

MEMORANDUM FOR THE PRESIDENT

FROM: D. ALLAN BROMLEY

SUBJECT: Global Change Status Report

This memo is to provide you with a status report on global change with regard to the most recent scientific conclusions as well as our current position in the world community on this issue.

The present status of knowledge on the science of global change.

Since the first part (scientific/technical session) of the Second World Climate Conference in Geneva 2 weeks ago (747 participants, 120 countries) was devoted to, among other things, producing the most current summary of the scientific results of the past decade of research on climate under the World Climate Programme and other climate-related programs, it may be useful to review the information presented at that Conference. It is the information upon which most countries are basing their discussions as well as their decisions regarding global change issues.

- o The Conference agreed that the scientific conclusions set out by the IPCC reflect the international consensus of scientific understanding of climate change.

A few examples of their specific conclusions:

- o "Emissions resulting from human activities are substantially increasing atmospheric concentrations of the 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 "Global warming induced by increased greenhouse gas concentrations is delayed by the oceans; hence, much of the change is still to come. Inertia in the climate system due to the influence of the oceans, the biosphere and the long residence times of some greenhouse gases means that climate changes that occur may persist for centuries."
- o Natural sources and sinks of greenhouse gases are sensitive to a change in climate. Although many of the response or feedback processes are poorly understood, it appears that, as climate warms, these feedbacks will lead to

an overall increase rather than a decrease in greenhouse gas concentrations."

- o The Conference noted that, as stated in the IPCC Report, there is substantial scientific uncertainty in the details of predictions of climate change... To narrow the uncertainties, the Conference recommended enhanced research and observational systems for a number of high priority research areas (e.g., oceans, clouds, carbon cycle, polar ice sheets and sea ice)

(2) The present position of the U.S. in the world community in the global change issues

The international political environment surrounding both the scientific and Ministerial portions of the Second World Climate Conference (SWCC), which ended last week in Geneva, provides a good barometer for where we are in the international arena of global change.

Background: The past year leading up to the SWCC:

- o The U.S. arrived in Geneva against the backdrop of our past year's cautious approach to the global change issue - in contrast to most other countries who have been publically willing to commit to specific targets and timetables for reducing greenhouse gas emissions, regardless of cost or economic uncertainties. Over the year, we have continued to insist that we should be taking actions that are justified for other reasons ("no regrets"). In addition, we also, for much of the year, publically reserved judgement on the science of global change, stating that we were waiting for the results of the IPCC Working Group I Report on the Scientific Assessment of Climate Change (now published - June 1990).

- o While our cautious approach toward any specific plans or strategies for stabilization of CO₂ and other greenhouse gases has been factually well-justified, it has, unfortunately, been poorly-understood and our motives have been badly misconstrued. In fact, we have not called for any specific targets to date because of the lack of sufficient economic information available to us to craft a realistic plan.

- o Over the past year, at several highly-visible, high-level meetings on climate change, such as Noordwijk, the U.S. along with other major powers have been party to statements, which agree that stabilization of CO₂ emissions should be achieved as soon as possible and that "such stabilisation should be achieved by..industrialized nations.. as soon as possible, at levels to be considered by the IPCC and the Second World Climate conference of November 1990"

The U.S. and The Second World climate conference

- o By the time of the SWCC two week ago, the U.S. had become even further isolated on the global change issue because just prior to the start of the Ministerial portion of the Conference, the EC reached an agreement which called for "...stabilization of CO₂ emissions ...by the year 2000 at 1990 levels, although noting

that some countries are not in a position to commit themselves to this objective". (reference to UK whose target year for stabilization is 2005). In addition, several weeks prior to that, both Japan and Australia announced plans for stabilization or reduction of their carbon dioxide emissions.

- o At the conference itself, opening speeches by several heads of state, King Hussein of Jordan and Prime Minister Thatcher, in particular (the latter was a call to arms for responding to climate change) set the stage for some difficult negotiations at the preparatory meetings and at the Ministerial Conference, where the U.S. was clearly viewed as the last hold-out among the industrialized countries not willing to propose a plan for the stabilization or reduction of its greenhouse emissions.

- o After alot of skillful negotiating by the U.S. delegation at the preparatory meetings, and later, in the Ministerial meeting, all of the five major issues of concern to the U.S. (to which I referred in my memo to you of October 26), were negotiated in such a way as to favorably reflect our position on each issue. This was quite a feat given the political environment at the conference.

- o Our success in negotiating a Ministerial Declaration favorable to the U.S. positions, despite the rather wide-spread hostility regarding our refusal to offer a plan for stabilizing greenhouse gases, was probably due to the fact that all countries present genuinely wanted a declaration to be issued from the meeting and that such a declaration is meaningless without the U.S. Furthermore, most countries recognize that the upcoming negotiations on a Climate Change Framework Convention are the best vehicle for obtaining real commitments to such actions as stabilization of CO₂ and other greenhouse gases. In fact, at the Second World Climate conference, a number of countries, including the EC worked hard to help us to find compromise language so that we did not become completely isolated on the issue.

Where do we go from here?

- o It is clear that we must have a well-defined position for the U.S. to take to the table at the first negotiating session of the Climate Change Convention which will include a strategy or plan for stabilizing or reducing greenhouse gas emissions.

- o We can no longer state that we are waiting for the science; the IPCC science report is now out and it represents the consensus of the international scientific community. The report was endorsed by the Scientific/Technical Session of the SWCC who concluded that:

"...notwithstanding scientific and economic uncertainties, nations should now take steps towards reducing sources and increasing sinks of greenhouse gases through national actions and negotiations of a global convention on climate change, and related legal instruments, with the long-term goal of halting the build-up of greenhouse gases at a level that minimizes risks to society and natural ecosystems...."

The good news is that a number of recent interagency activities, many of which are

being coordinated under my DPC Global Change Strategy Task Force, are in the process of developing and compiling important new information on this issue which, combined with results of analyses of benefits from actions we are already taking, such as the Clean Air Act, may soon make it possible to propose a strategy toward an economically-feasible, realistic plan regarding U.S. greenhouse gas emissions.

My next memo to you will provide you with a summary of some of the kinds of new information which is becoming available on the issue as well as a summary of our preparations for the February negotiations, including a timetable for production of some of the most important materials.

We obviously have a great deal of hard work to do between now and the start of the negotiations, but it is an important issue to us both scientifically and politically. I firmly believe that we will be able to make some excellent progress on both fronts over the next few months.

NOVEMBER 14, 1990

MEMORANDUM FOR THE PRESIDENT

FROM: D. ALLAN BROMLEY

SUBJECT: FRAMEWORK CONVENTION NEGOTIATIONS IN FEBRUARY

A number of major tasks have been identified to be completed by the time of the first negotiating session of the Framework Convention on Climate Change in February to help develop a detailed strategy for the U.S. for dealing with greenhouse gases and to define a negotiating position for the Session. The Second World Climate Conference was clearly a success for the U.S. with regard to the final version of the Ministerial Declaration; however, we risk becoming isolated in February without the announcement of a U.S. strategy, which I believe will be possible by that date.

In order to be well-prepared for the negotiations, a large amount of research and analysis tasks are being carried out by a number of different agencies in order to provide the U.S. with the best information available for negotiating the convention from the U.S. point of view. They have been reporting results to and receiving policy guidance from the DPC Global Change Strategy Group, which I chair. The process has included a State Department Policy Coordinating Committee, the Task Force on a Comprehensive Approach, the Economics Task Force, a Task Force on the Private Sector and the FCCSET Committee on Earth and Environmental Sciences (CEES).

The following is a summary of some of the main tasks which are underway:

Some of Major Tasks Presently Underway in Preparation for the February Negotiations

- o "The Economics of Long-term Global Climate Change - A Preliminary Assessment", Report of an Interagency Task Force (Chaired by CEA) Published September 1990.
- o Preliminary assessments of best available information on effectiveness and economic consequences of various response strategies before negotiations begin.
- o Calculation of the impact on radiative forcing of emissions targets implemented by only a subset of countries (e.g., OECD members)
- o Detailed analysis of the comprehensive approach
- o Determine what could be listed under "no regrets" heading

- o Assessment of existing institutions and mechanisms related to financial assistance for climate change

Major policy issues to be Addressed before the Start of the Negotiations

In addition to the interagency activities which are being carried out in preparation for the negotiations, there are a number of major issues to be resolved by the White House prior to February:

1. Appointment of a head of delegation for the Framework Convention negotiations. This could be the same person as the "Special Ambassador", called for by the Carnegie Commission to be appointed to oversee the complex preparatory efforts leading up to the 1992 United Nations Conference on Environment and Development, to be held in Brazil (the "Brazil Conference). As part of the strategy determination, this will require the early appointment of a specific person to head our delegation, so he or she can get up to speed in a very short amount of time.
2. Further development of positions on major issues such as comprehensive approach, economic aspects of emissions reductions, targets and timetables, the precautionary principle, and financial assistance.
3. Beginning development or further development of any new policy initiatives that may be needed in conjunction with a framework convention. One initiative that may prove most useful is the National Energy Strategy.
4. Compilation of Administration accomplishments in the environmental area.
5. Timing of any new announcements on climate change policy. The beginning of the framework convention negotiating session may heighten public awareness of the issue. It coincides with the State of the Union address.

Timetable for Preparations for the First Negotiating Session

A timetable has been developed, which received Governor Sununu's approval during our November 8th meeting. It is an ambitious timetable and will take a considerable amount of effort to make sure this is kept on track, but it is essential to our preparation for February negotiations.

The timetable makes a number of assumptions. 1) That we will appoint a specific person to be head of delegation (a "Special Ambassador", perhaps), 2) That the staff-level group which plans each Task Force meeting convene more often and be expanded slightly, to include OMB and some other agencies. The timetable is as follows:

November 28 Global Change Strategy Task Force Meeting

Agenda items: (1) Progress Report on Preparations for framework convention by PCC WGCC subgroups; (2) briefing on comprehensive approach EPA/DOJ; 3) Tasking out of additional information

required and preparation of options paper on major, outstanding issues needing resolution.

- November 30 Deadline for all PCC WGCC Workgroup reports. Tentative deadline for Comprehensive Approach Task Force materials and Economics Task Force report.
- December 1-7 Staff meetings to develop final options papers for presentation to full Global Change Working Group for approval.
- December 10 Full DPC GCWG to 1) review options paper, 2) review U.S. preparations for, and approaches to, negotiating a framework convention, 3) discussion of PCC WGCC Workgroup reports, and 4) tasking of additional work product.
- December 11-19 Staff meeting as needed to compile and integrate additional information, put options paper into final draft form.
- December 18 Strategy Task Force Meeting, if needed.
- Agenda items: (1) package options (based on all comments) for consideration by DPC GCWG.
- December 20 Full DPC Global Change Working Group meeting.
- Agenda items: (1) Review Options Package to be presented to full DPC.
- December 20-
January 6 Staff meeting as needed to further refine options paper and compile additional information.
- December 25 Christmas Day
- January 7 Options package distributed to DPC members in preparation for meeting.
- January 15 Full DPC meeting to consider Options package.
- January 22 Full DPC meeting to consider Options package.

We will keep the Governor apprised of the development of strategic options.

CC: Governor Sununu

THE WHITE HOUSE
WASHINGTON

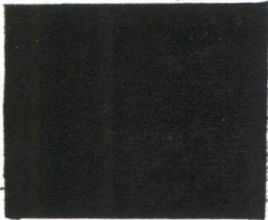
Date: 10/25/90

TO: Dr. Allan Bromley

FROM: **JAMES W. CICONI**
Assistant to the President and
Deputy to the Chief of Staff

The attached has been forwarded
to the President.

THE WHITE HOUSE
WASHINGTON



DATE:

1021-90

FROM THE PRESIDENT

To:

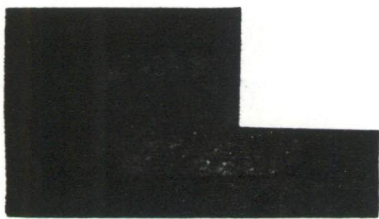
Roger Porter

How do we stand for
World Climate Conference in Geneva?

Will we be isolated??

Issues??

gb .



THE WHITE HOUSE

WASHINGTON

October 23, 1990

90 OCT 23 PM 9:17

MEMORANDUM FOR THE PRESIDENT

FROM: ROGER B. PORTER *RBP*
SUBJECT: The Second World Climate Conference

This responds to your request for an assessment of prospects for the Second World Climate Conference, which will be held in Geneva from October 29 to November 7.

The Conference will address the climate change agenda for the 1990s.

The First World Climate Conference, held in 1979, defined the world climate program that has been the basis for joint action over the past decade. The broad objective of the Second Conference is to set the international agenda for climate change activities for the next decade.

The Conference will review three reports of the Intergovernmental Panel on Climate Change (IPCC) -- on scientific evidence, potential effects, and response strategies. It will then attempt to identify principles for negotiations on a framework convention on climate change. These negotiations will begin next February (in Washington) and run at least through March 1992.

The U.S. will be a leader in discussions on research.

The Conference is divided into two parts. During the first week, scientists will discuss changes needed in the world climate research program for the next ten years. While no official delegations have been invited, U.S. scientists will be led by Dr. Joe Friday, head of Commerce's National Weather Service. Because the U.S. is the world leader in global climate change research (spending nearly \$1 billion in 1991), we will urge greater research commitments from others, including developing countries.

We may be isolated in negotiations on the declaration.

During the second week, ministers will attempt to remove the extensive brackets in a draft declaration. The U.S. is likely to be isolated on three familiar issues.

- There will be wide support for endorsing the precautionary principle, which would obligate

governments to attack climate change problems regardless of the uncertainty over causes and solutions.

- The northern Europeans and the Nordics want to establish targets and timetables. We have refused, citing the probable negative effects on growth.
- Developing countries want a commitment to receive new and additional resources to address climate change problems. We have challenged the view that resources for the environment should be isolated from resources for other activities.

