

Framework Convention on Climate Change (FCCC)
Ad Hoc Group on the Berlin Mandate (AGBM)
Subsidiary Body for Scientific and Technological Advice (SBSTA)
Subsidiary Body for Implementation (SBI)

**THIRD SESSION OF THE AGBM
AND SECOND SESSION OF THE SBSTA AND SBI**

February 26 to March 8, 1996

Geneva

DELEGATION REPORT

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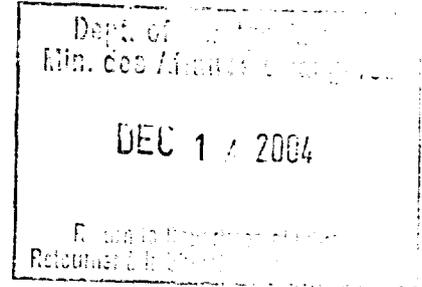
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REPORTS

Reporting Telex on AGBM 3, SBI 2 , SBSTA 2

PROTECTED

Report on Climate Change Sessions AGBM 3 and SBSTA 2 and SBI 2
FEB 26 TO MAR 8, GENEVA

The mtgs took place in Geneva Feb 26 to March 8 and were co-lead by Peter Fawcett/DFAIT/AGE for all sessions and Dr. Gordon McBean/DOE AES or Grimes/DOE/AES for SBSTA, Ann MacKenzie/GAIB for SBI, and Doug Russell for AGBM. Candel also included Varangu/NRCan, Drexhage/DOE/GAIB, Masterton/DOE/AES for one day of SBSTA, . Maciunas/DFAIT/JLO, Pierre Guimond/Cdn Elec. Assn. (first wk), John Dillon/BCNI (Second Wk.), Louis Comeau/ Sierra Club (first wk.), and Robert Hornung/Pambina Inst. (second Wk.). SBSTA and SBI sessions were held from Feb 26 to March 4, and included workshops on non-Annex 1 national Communications, and an NGO workshop. AGBM session was held from March 5 to March 8 and included workshops on Policies and Measures, and Quantified Emissions Limitations and Reductions Objectives (QELRO's).

Summary: The major outcome of Framework Convention on Climate Change (FCCC) sessions February 26 to March 8 was a recommendation for a Ministerial segment July 17, 18th as part of COP 2 July 8 to 19, 1996. Canada was successful in securing a seat on the bureau of COP 2 (ENVCDA ADM Tony Clarke) which will provide greater access to decisionmaking of this key steering body of the Convention. This will strengthen Canada's profile in the international negotiations for a protocol or another legal instrument by COP 3 in 1997 to address post year 2000 greenhouse gas emissions.

The Ad hoc Group on the Berlin Mandate (AGBM) discussed policies and measures that should be considered for further analysis and the scope of commitments and timeframe for quantified emission limitation and reduction objectives (QELRO)'s. The lack of consensus in Subsidiary Body on Science and Technical Advice (SBSTA) on the Second Assessment Report of Intergovernmental Panel on Climate Change (IPCC) and on the Technical Advisory Panels does not bode well for future scientific input. The Subsidiary Body on Implementation (SBI) did resolve some difficult issues related to implementation. A clearer separation of responsibilities between SBI and SBSTA will have to be established, including joint sessions.

U.S. delegation following the lead of Secretary of State Christopher placed greater emphasis on achieving progress in the sessions including support for a Ministerial portion at COP 2 to give more public visibility and political impetus to the negotiations. At the same time the EU (particularly Germany and the U.K.) are concerned about the lack of engagement by southern European member states in their EU commitments and by developing countries in their Art 4.1 commitments. USA - EU conflict is expected over the degree to which future policies and measures will be common among Annex 1 Parties, with the EU arguing that a coordinated response will have a greater environmental impact and

the U.S. resisting limits on its choice of measures.

Discussion in our JUSCANZ group is ever candid particularly with U.S., Australia, Japan and New Zealand. Now that we represent JUSCANZ on the bureau of COP 2, we will need to maintain their confidence in the Canadian delegation and ensure good relations with Switzerland with whom we competed for the seat. On possible participation by the Czech Republic in JUSCANZ, the group felt that if asked the Czech Republic could join, as long as they were not attending EU Coordination meetings.