We also may be criticized for our refusal to endorse the report of the IPCC's science panel. We question the report's analysis of the threat posed by the greenhouse effect and its call for prompt action. Because the U.S. position is well known, however, other countries are likely to criticize us less stridently than in the past.

The U.S. will attempt to focus attention on practical next steps.

The head of our delegation, NOAA Administrator John Knauss, will take a pragmatic approach. He will refuse to get drawn into extensive debates over rhetoric in the draft declaration. If necessary, we will table a no-frills draft that we could sign. Instead, he will focus on our willingness to begin negotiations on a framework convention on climate change. He will also emphasize the strong U.S. record of action on climate change -- notably the recent Clean Air Act.

Our strategy appears sound. Any lingering criticism will probably dissipate by February, when attention will turn to the framework convention.

The U.S. is being unfairly criticized for its level of representation.

The press has criticized the U.S. for sending John Knauss, when Prime Minister Thatcher and Chancellor Kohl may attend. In fact, if Thatcher and Kohl attend, they will address the Conference at the beginning of its second week. For the rest of the week, all countries will be represented by environment ministers. Knauss is accepted in this group, having been the U.S. delegate at the Bergen and Noordwijk Conferences.

MINISTERIAL DECLARATION

PREAMBLE

We, Ministers from ___ countries, assembled in Geneva, Switzerland, from 6 to 7 November 1990 at the Second World Climate Conference.

Conscious of our responsibility to present and future generations to preserve, protect and defend our fragile planet;

Alarmed by recent evidence that our actions may be altering the atmosphere which nurtures life and sets Earth apart from all other planets;

Uncertain still of what may follow, and at what cost, but convinced that delay will constrain our ability to act;

We embark now with common resolve on an effort which will require strength, resolution and steadfast purpose, an effort which will test every virtue of our peoples, but without which we can have no hope of success.

RISKS AND UNCERTAINTIES

1. Science tells us that gases produced by human activities -- the so-called greenhouse gases -- are accumulating in the atmosphere. Many of these gases are produced naturally and are essential to the habitability of our planet; still, the human contribution, particularly since the dawn of the industrial age, has perturbed their delicate balance in the atmosphere.

2. Science also warns us that the accumulation of greenhouse gases produced by human activities will lead inevitably to a global warming, perhaps at rates faster than any experienced since life as we know it began. Science predicts that the warming will not be even, that it is likely to occur more rapidly at higher latitudes, but that, once begun, we may neither be able to control or reverse it.

3. The state of our knowledge is imperfect -- many important uncertainties remain. Still we are aware that a significant warming may have harmful consequences for our planet and our peoples. Seas may rise, storms may increase and intensify and many species of life may not be able to adapt.

4. Facing such risks, but acknowledging great uncertainties, we must determine how extensively we must act, what the costs of action and inaction may be, and what measure of success will likely grace our efforts.

5. At this Second World Climate Conference we reaffirm our support for the World Climate Programme and for other cooperative scientific initiatives to resolve the questions before us.

PAST AND PROLOGUE

6. We recall that this endeavor is not without precedent. Our nations have already developed a common strategy to address a related global crisis -- stratospheric ozone depletion. From a modest beginning in 1985, we have quickly narrowed scientific uncertainties and summoned the resolve to take more stringent but necessary action. That action is also the most significant first step to limit the accumulation in the atmosphere of greenhouse gases from human activities.

7. We have also concluded an unprecedented international effort to analyze the science, impacts, and response options for further dealing with climate change. This effort, initiated under the joint auspices of the World Meteorological Organization and the United Nations Environment Programme, has produced the First Assessment Report of the Intergovernmental Panel on Climate Change. The Report has heightened our awareness and enlisted an increasing number of nations in the search for solutions.

8. We have thus set the stage for negotiations on a framework convention on climate change. We note with satisfaction that these negotiations will begin in three months time and that all parties have resolved to complete the convention, together with any related legal instruments as may then be agreed, by the time of the United Nations Conference on Environment and Development in June 1992.

9. We further note that the United Nations General Assembly will shortly consider ways, means and modalities for further pursuing these negotiations on the basis of recommendations produced one month ago by government representatives.

CALL FOR A GLOBAL STRATEGY

10. While uncertainty complicates our task, it will neither delay nor deter us. We must develop a global strategy to preserve our atmosphere. Our strategy must seek both to slow the predicted rise in temperature and to help us adapt to its effects.

11. It must be universal, involving all nations of the world, for only together can we hope to prevail.

12. It must be comprehensive, addressing all sources and sinks of the gases we produce, for the problem has many aspects, which must be considered together if our efforts are to succeed.

13. It must be equitable, taking into account our differing abilities to act and our differing contributions to past and anticipated future accumulations of greenhouse gases.

14. It must be pragmatic, recognizing our common desire to grow and provide for our peoples, without which prospect hope for human prosperity and dignity will wither.

15. It must also be farsighted, recognizing that future innovation will open possibilities as yet unknown, if we but direct our collective ingenuity to shape that future.

THE EFFORT REQUIRED

16. The challenge before us is great. How we meet it may influence life to come on our planet. We are aware that the effort required will be among the most complex and difficult ever undertaken. Our negotiators must find ways to accomodate a wide range of legitimate concerns while ensuring that we develop a specific program of action.

17. Foremost among these concerns is that shared by all countries -- that the actions we agree to take not foreclose economic growth. This concern is particularly acute among developing countries who have not yet attained the level of prosperity that prevails among countries of the industrialized world. Still, it is not unique to them, for disparities exist as well within the industrialized world.

18. We are aware that negotiators must also find ways to accomodate:

--the concerns of countries now determined to limit and reduce growing emissions of greenhouse gases as well as the concerns of countries whose growth depends on fossil fuel production;

--the concerns of countries, whose forests are integrally tied to their economic development yet which provide a critical element of the world's defense against global warming;

--the concerns of countries which bear a proportionately large degree of risk from the anticipated impacts of climate change, particularly countries in arid and semi-arid regions and small, low-lying coastal and island countries; and

--the concerns of all who understand that the burgeoning growth in our planet's population must be taken into account in our efforts to deal with global climate change.

19. We acknowledge that we must also deal anew with issues we have encountered in other fora, issues whose resolution often still eludes us. In particular, negotiators must develop:

--ways to assure that adequate financial resources are made available to countries that would otherwise be unable to join fully in this common effort;

--ways to assure that know-how and technological innovation continue to advance and are made affordable and widely available to solve this common problem;

--ways to assure that knowledge and information are fully and openly shared; and

--ways to assure that the educational and scientific infrastructure in all countries, particularly in the developing countries, is extended and enhanced to enable each of us fully to appreciate the scientific basis for climate change, the potential impacts of such change and evaluations of practical response strategies.

OUR COMMON FUTURE

20. Generations past once relied on faith in moving toward the future. Later generations placed their faith in reason. As we move now toward the second millenium we must seek to marry the two. We must urgently resolve the uncertainties that confront us. We must also accept that full knowledge may elude us for some time. We must begin now to take sustained, pragmatic action to secure our common future. We dedicate ourselves henceforth to develop a phased, flexible response that will enable us to take action now even as we seek to resolve remaining uncertainties and develop a comprehensive action plan for the future.

Withdrawal/Redaction Sheet

(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
01. Memorandum	From: Secretary of State Re: SWCC Ministerial (6 pp.)	9/24/90	(b)(1)	

Collection:

Record Group: Bush Presidential Records
Office: Science and Technology Policy, Office of (OSTP)
Series: Bromley, D. Allan, Files
Subseries: Global Climate Change Files - Conferences/Meetings
WHORM Cat.:
File Location: Global Change: Second World Climate Conference (2) [2 of 2] [1990]

Date Closed: 4/26/2010	OA/ID Number: 62059-002
FOIA/SYS Case #: 2005-0336-F	Appeal Case #:
Re-review Case #:	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]
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P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
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P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

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(b)(1) National security classified information [(b)(1) of the FOIA]
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(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

Timetable for First Negotiating Session in February
[Revised schedule based on N. Maynard 10/28/90 version]

October 29	SWCC Science Meeting
November 5	SWCC Ministerial Portion of Meeting
November 14	Global Change Strategy Task Force Meeting
	Agenda items: (1) report on result of SWCC and implications for Framework convention; (2) forestry convention
November 16	PCC WGCC (DOS) meeting - Progress report on preparations for a framework convention by all subgroups.
November 21	GC Strategy Task Force Meeting
	Agenda items: (1) Progress Report on Preparations for framework convention by PCC WGCC subgroups; (2) briefing on comprehensive approach EPA/DOJ
November 28	GC Strategy Task Force Meeting
	Agenda items: (1) Discussion of framework convention preparation of options package for presentation at DPC GCWG meeting; (2) selection of a negotiator and head of delegation.
November 30	Deadline for PCC WGCC Workgroup reports.
December 5	DPC GCWG to review U.S. preparations and approaches to negotiating framework convention, and discussion of PCC WGCC Workgroup reports which will be distributed to them the preceeding Friday.
December 18	Strategy Task Force Meeting
	Agenda items: (1) package options (based on DPC GCWG comments) for consideration by DPC GCWG.
December 20	Strategy Task force meeting
	Agenda items: (1) Review Options Package to be presented to full DPC.
January 7	Options package distributed to DPC members in preparation for meeting.
January 15	Full DPC meeting to consider Options package.
January 22	Full DPC meeting (if necessary)

Second World Climate Conference

Negotiations on a Framework Convention on Climate Change

Proposed actions:

Products:

1. Development of appropriate definitions [**Task Force on Climate Approaches**]
2. Preliminary assessments of best available information on effectiveness and Economic consequences of various response strategies before negotiations begin. [**DOE, EPA, CEA**]
3. Develop detailed analyses of the feasibility of meeting certain proposed targets in order to demonstrate the impracticability of these proposals. [**DOE, EPA, CEA**]
4. Calculate the impact on radiative forcing of emissions targets implemented by only a subset of countries (e.g., OECD members) [**DOE, EPA AND CEA**]
5. Set out in detail how the approach will work and the advantages of a comprehensive approach prior to negotiations.
6. Evaluate the feasibility and economic consequences of emissions targets for the U.S. and other key countries. (Part of the effort will be to identify potential allies) [**EPA, CEA, OMB AND DOE**]
7. Determine what could be listed under a "no regrets" heading. [**STATE IN COOPERATION WITH OTHER AGENCIES**]
8. Develop options regarding to what extent (i.e., how much detail) the framework convention should "tilt" the protocol in the direction of a comprehensive approach. [**STATE WORKING WITH THE TASK FORCE ON CLIMATE APPROACHES**]
9. Options paper on how to handle the possibility of differentiated treatment in the framework convention. [**STATE**]
10. Catalogue existing U.S. financial assistance related to climate change. [**STATE**]
11. Assessment of existing institutions and mechanisms related to financial assistance for climate change. [**STATE**]
12. Develop positions regarding technology development issues. [**STATE, DOE, USDA, EPA'S INTERNATIONAL ENVIRONMENTAL**]

**TECHNOLOGY TRANSFER ADVISORY BOARD, DOC, USTR, AND
OTHER RELEVANT AGENCIES]**

13. Consider surveillance/verification/compliance functions that might accompany comprehensive/economic mechanisms to be included in the framework convention. **[STATE AND THE TASK FORCE ON CLIMATE APPROACHES]**

14. Review and analysis of existing institutions, identifying gaps. **[STATE, TASK FORCE ON CLIMATE APPROACHES AND OTHER AGENCIES AS APPROPRIATE]**

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

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

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

18. Identify whether there is a need for the elaboration of a comprehensive international research program in order to facilitate cooperation in the exchange of scientific, economic and other information on climate change. **[INTERAGENCY WORKING GROUP ON DATA MANAGEMENT FOR GLOBAL CHANGE]**

19. Options paper discussing whether we should support stronger dispute settlement provisions. **[STATE]**

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

**Task Force on Comprehensive and Incentives Approaches to Climate
October 12, 1990
Work products to prepare for framework convention negotiations.**

[List is based on Task Force Interim Report]

- 1. Drafting a U.S. version of a possible framework convention. [STATE AND DOJ]**
- 2. Develop an improved radiative forcing index. [CEES, EPA (ALBRITTON AND TIRPAK, ET. AL.)]**
 - Develop a plan for resolving areas of uncertainty.**
 - Sketch of the design of a global change index**
- 3. Design an international GHG monitoring system. [EPA, CES, DATA MANAGEMENT WORKGROUP, EPA, MARS]**
- 4. Development of talking points including quantitative demonstrations that piecemeal proposals would have little environmental benefit, or actually be counterproductive. [DOJ]**
- 5. Conduct quantitative analysis of the comprehensive and economic incentives approaches, and its variations by gas, strategy, sector, nation. [NORM HARTNESS, DOE]**
- 6. List of the net index-weighted emissions change wrought by relevant U.S. actions, including "no regrets" measures. Prepare a similar list for other countries. [EPA]**
- 7. Develop language for the framework convention to address the vision of decisionmaking under uncertainty. [CEES AD HOC ECONOMICS TASK FORCE]**
- 8. Assess other's proposals. [EPA, DOE, CEA]**

PRIORITY CONCERNS ON SWCC

<u>Concern</u>	<u>Para</u>
We need to correctly convey scientific context and uncertainties.	4 8
We should take no-regrets actions.	9 17 20 22
All countries must share obligations.	20 24
We should take a comprehensive approach.	20 21 40
We will negotiate a framework convention only.	23 40
No new funding will be available	25 26 27

Precautionary Principle.

CEES - continues to have economic impact / presence.

Task force on

8

US COMMENTS ON SWCC DRAFT DECLARATION

General Comments

- References should be to a framework convention on climate change, rather than the Climate Change Convention;
- There should be no mention of concurrent negotiation of the framework convention and any implementing protocol(s);
- References to limitation measures should include mention of all GHGs and their sources and sinks, not just CO2;
- References to funding should not call for additional resources.
- There should be no specific commitments to quantitative reductions in greenhouse gas emissions.
- Text similar to that of the IPCC Policymakers Summaries and other previously adopted documents should be as consistent as possible with the texts of those sources.
- References should be to "industrialized" and "developing" countries, rather than "developed" and "less developed"
- The subtitles in parentheses should be eliminated.
- All paragraphs relating to the IPCC should be gathered together in one section.
- All paragraphs relating to the framework convention on climate change should be gathered together in one section.
- The small number of paragraphs dealing with science is disproportionate to the large number dealing with policy issues.

Key:

- "Original Version" is the 13 July 1990 Draft prepared by the SWCC organizers.
- "Comments" are the August 24 US Comments provided via STATE 291963, with the amendments agreed to in Sundsvall.
- "New Version" is the version distributed to other governments during the 4th IPCC Plenary.

1

④

Original:

PREAMBLE

1. We, the Ministers from [] countries representing the world community met in Geneva, Switzerland, from 6 to 7 November 1990 at the Second World Climate Conference.

Comments:

Specific Changes

Delete title "Preamble"

Para 1, line 1: delete "the" before "Ministers".

Para 1, line 1: delete "representing the world community"

New Version:

1. We, Ministers from [] states, met in Geneva, Switzerland, from 6 to 7 November following the Second World Climate Conference.
- 1 ?

Original:

2. Our Meeting following the IPCC Report is a demonstration of our intention to take active and constructive step in the global response to the global climate change issue. It is also the expression of our will to fully contribute to the preparation for the 1992 UN Conference on Environment and Development.

scientific understanding

Comments:

Para 2, line 2: replace "IPCC" with "adoption by the Intergovernmental Panel on Climate Change of its First Assessment"

Para 2, line 2-3: replace "step in the global response to the global climate issue" with "steps in response to concerns regarding human-induced global climate change"

Para 2, line 4: delete last sentence

New Version:

2. Our Meeting, following the adoption by the Intergovernmental Panel on Climate Change of its First Assessment Report, is a demonstration of our intention to take active and constructive steps in response to concerns regarding human-induced global climate change.

Original:

3. Ever since the dawn of history, man's life on earth has been largely dependent on the environmental processes which we call weather and climate. The world climate system consists of a delicately balanced combination of many interactive components which include the atmosphere and the biosphere, as well as the land, sea and ice surfaces.

Comments:

Para 3, line 1: delete "largely"

Para 3, line 3: delete "delicately balanced"

Para 3, line 4-5: add a comma after "atmosphere" and change the rest of the sentence to read: "the oceans, the biosphere, as well as land and ice surfaces."

New Version:

3. Since before the dawn of history, life on Earth has depended on the natural processes we call weather and climate. The world climate system has many interactive components which include the atmosphere, the oceans, the biosphere, as well as land and ice surfaces.

4

②
①

Original:

4. Climate has varied in the past. But the temperature increase which is predicted to occur in the decades to come due to the increasing accumulation of the greenhouse gases in the atmosphere has not been encountered in the last 100,000 years at least; nor has the past rapidity of change been as fast as that predicted. The greenhouse gases result from a host of human activities such as the burning of fossil fuel, deforestation, mining operations and waste management.

USE IPCC OVERVIEW LANGUAGE

Comments:

Para 4, replace with:

Climate has varied significantly in the past; however, the potential change in global mean temperatures over the next century associated with human activities is predicted to be larger and more rapid than those seen in the last 10,000 years. The magnitude, timing, rate, and regional distributions of these predicted climate changes are uncertain because of limitations in our present scientific understanding of climate processes and in our ability to model the behavior of climate systems and components. The human caused emissions of greenhouse gases are much smaller than the exchange between the atmosphere and natural systems. Stabilization of atmospheric concentrations of long-lived gases at today's levels, for example, would require a 60-80% reduction in anthropogenic emissions compared to a 2-3% increase in absorption by natural systems.

New Version:

4. Climate has varied significantly in the past; however, the potential change in global mean temperatures over the next century associated with human activities is predicted to be larger and more rapid than those seen in the last 10,000 years. The magnitude, timing, rate and regional distribution of these predicted climate changes are uncertain because of limitations in our present scientific understanding of climate processes and in our ability to model the behavior of climate system and components. The human-caused emissions of greenhouse gases, while significant, are much smaller than the exchange between the atmosphere and natural systems. Stabilization of atmospheric concentrations of long-lived gases at today's levels, for example, would require either a 60 to 80 percent decrease in anthropogenic emission or a 2 to 3 percent increase in absorption by natural systems.

Original:

5. Recognising that climate change is a common concern of mankind United Nations General Assembly's Resolution 43/53 urged the intergovernmental and non-governmental organisations and scientific institutions, to treat climate change as a priority issue, and to co-operate in research and action-oriented programmes so as to increase the understanding of the causes and effects of climate change.

Comments:

Para 5: add to the end of the paragraph:

Industrialized countries and developing countries have a common responsibility in dealing with problems arising from climate change.

(AND VARIED)?

New Version:

5. Recognizing that climate change is a common concern of mankind, the United Nations General Assembly urged intergovernmental and non-governmental organizations and scientific institutions to treat climate change as a priority issue and to cooperate in research and action-oriented programmes so as to increase the understanding of the causes and effects of climate change. Industrialized countries and developing countries have a common responsibility in dealing with problems arising from climate change.

Original:

6. The World Climate Programme undertaken jointly by the World Meteorological Organization, the International Council of Scientific Unions with the co-operation of its Scientific Committee on Oceanic Research, and UNESCO and its International Oceanographic Commission and UNEP have endeavoured during the last decade to promote a quantitative understanding of climate, and predictions of global and regional climate changes on all time scales and on their potential impacts. Through its three major projects the study of Tropical Ocean and Global Atmosphere, the Global Energy and Water Cycle Experiment, and the World Ocean Circulation Experiment, the World Climate Research Programme has succeeded in providing valuable information on the causes, processes and some of the effects of climate change.

Comments:

Para 6, lines 1-5: list all sponsors on an equal basis: WMO, UNEP, ICSU including SCOR, UNESCO and its Intergovernmental Oceanographic Commission

Para 6, line 5: replace "a quantitative understanding.... impacts." with

an improved quantitative understanding of climate, advances in predictions of global and regional changes on all time scales and estimates of the potential impacts of these changes.

Para 6, line 7-10: delete "Through its three.... Circulation Experiment,"

Para 6, lines 11-12: replace both lines with:

...improved our understanding of climate change processes, thus providing valuable information on the causes and possible manifestations of such change. However many uncertainties remain and must continue to be addressed by these and national scientific programs.

New Version:

6. The World Climate Programme, undertaken jointly by the World Meteorological Organization (WMO), the United Nations Environment Program (UNEP), the International Council of Scientific Unions (ICSU), with the cooperation of the Scientific Committee on Oceanic Research (SCOR), and the United Nations Educational, Scientific and Cultural Organization (UNESCO) and its Intergovernmental Oceanographic (IOC), has endeavored during the last decade to promote improved quantitative understanding of climate, advances in predictions of global and regional climate changes on all time scales, and estimates of the potential impact of these changes. The World Climate Research Programme has improved our understanding of climate processes, providing valuable information on the causes and possible manifestations of climate change. However, many uncertainties remain and must continue to be addressed by international and national scientific programs.

Original:

7. The Intergovernmental Panel on Climate Change (IPCC) established by U.N.E.P. and W.M.O. has undertaken to study the problem of climate change including global warming. Through the work of its various working groups and their sub-groups the I.P.C.C. has produced a comprehensive report on the causes and effects of climate change. It has also ~~proposed~~ strategies to delay, limit or mitigate the impact of climate change, and at the request of United Nations General Assembly has ~~proposed the~~ elements for inclusion in a convention on climate.

identified

also identified possible

Comments:

Para 7: place in a new section entitled "The Intergovernmental Panel on Climate Change" after rewriting as follows:

The Intergovernmental Panel on Climate Change (IPCC) was established by WMO and UNEP to assess the current level of scientific knowledge on climate change including its possible impacts and options for limiting or adapting to adverse impacts. Based on the work of its various working groups and their subgroups the IPCC has produced its First Assessment of global climate change. It has also identified options to limit and to adapt to climate change, and has identified elements to be considered for inclusion in a framework convention on climate change and in possible subsequent protocols.

New Version:

The Intergovernmental Panel on Climate Change

11. The Intergovernmental Panel on Climate Change (IPCC) was established by WMO and UNEP to assess the current level of scientific knowledge on climate change including its possible impacts and options for limiting or adapting to adverse impacts. Based on the work of its various working group and their subgroups, the IPCC has produced its First Assessment Report on global climate change. Its Report identifies options to limit and adapt to climate change and elements to be considered for including in a framework convention on climate change and in possible subsequent protocols.

Original:

8. Global warming poses environmental threat of a magnitude the world has never known before. Human activities which have lead to the emissions of greenhouse gases into the atmosphere have so far committed the Global Commons to an irreversible warming so far. In order to stem an unprecedented global warming likely to lead to serious environmental consequences such as a rise in sea level of about 20 cm by the year 20 and 65 cm by the end of the next century urgent action should be taken now. Carbon dioxide has been responsible for over half the enhanced greenhouse effect in the past and is likely to remain so in the future. It is therefore important that emissions of greenhouse gases especially CO₂ and other long lived greenhouse gases be reduced as soon as possible. This is urgent because changes in emission rates of these gases lead to a slow rate of change in their concentration in the atmosphere. If action is delayed, it will take much longer and much greater reductions at greater economic sacrifice to stabilize concentrations at today's levels. The long lived gases (CO₂ and N₂O) would require at least 60% reductions in emissions, and methane 15-20% reduction in emissions in order to stabilise their concentrations in the atmosphere at today's levels. The other gases of concern, namely the CFC are addressed under the Montreal Protocol on Substances that Deplete the Ozone Layer.

Comments:

Para 8: delete the title "Definition of Problem and Risks"

Para 8: Replace with the following paragraph from RSWG Policymakers Summary, page 12:

The consideration of climate change response strategies present formidable difficulties for policymakers because of: (a) remaining scientific uncertainties regarding climate change; (b) uncertainty with respect to how effective specific response options or groups of options would be in actually limiting or averting potential climate change; and (c) uncertainty with respect to the costs, effects on economic growth, and other economic and social implications of specific response options or groups of options.

New Version:

7. The consideration of global climate change response strategies presents formidable difficulties for policymakers because of: (a) remaining scientific uncertainties regarding climate change; (b) uncertainty in the effectiveness of response options in actually limiting or adapting to potential climate change; and (c) uncertainty in estimates of costs, effects on economic growth, and other economic and social implications of specific response options or groups of options.

4.

①

Original: GLOBAL STRATEGY

9. We consider therefore that a global response must be decided and implemented without further delay based on the best available knowledge such as those resulting from the IPCC assessment. Recognizing that the principle of equity should be the basis of any global response to the climate change phenomena industrialized countries, which are responsible for most of the observed increase in the greenhouse gases' concentration in the atmosphere must take the lead, commit themselves to immediate action and provide resources and assistance to developing countries to help them in addressing climate change in a way compatible with their development needs. [To this end the industrialized countries will support developing countries with no additional and specific contributions.] [To this end there is a need to negotiate the necessary support needed by developing countries] [To this end there is a need to provide the necessary support, including additional and specific financial assistance to the developing countries]

Comments:

Para 9: delete the title "Global Strategy"

Para 9: replace with the following:

The potentially serious consequences of human-induced climate change, however, give sufficient reasons to begin adopting response strategies that are fully justified for other reasons even in the face of significant uncertainties. These strategies could include improved energy efficiency; use of cleaner, more efficient and lower greenhouse gas-emitting energy sources; improved forest management; development of comprehensive coastal management plans; use of practices to recycle and reuse CFC gases and their substitutes; and improved agricultural practices.

CHECK IPCC
OVERVIEW
+ PMS

New Version:

8. The potentially serious consequences of human-induced climate change, however, give sufficient reasons to begin adopting response strategies that are fully justified for other reasons, even in the face of significant uncertainties. These strategies could include: improved energy efficiency, use of lower greenhouse gas-emission sources; improved forest management; development of comprehensive coastal management plans; use of practices to recycle and reuse cfc gases and their substitutes; and improved agricultural practices.

Original:ACKNOWLEDGMENT OF THE CONCLUSIONS OF LONDON CONFERENCE ON THE MONTREAL PROTOCOL

10. [Short text to be included after the conclusions of the London Meeting]

Comments:

significant

Para 10, replace text in parenthesis with:

We acknowledge the agreement of the Parties to the Montreal Protocol in June in London to phase out substances that deplete the ozone layer. This action, when implemented, will have a beneficial influence on global climate change by reducing human emissions of greenhouse gases by () percent. We urge all states to participate in the Protocol and implement the London agreements.

ratify

amendments

join

New Version:

The Montreal Protocol

10. We acknowledge the agreement of the Parties to the Montreal Protocol in June in London to phase out substances that deplete the ozone layer. This action, when implemented, will have a beneficial influence on global climate change by reducing human emissions of greenhouse gases by [percent]. We urge all states to participate in the Protocol and implement the London agreements.

WASCH FINAN. MECH. "PRECEDENT"

Original:

HEDGE

ENDORSEMENT OF THE CONCLUSION OF THE SCIENTIFIC PART OF SWCC

11. *acknowledge*
take note of We are highly appreciative of the work done by IPCC.

We *accept* and are highly appreciative of the conclusions and recommendations of the scientific part of the Second World Climate Conference as presented in the annex 1 of this Declaration. Their implementation should be strongly supported by governments.

Comments:

Para 11, lines 1-4: replace with:

We acknowledge the conference statement of the scientific and technical part of the Second World Climate Conference. We urge all nations and relevant international organizations to respond to the conference statement and incorporate relevant actions into their scientific and technical programs.