Canada chaired a meeting of the Common Interest Group including all Annex 1 Parties to discuss National Communications, Technical Advisory Panels and the Climate Technology Initiative that engaged the Group in detailed discussion of these issues. We also chaired a meeting of the OECD / IEA Annex 1 Experts Group on common policies and measures and a meeting to generate participation in the technology exhibit at COP 2, that Canada is organizing.

We also met bilaterally with the heads of the Indian and Jordanian delegations to discuss cooperative approaches to Activities Implemented Jointly (AIJ). India though very cautious suggested that a Ministerial letter would be appropriate to start discussion on AIJ with the Indian Government. Jordan supported the proposed project on energy efficiency and asked if Canada was interested in AIJ projects in the oil and gas sectors.

Report:

COP 2 Ministerial Segment

In response to a request for views by the chairman of SBI, the Canadian intervention referred to the growing international environmental agenda and that we should be careful to ensure that ministerial participation at international meetings is effective, justified by the agenda, and care should be taken not to overuse this device. New Zealand made a similar statement. The following day the U.S. stated that it was in favour of a Ministerial, to acknowledge the Second Assessment Report of IPCC, to give Climate Change more public visibility and to re-engage Ministers on the issue. The European Union (under pressure from Germany) said that it supported a Ministerial on July 17, 18 for almost identical reasons expressed by the U.S. Subsequently all of the regional groups (except the Asian group due to opposition from OPEC countries) expressed support for a Ministerial portion at COP2 and was adopted without objection.

The agenda for the Ministerial segment of COP 2 is not clear other than to take stock and intensify the Berlin Mandate process. The AGBM chairman does not want to use all of COP 2 preparing a communique nor use all of the Ministerial segment on statements. In JUSCANZ informal discussions there has been some suggestion that Ministers could provide their views on the

meaning of "dangerous" interference in the climate system from the IPCC report and we have suggested that there should also be a role for the private sector at COP 2.

Policies and Measures

Parties represented a wide range of views, with the EU calling for a strong link between policies and measures and emissions objectives eventually agreed upon and the United States open to negotiating "targets and timetables" but suspicious of any agreement that would work to harmonize regulatory and fiscal measures. Specifically, the EU identified eleven areas for investigation and analysis, which are planned to be ready in time by COP 2. At this session the EU provided analytic papers on renewable energies; energy efficiency standards, labelling and other product-related measures; carbon dioxide emissions from the transportation sector; and, economic instruments. Other areas that the EU will analyze cover energy policies; industrial sector emissions (including voluntary agreements); agricultural emissions; forests; waste management; HFCs & PFCs; and, actions at local level in the urban environments. The work programme for each of these areas will identify a set of key policies and measures; identify indicators, objectives and possible targets for policies & measures, including assessing the expected effect on the reduction of greenhouse gas emissions; and, consider how the measures should be distributed through the three Annexes of the draft protocol structure proposed by the EU at AGBM 2.

Most other Annex 1 Parties, including Canada, were somewhere in-between, arguing that elaboration on policies & measures should at least serve as the basis for negotiations on emissions objectives. Several non-Annex 1 Parties, in particular Saudi Arabia, stressed that analysis is also needed on the environmental and economic impacts of policies & measures on non-Annex 1 Parties. The same Parties also stressed that policies and measures should conform with the provisions of WTO and not constitute new barriers to trade.

Decision was reached at end of session whereby AGBM welcomed Chairman's offer to convene informal open-ended round tables during AGBM 4 on specific points related to policies and measures, taking account of the interdependence between such policies and measures and emission objectives. AGBM also requested the IPCC to prepare a technical paper on possible policies and measures for consideration at the fifth session of the AGBM.

QELRO's

Parties underlined interdependence between these objectives and elaboration of policies and measures. The Secretariat has been requested to prepare a compilation of proposals relating to the treatment of QELRO's and policies and measures in a protocol or other legal instrument tabled or received before April 15.

There were considerable differences on a few key aspects of QELRO'S. Specifically, some delegations including Germany and AOSIS supported a gas by gas approach, while others including Canada, a comprehensive approach. As well, some supported a single QELRO (Germany), while many others saw differentiated goals as more appropriate.

The USA came out for quote targets and timetables unquote, a phrase which it repeated numerous times. This is a major change from Berlin when the use of term targets and timetables was not in USA lexicon. It was, however, couched with phrases such as cost effective, national circumstances and flexibility. The USA indicated that it will be doing analysis of various protocol proposals which it will share at COP2.