Para 11, lines 2-3: rewrite first part of sentence to read:

We are also appreciative of the conference statement of the scientific part of the Second World Climate Conference

New Version:

The SWCC Conference Statement

14. We acknowledge the conference statement of the scientific and technical part of the second world climate conference. We urge all nations and relevant international organizations to respond to the conference statement and incorporate relevant actions into their scientific and technical programs.

SPP
SECTION

Original:**THEREFORE:****I. ROLE OF SCIENCE IN IMPROVING OUR UNDERSTANDING, CAPACITY OF PREDICTION AND OUR RESPONSE TO CLIMATE CHANGE**

12. We reaffirm that, in order to reduce uncertainties, to increase our ability to predict (including early identification of as yet unknown climate-related problems) and to design scientifically sound response strategies, there is a need to strengthen both national and international activities in research, monitoring, and data and information exchange related to climate change.

Comments:

Para 12: delete the title "Therefore"

Para 12: title should read "Role of Science"

Para 12, lines 2-3: replace "(including early identification of as yet unknown climate related problems) and to design scientifically sound response strategies" with

climate and climate change on a global and regional basis and to design response strategies that are scientifically and economically sound

Para 12, line 5: scientific research, monitoring, analysis.

Para 12, line 6: add additional paragraph:

To this end, we pledge our full support to the needs of the World Climate Program including contributions to the WMO Special Fund for Climate and Atmospheric Environment Studies.

New Version:**Role of Science**

15. We reaffirm that in order to reduce scientific uncertainties, to increase our ability to predict climate and climate change on a global and regional basis, and to design response strategies that are scientifically and economically sound, there is need to strengthen both national and international activities in scientific research, monitoring, analysis, and data and information exchange related to climate change.

To this end, we pledge our full support to the needs of the world climate program including contributions to the WMO special fund for climate and atmospheric environmental studies.

OTHER

Original:

13. Recognizing that climate changes are of a complex interdisciplinary character, we urge the full participation of scientists dealing with the atmosphere, the oceans and land, as well as with the physical, chemical and biological processes needed for a deeper understanding of climate issues. Given the intrinsically global nature of climate and climate research, we stress the need to strengthen international cooperation. The magnitude of the problem being addressed is such that no nation can undertake it alone. It is imperative therefore, that, to the extent feasible, national research programmes on climate be planned in such a way that they form integral parts of international research programmes. We urge that special resources to sustain such programmes are made available to less developed countries in order to insure their full participation in the international research effort and the response strategies based upon the results.

Comments:

EDITOR.

Para 13, line 1: climate change | and its impacts |

Para 13, line 10: replace "from integral parts of" with "are consistent with and support"

Para 13, line 12: replace "less developed" with "developing"

Para 13, lines 13-14: delete "and the response strategies based upon the results"

New Version:

16. Recognizing that climate change and its impacts are of a complex interdisciplinary character, we urge the full participation of all scientists who are expert in dealing with the atmosphere, the oceans, and land as well as with the physical, chemical and biological processes needed for deeper understanding of climate issues. Given the intrinsically global nature of climate and climate research, we stress the need to strengthen international cooperation. The magnitude of the problem being addressed is such that no nation can undertake it alone. It is imperative therefore, that, to the extent feasible, national research programmes on climate be planned in such a way that they are consistent with and support international research programmes. We urge that special resources to sustain such programmes be made available to developing countries in order to insure a full partnership in the international research effort.

Original:

14. We stress that special efforts be directed to key areas of uncertainty, including:

the role of clouds, ocean and greenhouse gases; ecosystem responses to global change; effects of land-use changes in the hydrological cycle; climate changes on a regional scale and the socio-economic and cultural dimensions and impacts of climate change.

Comments:

Para 14, line 3-7: replace with

the roles of clouds, oceans, and greenhouse gases;
ecosystem interactions with climate; net emissions of
greenhouse gases; types and levels of atmospheric aerosols;
effects of land-use changes in climate change; regional
climate change; and the regional socio-economic and
ecological implications of impacts of climate change.

New Version:

17. We stress that special efforts be directed to key areas of uncertainty, including: the roles of clouds, oceans and greenhouse gases; ecosystems interactions with climate; net emissions of greenhouse gases; types and levels of atmospheric aerosols; effects of land-use changes on climate change; regional climate; and regional socioeconomic and ecological implications of climate change.

Original:

15. We consider that research programmes must be accompanied by long-term monitoring programmes so designed as to provide continuous and comprehensive coverage of climate-influencing variables as well as those useful in detecting climate change. We agree that long term governmental commitments are necessary to sustain these monitoring programmes. We ask further-more that obstacles to the free flow of relevant data and information be removed.

Comments:

LDC SOVEREIGNTY
ISSUE

1 ?

Para 15: replace last two sentences with:

We recommend that governments make the long term commitments necessary to the development and operations of these monitoring and data management programs. We fully support the Climate Change Detection Project of WMO with its goal of regularly providing assessments of the state of the global climate to all governments.

Para 15, line 7: add a new paragraph:

We support the ^{Full} free and open exchange of relevant data between nations, recognizing its important use in monitoring, detecting and predicting and understanding climate and climate change. It is critically important to move ahead as quickly as possible with the development of integrated, comprehensive (satellite and in situ) ocean and terrestrial monitoring systems and with the improvement of the existing atmospheric system. We agree to strengthen and improve the utilization of our current data resources by improving the quantity, quality and accessibility of these data. We recommend that governments make the long-term commitments necessary to the development and operation of these monitoring and data management programs. We stress that full and open access to relevant data and information by global change researchers from all countries must be a fundamental principle of international climate data policy, and we urge countries to establish national policies and administrative practices consistent with this principle.

"Free" VS
"full"
1

New Version:

18. We consider that research programmes must be accompanied by long-term monitoring programmes so designed as to provide continuous and comprehensive coverage of climate-influencing variables as well as those useful in detecting climate change. We recommend that governments make the long-term commitments necessary to the development and operation of these monitoring and data management programs. We fully support the Climate Change Detection Project of WMO with its goal of regularly providing assessments of the state of the global climate to all governments.

New Version:

19. We support the free and open exchange of relevant data between nations, recognizing its important use in monitoring, detecting, predicting and understanding climate and climate change. It is critically important to move ahead as quickly as possible with the development of integrated, comprehensive (satellite and in situ) ocean and terrestrial monitoring systems and with the improvement of the existing atmospheric system. We agree to strengthen and improve the utilization of our current data resource by improving the quantity, quality, and accessibility of these data. We recommend that governments make the long-term commitments necessary to the development and operation of these monitoring and data management programs. We stress that the free and open access to relevant data and information by climate and global change researchers from all countries must be a fundamental principle of international climate data policy, and we urge countries to establish national policies and administrative practices consistent with this principle.

Original:

16. We reaffirm that there is no need to establish new international coordination mechanisms, but rather urge all countries and relevant organizations to contribute through their national efforts and to increase financial support and assistance in kind on a sustained basis to important existing programmes such as the World Climate Programme including the WMO/ICSU World Climate Research Programme, the ICSU International Geosphere-Biosphere Programme, and the climate-related components of programmes of WMO, UNEP, Unesco and its IOC and FAO. We further urge that these programmes be better supported in order to continue to strengthen their interdisciplinary approach, to include the participation of all nations, and to increase coordination in order to achieve still greater efficiency.

Comments:

Para 16: line 1: add "scientific" after "international"

Para 16: line 3: delete "through their national efforts"

Para 16: lines 9-12: redraft final sentence as follows:

We further urge that these programs continue to strengthen their interdisciplinary approach, broaden national participation, and strive for more effective coordination.

2-3

New Version:

20. We reaffirm that there is no need to establish new international scientific coordination mechanisms, but rather urge all countries and relevant organizations to contribute and increase financial support and assistance in kind on a sustained basis to important existing programmes such as the World Climate Programme, including the WMO/ICSU World Climate Research Programme; and the climate-related components of programmes of WMO, UNEP, UNESCO and its IOC, and FAO. We further urge that these programs continue to strengthen their interdisciplinary approach, broaden national participation, and strive for more effective coordination.

WATCH

Original:

II. POLICY TARGET FOR URGENT POLICY ACTION

(Precautionary measures)

17. In order to achieve sustainable development, we must base ourselves on the precautionary principle. Environmental measures must anticipate, prevent and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

BERGEN
QUOTEBergen
quote }Comments:Para 17: title should read: "Policy Considerations"Para 17: add at the end of the paragraph "which are justified in their own right"in
(Houston version)New Version:

9. In order to achieve sustainable development, we must base ourselves on the precautionary principle. Environmental measures must anticipate, prevent and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation which are justified in their own right.

essley
no regrets
pol.

If can't get what want, make to
stick to Bergen

Original:

18. We note that a mechanism is being set up by WMO and UNEP to undertake the necessary intergovernmental negotiations on global warming.

ADD TO IPCC
FOLLOW-UP
4

Comments:

Para 18: move to end of Declaration to new section entitled "Framework Convention on Climate Change" after rewriting to read:

We note that a mechanism has been created by WMO and UNEP for intergovernmental negotiations on a framework convention on climate change.

Not in new version

Original:

(Stabilization and reduction of greenhouse gases)

19. We recognise the fundamental need to conserve the global climate, and protect it from anthropogenic interference. Taking into account that the increase of greenhouse gas concentrations in the atmosphere threaten the natural variability of climate, we agree that the ultimate global objective should be to stabilize and reduce those concentrations.

REWRITE

EMISSIONS VS CONCENTRATIONS

Comments:

Para 19: delete entirely to improve balance between science paragraphs and policy paragraphs

BAD LANG.; MEANINGFUL
PARTS ELSEWHERE?

LOOK FOR BERGEN/NOORDWIJK VAR.

Original:

20. We stress, as a first step, the need to stabilize, while ensuring stable development of the world economy, emissions of greenhouse gases not controlled by the Montreal Protocol. We note with appreciation the unilateral commitments of some industrialised countries to stabilize emissions at present level or reduce them by the year 2000.

Comments:

(OVERVIEW)

ADD PMS II, p. 13

(1)

Para 20: rewrite as follows:

- We recognize that the most effective response strategies, especially in the short-term, are those which are:
- Justified for reasons other than climate change and also provide beneficial impacts on potential climate change;
 - Economically efficient and cost effective;
 - Able to serve multiple social, economic, and environmental purposes;
 - Easily modified to respond to increased scientific and economic understanding of climate change;
 - Compatible with the concept of sustainable economic growth and development;
 - Compatible with the concept of a comprehensive approach that deals with all sources and sinks of greenhouse gases;
 - Administratively practical and effective in terms of application, monitoring, and enforcement; and
 - Inclusive of obligations by both industrialized and developing countries in addressing this issue.

New Version:

Policy Considerations

21. We recognize that the most effective response strategies, especially in the short-term, are those which are:

- Justified for reason other than climate change and also provide beneficial influence on potential climate change;
- Economically efficient and cost effective;
- Able to serve multiple social, economic, and environmental purposes;
- Easily modified to respond to increased scientific and economic understanding of climate change;
- Compatible with the concept of a comprehensive approach addressing all sources and sinks of greenhouse gases;
- Compatible with the concept of sustainable economic growth and development;
- Administratively practical and effective in terms of application, monitoring, and enforcement;
- Inclusive of obligations by both industrialized and developing countries.

BERN
& NOORD
IPCC
PMS
P.13

Original:

21. We agree that stabilization of greenhouse gas emissions should be achieved by industrialized countries by the year [2000] and should be set at [present] emission levels.

INDUST. / ASAP
- (BERGEN / NOORD.)

Comments:

Para 21: rewrite as follows:

We recommend that limitation and adaptation strategies be considered as an integrated package that complement each other to minimize net costs. These strategies should include measures which limit emissions from greenhouse gas sources as well as those which increase the ability of natural systems to utilize greenhouse gases. A comprehensive approach is needed which considers the costs of reducing emissions of different greenhouse gases and the effects of those reductions on potential climate change.

ADD TO #20

New Version:

21. We recommend that limitation and adaptation strategies be considered as an integrated package that complement each other to minimize net costs. These strategies should include measures which limit emissions from greenhouse gas sources as well as those which increase the ability of natural system to utilize greenhouse gases. A comprehensive approach is need to which considers the costs of options for reducing emissions of different greenhouse gases and the effects of those reductions on potential climate change.

Original:

22. We urge industrialized countries to establish greenhouse gases reduction programmes aiming at achieving at least 20% reduction of their current contribution to global warming potential, possibly by the year 2005 and in any case not later than the year 2010;

Comments:

Para 22: delete entirely to improve balance between science paragraphs and policy paragraphs

Original:

23. We recommend that the specifications of the obligation to stabilize and reduce greenhouse gases emissions be realized in the form of separate Protocols to the Climate Convention. Some of these protocols could be negotiated concurrently with the framework convention.

MOVE TO SEP. SECTION

Comments:

Para 23: delete entirely; point addressed in para 37-8.

Original:(Economic situation of certain countries)

24. We recognize that developing countries with, as yet, relatively low energy requirements, which can reasonably be expected to grow in step with their development, may have targets that accommodate that development. We also recognize that additional financial resources [will] [may] have to be made available to developing countries to enable them to limit their net emissions of greenhouse gases while ensuring a steady development of their economies;

Comments:

Para 24: replace with page ii of RSWG Policymakers Summary:

We note that all countries have a common responsibility for dealing with problems arising from climate change. Industrialized countries should adopt domestic measures to limit climate change by adapting their own economies in line with future agreements to limit emissions. Industrialized countries should also cooperate with developing countries in international action, without standing in the way of the latter's development. Developing countries should, within limits feasible, take measures to suitably adapt their economies. Because a large, projected increase in world population is a major factor in causing the projected increase in global greenhouse gases, it is essential that global climate change strategies include strategies and measures to deal with the rate of growth of the world population.

MEX:

New Version:

23. We note that all countries have a common responsibility for dealing with problems arising from climate change. Industrialized countries should adopt domestic measures to limit greenhouse gas emissions by adapting their own economies in line with future agreements to limit such emissions. Industrialized countries should also cooperate with developing countries in international action addressing climate change, without standing in the way of the latter's development. Developing countries should, within limits feasible, take measures to suitably adapt their economies. Because a large, projected increase in world population is a major factor in causing the projected increase in global greenhouse gases, it is essential that global climate change strategies include strategies and measures to deal with the rate of growth of the world population.

Original:(Fund (Climate Fund))

25. We recommend that existing institutions for development and financial assistance including the World Bank and other Multilateral Development Banks, Bilateral Assistance Programmes, the relevant United Nations organisations and specialized agencies, and scientific and technological organisations should give greater attention to climate change issues within their environmental and other relevant programmes by providing expanded funding including concessional funding. In addition, regional and subregional co-operation should be reinforced and funded so as to address and implement the required action at that level.

①

Comments:CHECK
IPCC RPT.

Para 25: delete "by providing expanded funding including concessional funding"

New Version:

24. We recommend that existing institutions for development and financial assistance including the world bank and other multilateral development bank, bilateral assistance programmes, the relevant United Nations organizations and specialized agencies, and scientific and technological organizations give greater attention to climate change issues within their environmental and other relevant programmes. In addition, regional and sub-regional cooperation should be reinforced and funded so as to address and implement the required action at that level.

Original:

26. We ^{re}commend that consideration should be given to the need for funding facilities including a clearinghouse mechanism and a possible new international fund and their relationship to existing funding mechanisms, both multilateral and bilateral. Such funding should be related to the implementation of the climate convention and associated protocols. In the meantime the donor community is urged to provide assistance to developing countries to support immediate actions addressing climate change without waiting for the Convention.

Comments:

Para 26: replace with:

We recommend that financial resources channelled to developing countries to limit and/or adapt to climate change be focused on those activities which contribute both to limiting greenhouse gas emissions and promoting economic development.

New Version:

25. We recommend that financial resources channelled to developing countries to limit and/or adapt to climate change be focused on those activities which contribute both to limiting greenhouse gas emissions and promoting economic development. We recommend further that the scope of resource needs for these activities be assessed for developing countries. Such assessments should include, inter alia, country studies and the capabilities of existing institutions and mechanisms to meet the financing needs identified.

whether there is a

Any

HOLD LINE

Original:

27. We recommend that additional resources should progressively, be mobilized to help developing countries take the necessary measures to address climate change consistent with their development needs.

Comments:

Para 27: delete in its entirety.

Original:

28. We recommend further that the scope of resources needed be assessed. Such assessments should include *inter alia* country studies and the capabilities of existing institutions and mechanisms to meet the financing needs identified, ~~similar to the approaches developed under~~ the Montreal Protocol.

EDIT.

as has been done under

LEAVE AS IS

Comments:

Para 28, line 1: after "assessed" add "for developing countries".

Para 28, lines 4-5: delete "similar to the approaches developed under the Montreal Protocol."

combined into para 25 of new version

New Version:

25. We recommend that financial resources channelled to developing countries to limit and/or adapt to climate change be focused on those activities which contribute both to limiting greenhouse gas emissions and promoting economic development. We recommend further that the scope of resource needs for these activities be assessed for developing countries. Such assessments should include, *inter alia*, country studies and the capabilities of existing institutions and mechanisms to meet the financing needs identified.

Original: 29. We recommend that, initially, international funding be directed to:

- (i) conducting research and monitoring;
- (ii) promoting public awareness, education and institutional and manpower development.
- (iii) promoting efficient use of energy, including appropriate end use technologies, increasing the use of non-fossil fuels and switching to energy sources with lower greenhouse gas emissions, and the use of renewable energy sources; ^{such as}
- (iv) increased financial support for forest protection and forest management improvement, ^{for example through the Tropical Forestry Action Plan (TFAP), the Plan of Action to Combat Desertification, the International Tropical Timber Organization (ITTO) and other relevant international organizations;}
- (v) arranging for technology transfer to and technology development in developing countries;
- (vi) assisting developing countries in planning how to address problems posed by climate change;
- (vii) supporting developing countries to enable their full participation in international meetings on the subject of climate change.

The use of financial resources could subsequently be extended inter alia to major energy sources with little or no environmentally damaging characteristics and for steps to reduce other global man-made emissions of greenhouse gases due to human activities.

Comments:

Para 29, line 1, subpara (iii): break into two subparas by starting new subpara with "increasing the use of...."

Para 29, line 1, subpara (iv): delete "financial"

Para 29, para 1, subpara (iv): following "for example through" add "a global forestry agreement".

Para 29, para 1, subpara (v): replace with:

(v) fostering technology development and transfer of technology that is usable and applicable to economic development opportunities that would be beneficial to developing countries.

Para 29, para 1, subpara (vii): replace "their full" with "greater"

Para 29, para 1, subpara (vii): replace "meetings" with "activities"

Para 29, para 1, add new subpara (viii):

(viii) improving climate data management related to global and regional data sets with special emphasis on developing country requirements.

Para 29, second paragraph: delete entirely

KEEP
AS IS

KILL (OR
KEEP INTER
ALIA)

New Version:

26. We recommend that initially international funding be directed towards:

- (i) conducting research and monitoring;
- (ii) promoting public awareness, education and institutional and manpower development;
- (iii) promoting efficient use of energy, including appropriate end use technology;
- (iv) increasing the use of non-fossil fuels and switching to energy sources with lower greenhouse gas emissions and the use of renewable energy sources;
- (v) increasing support for forest protection and improving forest management, for example through a global forestry agreement, the Tropical Forestry Action Plan (TFAP), the Plan of Action to Combat Desertification, the International Tropical Timber Organization (ITTO) and other relevant international organizations;
- (vi) arranging for technology transfer to and technology development in developing countries;
- (vii) assisting developing countries in planning how to address problems posed by climate change;
- (viii) supporting greater participation of developing countries in international climate change activities; and
- (ix) improving climate data management related to global and regional data sets with special emphasis on developing country requirements.

Original:**(Economic instruments)**

30. We recognise that an environmentally sound development must include policies which will achieve a sustainable energy system and take the environmental costs and benefits of energy fully into account. We are convinced that promoting energy efficiency is the most cost effective immediate measure for reducing energy-related emissions of atmospheric pollutants, in particular CO₂.

Comments:

Para 30, replace with:

We recognize that environmentally sound development must include policies which consider the costs and benefits of energy use. We are convinced that, in many states, increasing energy efficiency is one of the most cost effective measures for reducing energy-related emissions of greenhouse gases.

Para 30, line 6: add new sentence at end as follows:

However, considerable research is necessary for each nation to establish what degree of energy efficiency is also economically efficient taking into account environmental externalities.

New Version:

27. We recognize that environmentally sound development must include policies which consider the costs and benefits of energy use. We are convinced that, in many states, increasing energy efficiency is one of the most cost effective measures for reducing energy-related emissions of greenhouse gases. However, considerable research is necessary for each nation to establish what degree of energy efficiency is also economically efficient taking into account environmental externalities.

Original:

31. We recommend that [new] policies at national level [be established] making extensive use of economic instruments in order to increase energy efficiency and reduce energy consumption. (2)

Such instruments could include:

- (i) taxes on environmentally damaging activities and energy inefficient product
- (ii) emission trading (tradeable permits/allowances)
- (iii) reduction or, wherever possible, elimination of subsidies to [energy intensive and other] activities that induce climate change
- (iv) other measures such as emission charges and fees deposit refund systems and fiscal incentive

Such action should in particular affect energy prices with the aim to reflect environmental costs and benefits and provide incentives to reduce energy consumption. They should also modify production and consumption pattern and encourage production and use of energy efficient technologies. (1)

Comments:

Para 31, para 1, line 1: replace "new policies at the national level be established making" with "policies at the national level make"

Para 31, line 3: replace "reduce energy consumption" with "conservation"

Para 31, subpara (iii): delete "energy intensive and"

Para 31, subpara (iv): replace "change" with "charge"

Para 31, subpara (iv): move "fiscal incentives" to before "measures" and delete the word "and" at the end.

Para 31, para 2 (on p. 7): delete this paragraph. (3)

New Version:

28. We recommend that policies at the national level increase energy efficiency and conservation, making use of economic instruments including:

- (i) taxes on environmentally damaging activities and energy inefficient products;
- (ii) emission trading (tradeable PERMITS/allowances);
- (iii) reduction or, wherever possible, elimination of subsidies to activities that induce climate change; and
- (iv) other fiscal incentive measures such as emission charges and fee-deposit-refund systems.

Original:**(Technology development)**

32. We agree that technological breakthrough in a wide range of fields covering energy, industry and other sectors related to the emission and absorption of CO₂ and other greenhouse gases is the key element of any long-term strategy that deals with climate change in a way that meets the goal of sustainable development. To this end, we urge all countries, the industrialized countries in particular, to intensify their individual efforts and international cooperation in technology development concerning, inter alia, low-energy and low-GHG production processes and products (e.g. chlorofluorocarbon substitutes with little or no global warming potential), and CO₂ fixation and reutilization.

Comments:

Para 32, line 3: delete "CO₂ and other"

Para 32, line 4-5: delete "in a way.....sustainable development"

Para 32, line 6: delete "the industrialized countries in particular,"

Para 32, lines 7-10: replace "in technology developing..." with
on technologies and practices which reduce emissions or
increase absorption of greenhouse gases.

New Version:

29. We agree that technological breakthrough in a wide range of fields covering energy, industry and other sectors related to the emission and absorption of greenhouse gases is the key element of any long-term strategy that deals with climate change. To this end, we urge all countries to intensify their individual efforts and international cooperation on technologies and practices that reduce emissions or increase absorption of greenhouse gases.

Original: (Transfer of technology)

[Alternative 1]

33. We urge that relevant technology be utilized by all sectors in all countries to the full extent possible. We recognize that there are great disparities in energy efficiency, even among the industrialized countries, and further urge all countries, industrialized and developing, to identify and take effective measures to remove barriers to the dissemination of the best available technology. This requires, in the case of developing countries, effective measures to aid their efforts in meeting the specific needs arising, to a great extent, from their lack of human and financial resources and other elements necessary for the continuous development and dissemination of the most appropriate technology. The East European countries, which are currently suffering the consequences of inefficient use of energy and other resources, also require special attention. To this end, we also urge all industrialized countries and relevant international institutions to step up their contributions to the effective transfer and dissemination of relevant technology in ways that fully address the constraints that all these countries face.

[Alternative 2]

33. We consider important that this expansion of development employ appropriate and environmentally sound technology in order that the problem of global warming and climate change not be exacerbated. Consequently, the transfer and development of such technologies must assume a high priority. It will be important for the industrial nation to respond to this priority and assign sufficient resources to assure technological development and establishment of mechanisms for successful transfer.

Comments:

Para 33, We prefer Alternative 2.

Para 33, Alternative 2: replace "this expansion of" with "economic" on line 1

Para 33, Alternative 2: delete "and environmentally sound" on line 2

Para 33, Alternative 2: replace "technology in order... exacerbated" with "technologies and practices" on line 2

Para 33, Alternative 2: revise second sentence as follows:

Consequently, consideration of effective mechanisms to develop and transfer such technologies must be accorded a high priority.

Para 33, Alternative 2, lines 5-8: Rewrite last sentence to:

It is important for both industrialized and developing nations to respond to this priority, by creating conditions that would be conducive to the development and transfer of such technologies and practices.

New Version:

30. We consider important that economic development employ appropriate technologies and practices. Consequently, consideration of effective mechanisms to develop and transfer such technologies must be accorded a high priority. It is important for both industrialized and developing nations to respond to this priority by creating conditions that would be conducive to the development and transfer of such technologies

(Forestry)

34. We recognize that the conservation of the world's forests is of crucial importance for global climatic stability, particularly having regard to the important contribution of forest destruction to global warming through the emission of carbon-dioxide, methane and other trace gases.

We stress the need to reduce the rate of deforestation and to enhance the potential of the world's forests as a sink for greenhouse gases, through vigorous programmes of reforestation and afforestation.

① [Urge the earliest completion of the feasibility assessment of We endorse the target included in the Noordwijk Declaration of achieving net global forest growth of 12 million hectares per year, through conservation of existing forests and through aggressive programmes of reforestation and afforestation.

We call on all countries to:

- EDIT.
REWRITE
- (i) Adopt clear objectives for the conservation, reforestation and sustainable management of forests in national development plans.
 - (ii) Amend national policies to minimize forest loss and their human disturbance associated with public and private development projects (e.g. roads, dams, resettlement projects, mining, logging).
 - (iii) [Integrate forest management solutions with policies on environment, agriculture, transportation, energy poverty and landlessness.
 - (iv) Strengthen, support and extend the Tropical Forestry Action Plan (TFAP) process to all countries with tropical forests, and expand support for immediate implementation of completed plans.
 - (v) Strengthen the role of the International Tropical Timber Organization (ITTO) in supporting the sustainable utilization of forest resources.
 - (vi) Strengthen the role of development banks, IMF, FAO, UNEP, and other multilateral and bilateral organizations in helping developing countries achieve conservation and sustainable development of forests by:
 - a) Requiring analyses of climate change implications, potential greenhouse gas emissions, and response programmes in their review of project proposals involving forests;
 - b) Expanding greatly aid and investment flows to the forest sector as well as for the production of energy from biomass.
 - c) Expanding debt relief via renegotiation of debt, and debt for conservation exchanges; and
 - d) Linking structural adjustment measures to alleviation of climatic impacts and reduction of gas emissions.
- FIX IF KEPT

Comments:

Para 34, line 2: after "importance" add "to the stability of the global climate"

Para 34, lines 2-4: delete "for global climatic stability,.... and other trace gases."

Para 34, lines 2-4: delete "for global climatic stability,.... and other trace gases."

Para 34, para 3: delete in its entirety because it goes beyond the Noordwijk Declaration

Para 34, para 4, delete subpara (vi)(b-d)

New Version:

31. We recognize that the conservation of the world's forests is of crucial importance to the stability of the global climate. In particular we note the significance of forest destruction to global climate change both in contributing to the increase in emissions of carbon-dioxide, methane and other trace gases, and in reduction of natural absorption of carbon dioxide.

We stress the need to reduce the rate of deforestation and to enhance the potential of the world's forests as a sink for greenhouse gases, through vigorous programs of reforestation and afforestation.

We call on all countries to:

- (i) adopt clear objectives for the conservation, reforestation and sustainable management of forests in national development plans;
- (ii) amend national policies to minimize forest loss and disturbance by public and private development projects (e.g. roads, dams, resettlement projects, mining, logging);
- (iii) integrate forest management solutions with policies on environment, agriculture, transportation, energy, poverty and landlessness;
- (iv) strengthen, support and extend the tropical forestry action plan (tfap) process to all countries with tropical forests, and expand support for immediate implementation of completed plans;
- (v) strengthen the role of the international tropical timber organization (ITTO) in supporting the sustainable utilization of forest resources;
- (vi) strengthen the role of development banks, IMF, FAO, UNEP, and multilateral and bilateral organizations in helping developing countries achieve conservation and sustainable development of forests by requiring analyses of climate change implications, potential greenhouse gas emissions, and response programmes in their review of project proposals involving forests.

Original:

35. We call finally for the development of a World Forest Conservation ~~Protocol or Convention~~, covering temperate, boreal and tropical forests, in the context of or in association with a Climate Convention which also addresses energy supply and use. The specific elements of such a protocol or convention are a matter for international negotiations which should begin at an early date. These elements may include: fundamental research, tropical forest planning, measures to use, protect and reforest, international trade, financial assistance and possible national and international targets for conservation, reforestation and afforestation.

Comments:

Para 35, line 7: before "tropical" add "temperate and"

Para 35: replace first four lines with:

We call finally for the development of a global forest convention or agreement. The specific elements of such a convention or agreement....

New Version:

32. We call finally for the development of a global forest convention or agreement. The specific elements of such a convention or agreement are a matter for international negotiations which should begin at an early date. These elements may include: fundamental research, temperate and tropical forest planning, measures to use, protect and reforest, international trade, financial assistance and possible national and international targets for conservation, reforestation and afforestation.

36. We recommend that regional and/or sub-regional studies on these subjects be undertaken to cover the impacts of climate change in the following fields:

Original:

- (i) Drought;
- (ii) Desertification;
- (iii) Water resources and their evolution;
- (iv) Agriculture (positive and negative impacts);
- (v) Energy;
- (vi) Forests.

Comments:

These studies should lead to the development of scenarios and short, medium- and long-term measures for mitigation of drought and stopping and reversing desertification for the attention of economic and political decision makers.

Para 36: expand list of items to include coastal resources, human health, infrastructure, human settlements, fisheries and biodiversity.

Para 36, para 1, line 2: positive and negative impacts

Para 36, para 1, line 3: replace "fields" with "areas"

Para 36, subpara (iii): delete "and their evolution"

Para 36, subpara (iv): delete "(positive and negative impacts)"

Para 36, subpara (v): replace with: "Energy supply and use;"

Para 36, para 2: replace with:

We recommend that all nations assess the potential impacts of climate change on their resources and plan for adaptation. Appropriate regional institutions should work with member countries to assess and plan for regional impacts of climate change. Industrialized countries should provide technical assistance to developing countries to conduct such assessments. These activities might be facilitated by the establishment, within an existing institution, of an international clearinghouse on climate change impacts and assessments.

3

New Version:

33. We recommend that regional and/or sub-regional studies be undertaken to evaluate the positive and negative impacts of climate change in the following areas:

- (i) drought;
- (ii) desertification;
- (iii) water resources;
- (iv) agricultural;
- (v) energy supply and use;
- (vi) forests;
- (vii) coastal resources;
- (viii) human health;
- (ix) national infrastructure;
- (x) human settlements;
- (xi) fisheries; and
- (xii) biodiversity.

We recommend that all nations assess the potential impacts of climate change on their resources and plan for adaptation. Appropriate regional institutions should work with member countries to assess and plan for regional impacts of climate change. Industrialized countries should provide technical assistance to developing countries to conduct such assessments. These activities might be facilitated by the establishment, within an existing institution, of an international clearinghouse on climate change impacts and assessments.

Original:

III. GLOBAL CONVENTION

37. We welcome the resolutions of the Executive Council of the WMO and Special Governing Council of UNEP authorising their Secretary General and Executive Director to begin negotiations ~~for~~ a Climate Convention, ~~and associated Protocols.~~ We call for such negotiations to begin without delay. We endorse the WMO and UNEP Governing Bodies Decisions in this respect. We urge all countries to join in these negotiations, with the aim of completing negotiations to ensure adoption of a Climate Convention by the time of the UN Conference on Environment and Development in 1992;

MEX. ADDITION 01C

Comments:

Para 37, title should read "Framework Convention on Climate Change"

Para 37, line 3: replace "begin negotiations for a" with

establish an ad hoc group of government representatives to prepare for negotiations for a Framework

Para 37, line 4: delete "and associated protocols"

Para 37, line 5: replace "without delay" with "no later than February 1991"

4
+ TRACK
WMO
RESOL.

New Version:

Framework Convention on Climate Change

34. We welcome the resolutions of the Executive Council of the WMO and special session of the governing council of UNEP ~~authorizing their Secretary General and Executive Director to establish an ad hoc group of government representatives to prepare for negotiations on a framework convention on climate change.~~ We call for such negotiations to begin not later than February 1991. We urge all countries to join in these negotiations, with the aim of completing negotiations to ensure adoption of a framework convention by the time of the UN conference on environment and development in 1992.

on a Framework
convention on
climate
change

1-2

with respect to

Original:

38. We recommend that such negotiations take account of the possible elements compiled by the IPCC, and that the Climate Convention be framed in such a way as to gain the support of the largest possible number of countries.

KEEP AS IS

Comments:

Para 38: change "the Climate" to read "the Framework Climate"

Para 38, line 1: replace "take account of" with "consider"

New Version:

35. We recommend that such negotiations consider the possible elements compiled by the IPCC, and that the framework convention be framed in such a way as to gain the support of the largest possible number of states. We recommend that the framework convention contain, at a minimum, general principles and obligations, and that it advocate a comprehensive approach that includes sources and sinks of all greenhouse gases.

5
CIRCLED IF
COMPREH. DOESN'T
GET IN ELSEWHERE

Original:

39. We welcome the offer of the Government of the United States to host the first negotiating meeting of a Working Group on the elaboration of a Climate Convention. We also welcome the possible invitation of Italy to host the first meeting of the Working Group for the elaboration of an Energy Protocol. We urge that these two meetings be convened at the beginning of 1991.

- ① HASN'T HAPPENED
② NO SIMULTAN.
PROTOCOLS
③ UNCONNECTED

Comments:

Para 39, lines 2-3: revise first sentence to read:

We welcome the offer of the Government of the United States to host the first negotiating session on the Framework Convention in February 1991.

Para 39, lines 3-6: delete the last two sentences.

New Version:

36. We welcome the offer of the government of the United States to host the first negotiating session on the framework convention in February 1991.

Original:

40. We recommend further that the Climate Convention and associated Protocols contain specific obligations and address in particular:
- (i) the enhancement of research and systematic observation of climate
 - (ii) the control of greenhouse gas emissions
 - (iii) the adaptation to the adverse effects of climate change in coastal areas
 - (iv) The needs of developing countries for financial assistance in their development efforts and transfer of technology
 - (v) appropriate institutional and decision-making procedures.

Comments:

COVERED BY 438

Para 40: replace with language from RSWG Policymakers Summary:

We recommend that the framework convention contain, at a minimum, general principles and obligations, and that it take a comprehensive approach addressing all sources and sinks of greenhouse gases.

Combined with para 35 in new version:

New Version:

35. We recommend that such negotiations consider the possible elements compiled by the IPCC, and that the framework convention be framed in such a way as to gain the support of the largest possible number of states. We recommend that the framework convention contain, at a minimum, general principles and obligations, and that it advocate a comprehensive approach that includes sources and sinks of all greenhouse gases.

PUT
SOMEWHERE
ELSE

①
ITEMS
FOR
NEGOT.

41:

Original:

IV. INFORMATION AND PUBLIC AWARENESS

41. We believe that a well informed public is essential for addressing and coping with as complex an issue as climate change and urge countries to
- (i) encourage wide participation of all sectors of the population in addressing climate change issues and developing appropriate responses
 - (ii) provide guidance for positive practices to limit/or adapt to climate change
 - (iii) incorporate in the curricula of their educational systems environmental education
 - (iv) establish national committees or clearing houses to collect, develop and disseminate accurate information on climate change issues.

Comments:

None

New Version:

Information and Public Awareness

37. We believe that well informed public is essential for addressing and coping with as complex an issue as climate change and urge countries to:

- (i) encourage wide participation of all sectors of the population in addressing climate change issues and developing appropriate responses
- (ii) provide guidance for positive practices to limit/or adapt to climate change
- (iii) incorporate in the curricula of their educational systems environmental education
- (iv) establish national committee or clearing houses to collect, develop and disseminate accurate information on climate change issues.

Original:

V. INSTITUTIONAL MATTERS

42. We congratulate the IPCC for the outstanding achievement of producing in a very short time its first report on the state of the science of climate change, the socio-economic impact and policy options. We recognize that the IPCC structure can provide an invaluable mechanism for periodic assessments, perhaps every five years, of the evolving knowledge from research and impact studies. We urge that the IPCC continue its analysis of risks of action and inaction, policy options and economic aspects of alternative measures for limiting greenhouse gas emissions, mitigating or adapting to climate change. We also urge that ~~we further report~~ on these issues should be produced during 1991 to support the then ongoing negotiations of a Climate Convention on Climate Change.

studies

Comments:

Para 42 and 43, place paragraphs in new section on IPCC.

Para 42, line 3: policy options to limit or adapt to climate change

Para 42, line 4: delete "structure"

Para 42, line 5: delete "perhaps every five years"

Para 42, lines 7-8: delete "risks of action and inaction"

Para 42, lines 8-9: replace "and economic aspects.... adapting to climate change." with "especially the economic aspects of alternative measures for limiting greenhouse gas emissions of adapting to climate change."

Para 42, line 10: delete "during 1991"

Para 42, lines 11: delete "then"

Para 42, last sentence: framework convention

New Version:

12. We congratulate the IPCC for the outstanding achievement of producing its First Assessment Report on the state of the science of climate change, the socio-economic impacts and policy options to limit or adapt to climate change. We recognize that the IPCC can provide an invaluable mechanism for periodic assessments of the evolving knowledge from research and impact studies. We urge that the IPCC can provide an invaluable mechanisms for periodic assessments of the evolving knowledge from research and impact studies. We urge that the IPCC continue its analysis of policy options, especially the economic aspects of alternative measures for limiting greenhouse gas emissions or adapting to climate change. We also urge that further reports on these issues be produced to support the ongoing negotiations of a Framework Climate Convention on Climate Change.

Original:

43. We further express our appreciation to WMO and UNEP for initiating the IPCC and providing an efficient Secretariat. We urge that this arrangement be continued and that countries continue to provide resources to support the Secretariat and participation of developing countries in the work of IPCC.

Comments:

Para 43, line 2: after "efficient" add "and effective"

Para 43, line 3: replace "that countries continue..... in the work of the IPCC." with "expanded to provide secretariat support for negotiations on a framework convention on climate change"

New Version:

13. We further express our appreciation to WMO and UNEP for initiating the IPCC and providing for an efficient and effective Secretariat. We urge that this arrangement be continued and expanded to provide secretariat support for the negotiations on a framework convention on climate change.

PREAMBLE

1. We, the Ministers from countries representing the world community met in Geneva, Switzerland, from 6 to 7 November 1990 at the Second World Climate Conference.
2. We note that while climate has varied in the past and there is still a large degree of scientific uncertainty, the rate of climate change predicted by the Intergovernmental Panel on Climate Change (IPCC) to occur over the next century is unprecedented. This is due mainly to the accumulation of greenhouse gases, resulting from a host of human activities since the industrial revolution, particularly in industrialised countries. Such climate change could pose an environmental threat of a magnitude hitherto unknown, and could severely jeopardize the social and economic development of some areas, and could in some cases even threaten habitability.
3. We appreciate the work of the World Climate Programme (WCP) during the past decade which has improved understanding of the causes, processes and effects of climate and climate change. We also congratulate the Intergovernmental Panel on Climate Change (IPCC), established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) on its First Assessment Report on the causes and [possible] effects of climate change. It has identified strategies to limit and adapt to climate change, and in the light of the United Nations General Assembly resolutions, has identified possible elements for inclusion in a framework convention on climate change.
4. Recognising climate change as a common concern of mankind, we commit ourselves to take active and constructive steps in a global response.

Proposal para.2 line 9: include
[potential] after "such"

Proposal para.2 to delete "and
could in some cases even threaten
habitability" and replace by:

[Many believe that in some cases
it even threatens survival,
specially for small islands, low-
lying, coastal, arid and semi-
arid countries.]

Proposal para.4 add at the end:
[without prejudice to sovereignty
of states.]

GLOBAL STRATEGY

5. Recognizing that climate change is a global problem of unique character, we consider that a global response [**which ensures the stable development of the world economy**] must be decided and implemented without further delay based on the best available knowledge such as that resulting from the IPCC Assessment. Recognizing further that the principles of equity and the common but differentiated responsibility of countries should be the basis of any global response to climate change, industrialized countries must take the lead and commit themselves to immediate action and enter into and strengthen cooperation with developing countries to enable them to adequately address climate change without hindering their national development goals and objectives. Developing countries must, within the limits feasible, commit themselves to appropriate action in this regard. To this end there is a need to contribute [new and] additional, adequate financial resources and transfer of technology on a [preferential] [fair and equitable] basis.

alternative

We recognize that climate change is a global problem of unique character, we also recognize that these exists many uncertainties in the fields of science, economics, plus the effecativeness at response options in limiting or averting Potential climate change.

U. S. Comment

Sept. 29, 1990
12:45

Add the following new para. to the "Global Strategy" section.

"The consideration of climate change response strategies present formidable difficulties for policymakers because of: (A) remaining scientific uncertainties regarding climate change; (B) uncertainty with respect to how effective specific response options or groups of options would be in actually limiting or averting potential climate change; and (C) uncertainty with respect to the costs, effects on economic growth, and other economic and social implications of specific response options or groups of options. There is an urgent need for continued national and international efforts to resolve these uncertainties."

I. ROLE OF SCIENCE IN IMPROVING OUR UNDERSTANDING, CAPACITY OF PREDICTION AND OUR RESPONSE TO CLIMATE CHANGE

6. We reaffirm that, in order to reduce uncertainties, to increase our ability to predict climate and climate change on a global and regional basis, including early identification of as yet unknown climate-related issues, and to design sound response strategies, there is a need to strengthen both national and international, and if necessary regional activities in science. We recognize that commitments by governments are essential to sustain and strengthen the necessary research and monitoring programmes and the exchange of relevant data and information, with due respect to national sovereignty. We stress that special efforts must be directed to key areas of uncertainty.

We maintain that there is a need to intensify research on the social and economic implications of climate change. We commit ourselves to promoting the full participation of developing countries in these efforts. We pledge our full support to the needs of the World Climate Programme including contributions to the WMO Special Fund for Climate and Atmospheric Environmental Studies. The magnitude of the problem being addressed is such that no nation can tackle it alone and we stress the need to strengthen international cooperation. In particular, we ask the [World Climate Programme] [WMO] **[and other international organisations]** to take the lead internationally in coordinating climate and climate change related scientific studies.

alternative: to add at the beginning of the para.

We reaffirm the scientific consensus that global warming is taking place owing to the greenhouse effect; and that the continued emission of greenhouse gases, [especially carbon dioxide,] is committing the earth to significant future warming.

II. POLICY TARGETS FOR URGENT ACTION *

(Precautionary measures)

7. In order to achieve sustainable development, (1) in all countries and to meet the needs of present and future generations, environmental measures must anticipate, prevent and attack the causes of environmental degradations. we must [may][will] base ourselves on the precautionary principle.(2) Environmental measures must anticipate, prevent and attack the causes of environmental degradation. (3)Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation [which are justified in their own right]. The measures adopted should take into account the different socio-economic contexts.

* Alternative title:

[POLICY CONSIDERATIONS]

- 1) Definition of sustainable development as agreed at the 15th session of UNEP Governing Council (Annex II UNEP/GC 15/L.37).
- 2) Proposal to delete two last sentences and reference to precautionary principle.
- 3) Proposal:
"Where there are threats of serious or irreversible damage, **measures to prevent** environmental degradation should be taken on the basis of full scientific certainty."

8. The potentially serious consequences of climate change give sufficient reasons to begin by adopting response strategies that can be justified (1) immediately [for other reasons] even in the face of significant uncertainties: [including] [phasing out of [production] and use of CFC emissions], efficiency improvements and conservation in energy supply and use, sustainable forest management, afforestation schemes, proper land use planning, use of cleaner and more efficient energy sources, review of agricultural practices. Further actions should be pursued in a phased and flexible manner on the basis of, in the long-term goals and strategies, at the national, regional or global level taking advantage of scientific advance and technological development to meet both environmental and economic objectives.

alternative

We note that a mechanism is being set up by WMO and UNEP to undertake the necessary intergovernmental negotiations on global warming.

alternative: after "uncertainties" line 4

and in view of the potential risks of survival especially for small islands, low-lying, coastal, arid and semi-arid countries.

-
- 1) Proposal after "justified" in the third line to insert: [in their own right]

28 September

(Stabilization and reduction of greenhouse gases [not controlled by the Montreal Protocol] (1)

9. We agree that the ultimate global objective should be to stabilize [and reduce] greenhouse gas concentrations [emissions]. We agree that the ultimate global objective should be to stabilize greenhouse gas concentration at a level that would prevent anthropogenic interference with climate. [noting that following the IPCC Report the long-lived gases such as CO₂, N₂O, and CFC could require immediate reductions in emissions from human activities of over 60% to stabilize their concentrations at today's levels; methane would require a 15-20% reduction.]

-
- . Proposal to delete para.9
1) Remark: Ministers are reminded of the analytical work of the IPCC on greenhouse gas emission targets as recommended by the Noordwijk Ministerial Declaration in November 1989.

10. We stress, as a first step, the need to stabilize, while ensuring **sustainable** development of the world economy, emissions of greenhouse gases not controlled by the Montreal Protocol. **Obligations should be equitably differentiated according to countries' respective responsibilities for causing and combatting climate change and their level of development.**

alternative

We recognize that the most effective response strategies, especially in the short-term, are those which are:

- . Justified for reasons other than climate change and also provide beneficial impacts on potential climate change;
- . Economically efficient and cost effective;
- . Able to serve multiple social, economic, and environmental purposes;
- . Easily modified to respond to increased scientific and economic understanding of climate change;
- . Compatible with the concept of sustainable economic growth and development;
- . Compatible with the concept of a comprehensive approach that deals with all sources and sinks of greenhouse gases;
- . Administratively practical and effective in terms of applications, monitoring, and enforcement; and
- . inclusive of obligations by both industrialized and developing countries.

11. We agree that stabilization of [in particular CO₂ emissions] [greenhouse gas emissions] [not controlled by the Montreal Protocol] [the global warming potential of greenhouse gases] should be achieved [jointly] by industrialized countries by the year [2000]* and should be set at [lowest possible] [present]** emission levels. We urge all countries to set achievable national targets and programs to achieve those targets.

alternative

We recommend that limitation and adaption strategies be considered as an integrated package that complement each other to minimize net costs. These strategies should include measures which limit emissions from greenhouse gas sources as well as those which increase the ability of natural systems to utilize greenhouse gases. A comprehensive approach is needed which considers the costs of reducing emissions of different greenhouse gases and the effects of those reductions on potential climate change.

* Proposal to delete the brackets.
 ** Proposal to delete the brackets
 Proposal to delete the para.

12.

We urge industrialized countries to establish greenhouse gases [**especially CO₂**] [reduction programmes aiming at achieving at least 20% reduction of] [their current contribution to global warming potential], [**its contribution to actual global warming potential**] [possibly by the year 2005] and in [any case not later than the year 2010] [**and appeal to all developing countries to establish their programmes equivalent to their status of development.**]

alternative

We stress, [in establishing emissions reduction targets, the need for a sound and equitable basis for setting such targets and the need for cost-effective measures to reach the targets.] [that if emissions reduction target were to be established.] [We note the differences today within the industrialized countries in the per capita emissions and urge the countries which have the highest rate to reduce these differences due to account being taken of their specificities.]

alternative

We urge industrialized countries to establish greenhouse gas reduction programmes to reduce their current contribution to global warming and aiming at a 20% reduction of CO₂-emissions of 1988 levels by the year 2005 and in any case not later than the year 2010, and appeal to all developing countries to establish programmes equivalent to their status of development.

Proposal to delete

28 September

13. We recognize that countries with, as yet, relatively low energy requirements, and which can be reasonably expected to grow in step with their development, may have targets that accommodate that development.

[Countries should, within the limits feasible, take measures to suitably adapt their economies.]

28 September

14. We recommend that [any] [the] specification[s] of the obligation[s] [if any] to stabilize and [or] reduce [net] greenhouse gas[es] emissions [may] be realized in the form of [a] separate Protocols to the Climate Convention. [Some of these protocol[s] could be [negotiated [[concurrently with the [framework] convention.]](1)[as expeditiously as possible.]] [developed on the basis of consensus decisions by the negotiating body.]

-
- 1) Proposal to delete the last sentence: "Some ... convention"

28 September

14 bis We urge industrialized countries to establish greenhouse gases reduction programmes aiming at achieving [at least 20%] reduction of their current contribution to global warming potential, [possibly by the year 2005] and in any case not later than the year 2010.

Proposal to retain this para. if new
para.12 is not retained in the form
proposed by the Secretariat.
Proposal: para. should be put in brackets

28 September

(Economic situation of certain countries)

SECRETARIAT TEXT

15. We recognize that developing countries with, as yet, relatively low energy requirements, which can reasonably be expected to grow in step with their development, may have targets that accommodate that development. We also recognize that additional financial resources [will] [may] have to be made available to developing countries to enable them to limit their net emissions of greenhouse gases while ensuring a steady development of their economies;

NORWAY [alternative]

We recognize that emissions from developing countries with, their as yet, relatively low energy requirements, and which can reasonably be expected to grow in step with their development may have targets that accomodate that development. Developing countries should, within the limits feasible, take measures to suitably adopt their economies. Recognizing the poverty that prevails among the populations of developing countries, it is natural that achieving economic growth is given priority by them. We recommend that new and additional resources should pregressively be mobilized to help developing countries take the necessary measures to address climate change consistent with their development needs.

29 September

(Economic situation of certain countries)

15. We recognize that [net] emissions from developing countries with their, as yet, relatively low energy requirements will need to grow in step with their development [and these countries may have targets to accommodate that development.] Narrowing the gap between the industrialized and the developing world would facilitate the developing countries dealing with the climate change issue. Recognizing the priorities of developing countries of alleviating poverty and achieving social and economic development, we recommend that [new] adequate [and additional] financial resources should be mobilized and environmentally sound technologies transferred [on a preferential/fair and equitable basis] to enable developing countries to take the necessary measures to address climate change and sea-level rise consistent with their development needs. Developing countries also should, within the limits feasible, take action in this regard.

[The particular difficulties of the developing countries whose economies are highly dependent on fossil fuel production and exportation, as a consequence of the action taken on limiting greenhouse gas emissions, should be taken into account.]

Proposal:

The alternative to the above would be the language that has been approved by consensus in the IPCC report.

28 September

(Funding)

16. We recommend that consideration should be given to the need for funding facilities [including the proposed World Bank/UNEP/UNDP "Global Environmental Facility"] [a clearing house mechanism] [and a possible new international fund] composed of [new and] additional financial resources for developing countries taking into account existing multilateral and bilateral mechanisms. Such funding should be related to the implementation of the framework climate convention. In the meantime industrialized countries are urged to co-operate with developing countries to support immediate action addressing climate change and sea level rise without imposing any new conditionality on developing countries.

28 September

17. "We recommend further that the scope of needed resources be assessed. Such assessments to be conducted as soon as possible should include inter alia country studies and mechanisms to meet the financing needs identified [**similar to the approaches developed under the Montreal Protocol.**]

18. International funding should be directed in priority to the sectors identified by the IPCC report, in particular:
- (i) promoting efficient use of energy
 - (ii) arranging rapid transfer of technology on a **[preferential] [fair and equitable]** basis to, developing countries and technology development in these countries
 - (iii) co-operating with developing countries to enable their full participation in international meetings on climate change.
 - (iv) **enhancing observational network, particularly in developing countries, to facilitate conducting research, monitoring and assessment of climate change.**

Funding should also be directed to the creation of regional centers to organize information networks on climate change in developing countries.

28 September

(Economic instruments)

19. Economic or market based instruments frequently offer the potential of achieving environmental improvements at lower costs than through regulatory mechanisms. [We recommend that policies at the national and international level make extensive use of economic instruments] [appropriate to each country's socio-economic conditions] in conjunction with a balanced mix of regulatory approaches. [Such instruments could include taxes and charges, emission trading (tradeable permits/allowances), [subsidies], [elimination of subsidies to activities that induce climate change] and other measures such as fees and, deposit refund systems.]

alternative: add a new sentence

It is evident that the question of adoption of any form of Economic instrument raises many complex and difficult issues. Careful and substantive analyses of all implications of such instruments are needed.

29 September

Add.1

The following paragraphs were submitted by several delegations to the Secretariat but not discussed in plenary neither in the drafting group

USSR

para.19 We agree that continued emissions of greenhouse gases at present rates would commit us to increase concentration for centuries ahead.

We recognize that for various scenarios of future emissions developed by IPCC as assumptions, there will be a projected doubling of equivalent carbon dioxide concentrations from pre-industrial levels in 2025-2050.

We further recognize that there exists an IPCC scenario under stabilisation of equivalent carbon dioxide concentration at about twice pre-industrial levels which would occur towards the end of the next century.

Therefore we note that any future decisions to limit the adverse affect of human-induced greenhouse gas emissions will have to consider the ultimate need to stabilize greenhouse gas concentrations.

BRAZIL

20 bis We therefore call for the development of a world protocol on the climate change aspects of energy production and use, centred on the concepts of specific targets for a phased increase of energy efficiency, reduction of fossil fuel emissions, associated with specific mechanisms towards the adaptation of economies.

USA

- Para.2 Second sentence, insert: [prediction] after "This";
Delete "particularly" substitute with "historically"
Insert [continuing] before "accumulation"
Sentence would read:
This [prediction] is due mainly to the [continuing]
accumulation of greenhouse gases resulting from a
host of human activities, [particularly]
[historically] in the industrialized countries.
- Para.5 Bracket [additional] in last sentence
- Para.6 Second sentence, insert: [free and unrestricted]
before "exchange of relevant data". In second sub-
para last sentence, insert new text in brackets:

[WMO to take the lead and coordinate, through the
World Climate Programme, international scientific
activities related to climate and climate change.]
- Para.9 Bracket entire para.9
- Para.10 Insert [net] before "emissions of greenhouse gases"
bracket [not controlled by the Montreal Protocol].
Bracket entire last sentence beginning with
["Obligations should be..."]
- Para.11 Bracket last sentence
- Para.15 Bracket [additional financial resources] in second
sentence of Secretariat text
- Para.23 Fourth sub-para., line 2 Bracket [conservation
Protocol or] insert [or Agreement] after convention]

First sentence would then read:

"We call for the development of a World Forest
[Conservation Protocol or] convention [or Agreement]

28 September 1990

"Energy"

20. We note that energy production and use account for nearly half of the enhanced radiative forcing resulting from human activities and is expected to increase its contribution in the absence of appropriate response actions. We recognize the promotion of energy efficiency as the most cost effective immediate measures, in many countries, for reducing energy-related emissions of greenhouse gases, in particular CO₂, while other options such as no or lower greenhouse gas emitting energy sources should be pursued. Transport energy use attracts special attention of many of us in the light of its role in many industrialised countries and of its expected importance in many developing countries.

(Role of the Energy and Transport Sector)

alternative

We note that the energy and transport sector presently accounts for nearly half of the man-made greenhouse effect and is projected to increase substantially. We recognize that an environmentally sound development must include policies which will achieve **environmentally** sustainable energy system [and take the environmental costs and benefits of energy fully into account.] We urge the promotion of energy conservation and of energy efficiency **demand management and fuel switching** as the most cost effective immediate measure for reducing energy-related emissions of atmospheric pollutants, [in particular CO₂.]

(Cont'd)

28 September 1990

(Technology development and transfer of technology)

21. We recognize that there is no single quick-fix technological option for limiting greenhouse gas emissions. However, we are convinced that technological innovation **as well as social behaviour and institutional adaptations** is a key element of any long-term strategy that deals with climate change in a way that meets the goal of sustainable development. Therefore, we urge all countries, the industrialized countries in particular, to intensify their efforts and international cooperation in [technological research] development and dissemination of [deployment, including improvement and reassessment of existing technologies.] [environmental favourable] "new" and ["green"] [renewable energy] technologies.]

28 September

22. We urge that [environmentally sound] technology be utilized by all sectors in all countries to the full extent possible and further urge all countries, industrialized, and developing, and least developed to identify and take effective measures to remove barriers to the dissemination of the best environmentally safe technology. There is a need for the effective transfer to the developing countries, [on a preferential and non-commercial basis] [on a preferential and affordable basis] [on favourable terms], of technologies for addressing climate change.

(Forestry)

23. We recognize that the conservation of the world's forests in their role as reservoirs and sinks of greenhouse gases along with other measures are/is of [crucial] [significant] importance for global climatic stability, [as well as the state of the environment in general] particularly having regard to the important contribution of forest destruction to global warming through the emission of carbon-dioxide, methane and other trace gases.

We stress the need to reduce the rate of deforestation [in consonance with the objective of sustained yield development] and to enhance the potential of the world's forests as a sink for greenhouse gases, [through vigorous programmes of reforestation and afforestation.] [through improved management of existing forests and vigorous programmes of reforestation and afforestation.]

[We endorse the target included] [We urge the earliest completion of the feasibility assessment called for] in the Noordwijk Declaration of achieving net global forest growth of 12 million hectares per year, through conservation of existing forests and through aggressive programmes of reforestation and afforestation.

We call for the development of a World Forest Conservation Protocol or Convention, covering boreal temperate subtropical and tropical forests in the context of or in association with a Climate Convention.

We call on all countries to strengthen [and reform] [support and extend] the Tropical Forests Action Plan [to enable it to tackle forestry programmes effectively,] [process to all countries with tropical forests,] to strengthen the role of the [Food and Agriculture Organization and] International Tropical Timber Organisations and to support the countries concerned to implement sustainable management of forests through enhanced and well coordinated international cooperation.

We also recognize that forests and forest products play a key social and economic role in many nations and communities.

We acknowledge that increasing population and economic growth would result in greater conversion of forest lands to other uses, unless offset by increased productivity in activities sustained by current land uses.

We affirm and recognize the sovereign rights of all countries to make use of their natural resources.

alternative to sub-para.1

"We recognize that the conservation of the world's forests is of crucial importance for global climatic stability, as well as the conservation of biological diversity, and the protection of soil stability and of the hydrological system. Forest destruction contributes to global warming through the emission of carbon-dioxide, methane and other trace gases.

alternative for the three last lines of sub-para.1

"...of forest as a sink for carbon-dioxide, and other trace gases."

Proposal to delete sub-paras. 4 to 8
in order to get balance with para.20
(Energy)

28 September

24. We call finally for the development of a World Forest Conservation [Protocol or Convention,] [Convention or Agreement] covering temperate, boreal, **subtropical** and tropical forests, in the context of or in association with a Climate Convention which also addresses energy-related and other greenhouse gas emissions. The specific elements of such a protocol or convention are a matter for international negotiations which should begin at an early date. These elements may include: fundamental research, **tropical and subtropical** forest planning, measures to use, protect and reforest, international trade, financial assistance and possible national, **regional** and international targets for conservation, reforestation and afforestation.

alternative

We recommend that discussions on the protection and management of boreal, temperate, sub-tropical and tropical forest ecosystems must be well coordinated and compatible with other possible types of action related to reduction of emission of greenhouse gases, rational utilisation of biological diversity, financial assistance and the need for more favourable market conditions for timber and timber products that might be taken up by the Food and Agriculture rganisation, the United Nations Environment Programme, the World Meteorological Organisation and the International Tropical Timber Organisation.

alternative

We recommend a forest protocol to be developed in parallel to the Framework Convention on climate change, dealing especially with the role of forests as reservoirs and sinks for greenhouse gases. We further note with interest the initiative to develop a legal instrument on the protection and management of forests to stimulate positive forest actions and address threats to the world's forest. These considerations should take into account the work of IPCC but not delay or complicate ongoing negotiations of a Framework Convention on climate change and related legal instruments.

(Desertification, drought and land degradation)

25. We recommend that [precautionary] [appropriate] measures be [adopted] [developed] by the countries concerned in collaboration with donors [i.e. through stepped-up financial contributions,] **scientific contribution** to counter the increasing degradation of **water resources as well as** the productive resource base in areas affected by drought, desertification and land degradation.

We also recommend that similar measures be adopted to address the funding needs of low-lying coastal and small vulnerable island countries, some of whose very existence is placed at risk by to rise in sea levels resulting from climate change

alternative

We recommend that precautionary measures be adopted by the countries concerned in collaboration with donors to counter...

alternative

We recommend that regional and/or sub-regional studies on these subjects be undertaken to cover the impacts of climate change in the following fields:

- (i) Drought;
- (ii) Desertification;
- (iii) Water resources and their evolution;
- (iv) Agriculture (positive and negative impacts);
- (v) [Energy]; [Salinization]
- (vi) [Forests] [Reforestation]
- (vii) **Socio-economic aspects**

These studies should lead to the development of scenarios and short-, medium- and long-term measures for mitigation of drought and stopping and reversing desertification for the attention of economic and political decision makers.

28 September

Population

26. We note that a large, projected increase in world population will be a major factor in causing the projected increase in global greenhouse gases. We recognise that global climate change strategies should take into account the need to deal with this issue.

The following paras have been submitted by various delegations but not discussed in plenary or in working groups. Addendum 2

SEV: BY: Xerox Telecopier 7020 : 4- 9-90 11:02AM :

U S EMBASSY-

6475947:# 2

Statement on Financial Resources
to the
UNCED Preparatory Committee
by the
Head of the U.S. Delegation
August 31, 1990

The U.S. is opposed to L-25 for the simple reason that it duplicates the study called for in L-17, a study that the Prep Com has already approved. L-17 specifically takes into account the relevant paragraphs of resolution 44/228 that deal with financial resources--namely paragraphs 15 J, K and M. L-25 is therefore superfluous.

But the introduction of L-25 has already absorbed the time of enough delegates last evening, so I do not want to prolong the debate. We will not block approval. We assume that the Secretary General will not conduct two separate studies, but will incorporate the L-25 study into the L-17 study which we have already approved. That would give us no problem.

For the record, I would remind the delegates to the Prep Com that last year at the time the General Assembly adopted Resolution 44/228 the United States made a statement that expressed its concerns about Paragraph 15 J. Mr. Chairman, I am grateful for this opportunity to clarify once again the U.S. interpretation of the phrase "new and additional financial resources" that appears in Paragraph 15 J. Given the present severe restraints on the U.S. federal budget, there is virtually no chance that there will be any additional development assistance funds available over and above present levels. The U.S. does not wish to raise expectations that it will not be able to meet. If more funds are to be made available for environmentally-sound programs, they will have to come from existing sources. I have no doubt that some funds presently going to unsustainable development projects can be reprogrammed for environmentally-sound projects. Future needs for environmental programs will be judged on a case by case basis.

Mr. Chairman, whenever the term "new and additional" arises in future, I hope all delegates will remember that the United States interprets this to mean newly available financial and other resources for environmentally-sound projects. It does not mean additional to overall development assistance levels. We have made this position clear in the past, but see the necessity to repeat it again today. This issue has been discussed at length over the past four weeks. It is time to put it behind us, so we can address other important substantive issues at the next session of the Prep Com. We look forward to cooperating closely with all delegates to define the essential measures that will ensure environmentally-sound development in all countries.

Ken -
your
copy

PREVIEW / GLOBAL WARMING

Emissions Debate Heating Up

By RUDY ABRAMSON
TIMES STAFF WRITER

WASHINGTON — When an international conference on global warming convenes Monday, the United States and the Soviet Union will be the only major industrialized nations without a plan for cutting or stabilizing carbon dioxide emissions.

A year ago, presidential science adviser D. Allan Bromley told Congress the Bush Administration was expected to reveal plans for combatting global warming at this 10-day meeting in Geneva. The 1990 World Climate Conference in Geneva draws together scientists and environmental ministers from more than 100 countries.

But the United States is still unprepared to announce targets or a schedule for reducing emissions of carbon dioxide, the chief culprit among so-called "greenhouse gases" that trap heat from the sun in the Earth's atmosphere.

Three-fourths of the 20 billion tons of carbon dioxide pumped into the earth's atmosphere each year results from burning gasoline, oil, coal and natural gas.

The United States accounts for about 22% of that, and the Soviet Union another 18%.

Austria, Denmark, the Netherlands, New Zealand and Germany have announced plans to make absolute reductions. Canada, Italy, Norway, Sweden, Switzerland and Britain have committed themselves to goals of stabilizing their emissions.

Earlier this month, Australia adopted an objective of cutting greenhouse gas output 20% by the year 2005. Just this week, Japan announced that it intends to stabilize its emissions at present levels by the year 2000.

And, as the 10-day Geneva meeting gets under way, officials of the 12-nation European Community will try to get agreement on a common goal of stabilization at 1988 levels by 2005.

Dodging the Pressure

But although work by scientists at the U.S. Environmental Protection Agency played a major role in focusing world attention on the problem, the Bush Administration has in several international conferences doggedly resisted European pressure for worldwide reduction targets and deadlines.

The pressure will be renewed when

environmental ministers debate their declaration at the end of the climate conference in Geneva. Administration critics, such as Sen. Albert Gore (D-Tenn.), have accused it of trying to sabotage the conference during preliminary skirmishing over the draft declaration.

The Geneva conference will be the last international meeting on global warming before negotiations on a global warming convention begin in Washington next February.

Dissension Ahead

Before the conference in Geneva is over, ministers are expected to embrace a massive study of global warming and its impacts—a study completed last August by the Intergovernmental Panel on Climate Change—and to issue a declaration setting the stage for negotiations. The Europeans want the declaration to refer to targets, deadlines and commitments, while the Bush Administration wants the language to remain vague.

Apparently anticipating a rerun of half a dozen debates in which the Europeans have criticized the United States for emphasizing research instead of action, the Bush Administration is downplaying the conference's importance.

British Prime Minister Margaret Thatcher and the top environmental officials of scores of countries will attend. But the U.S. delegation, headed by National Oceanic and Atmospheric Administration chief John Knauss, will be made up of working-level representatives.

Administration officials contend that the U.S. go-slow approach is founded on a profoundly serious intention to meet objectives once the problem and the economic consequences of fixing it are understood.

But environmentalists suggest the strategy is to delay as long as possible.

Daniel Lashof of the Natural Resources Defense Council, who authored one of the landmark global warming studies while a staff scientist for EPA, says the United States could save \$90 billion over the next 20 years by adopting renewable energy strategies that would permit stabilization of carbon dioxide emissions.

"The Bush Administration has run out of excuses for not acting against global warming," he said.

Proposed Agenda
First Negotiating Session
Framework Convention on Climate Change
Washington, D.C.
February 4 - 14, 1991

1. Welcoming Remarks
2. Opening of Meeting: Remarks by WMO Sec-Gen Obasi, UNEP Ex Director Tolba, IPCC Chair Bolin
3. Adoption of Rules of Procedure: Draft to be available
4. Adoption of Agenda
5. Election of Chair
6. Election of Bureau: Refer to Prepcom report and recommendations - *work ahead of time*
7. Organization of Work: To cover hours of sessions, meeting rooms, translation facilities (available only for negotiating group and subgroups, not regional and other interest groups)
8. Credentials Committee
9. Statements by Governments: To be brief (10 min max) and focused on issues raised in IPCC and other supporting documents
10. Preparation of Legal Negotiating Text *key item on wty.*
 - * a. work program
 - * b. establishment of subgroups } *subsequent wty of G-CWC to discuss*
 - c. legal drafting group } *clearing of groups*
 - d. review of draft legal text
11. Future Work
 - a. relationship with IPCC
 - b. time and place of next meeting
12. Adoption of Report - *cleared text, for annex, with brackets*
13. Close of Meeting

Suggested timing for proposed agenda:

4	Monday	Agenda items 1 to 8
5	Tuesday	Agenda item 9
6	Wednesday	Agenda item 9 cont'd
7	Thursday	Agenda item 10
8	Friday	Agenda item 10 cont'd
11	Monday	Agenda item 10 cont'd
12	Tuesday	Agenda item 10 cont'd
13	Wednesday	Agenda item 10c and 11
14	Thursday	Agenda item 10d, 12 and 13

draft nego text produced.

- key to direction of negotiations