No specific EU QELRO was mentioned except that emphasis was on 2005 and 2010 years, with 2020 cited as a possible longer term perspective. EU also noted possibility of Annex 1 or OECD collective objectives (EU bubble was not mentioned) and the importance of related objectives such as efficiency improvements. Germany proposed an international target of 10 per cent reduction of CO2 by 2005 and 15-20 per cent under 1990 levels by 2010 while Austria reiterated support for the Toronto target of 20 per cent reduction by 2005. Also of particular note was the proposal by Poland for a separate protocol for Economies in Transition, reflecting their need for economic restructuring vis a vis other Annex 1 countries.

Canada raised a number of questions regarding the quote bubble concept unquote and noted that a differentiated approach must take into account different countries' national circumstances. On the issue of time frames, Canada introduced idea of a medium to long term QELRO, with shorter term milestones, benchmarks and reviews to ensure Parties stay on track. Candel also provided examples of how performance indicators could play an important role in tracking progress. AGBM conclusions picked up on both the idea of a longer time horizon to optimize investment decisions with shorter term milestones, and on development of performance indicators.

The conclusions also reflect a proposal by the Chairman of the AGBM to hold roundtables to discuss specific aspects of QELRO'S, inviting all Parties to participate. No themes have yet been defined for the roundtables.

Non-Annex 1 Commitments: Advancing the implementation of Art. 4.1

On engaging developing countries in the Convention, the dynamics were much more positive and less confrontational at this session compared to the previous sessions which were affected by the typical north-south debate. The areas highlighted in the interventions included non-Annex 1 National Communications, capacity building, technology and financial requirements of developing countries, and the GEF funding. Several developing

countries including the chairman of G-77 and China noted that by advancing the preparation of the initial Communications from non-Annex 1 Parties, the implementation of their commitments under Article 4.1 was fulfilled. These countries also emphasized the relationship between the commitments of non-Annex 1 Parties and the provision of financial resources and transfer of technology by Annex 1 countries. Most of the developed countries, on the other hand, encouraged all Parties to develop long-term strategies for the mitigation of climate change, and noted the importance of the ongoing work on technology transfer and cooperation, the programmes for capacity building, and exchange of information and training in facilitating further actions by developing countries under Article 4.1. They also noted that the work by non-Annex 1 countries on guidelines for national communications was a good first step.

Protocol or another Legal Instrument

The legal debate focussed on the choice of an amendment or a protocol as the legal instrument to contain new commitments. Much of the discussion related to institutional issues of a protocol or amendment approach as raised in Secretariat paper FCCC/AGBM/1996/4. A number of delegations supported going forward with a protocol (EU, AOSIS, Poland, Iceland); others suggested that the choice of instrument should be made after commitments have been further developed (US, Canada, Japan). Most delegations, and virtually all JUSCANZ delegations who spoke to the issue, emphasized the need to avoid the creation of new institutions and to minimize duplication. The implications of lack of agreement on rules of procedure regarding decision making within the Convention were raised as a concern with respect to the choice of instrument (amendments can go ahead with a three-quarters majority while a protocol must be adopted by consensus given the absence of agreed rules of procedure on decision-making.) A number of delegations stressed that the emphasis of the commitments was on enhancement of specific areas under the Convention notably on Annex 1 countries.

IPCC Second Assessment Report

As this was the first mtg of the Convention Bodies since the adoption of IPCC's the Second Assessment Report (SAR) in Rome in Dec 1995, it was a key agenda item at QELRO's and Policies and Measures Workshops as well as the SBSTA. Bert Bolin, the Chairman of the IPCC, also spoke both at SBSTA and AGBM plenaries. In general, it turned out to be a difficult issue, which was discussed at length.

There was a consensus that IPCC's Second Assessment Report (SAR) was the most authoritative, intergovernmentally-agreed source of available scientific and technical information on causes, impacts, and response policies to address climate change. However, in terms of whether some of the key findings should or should not be included in the conclusions of the SBSTA to the

AGBM, there was a lengthy debate at the Plenary sessions, followed by the formation of a contact group which worked through the weekend to resolve the issue. Canada, along with the other JUSCANZ members participated actively to defend the key findings of the IPCC. The strongest objections came from the Saudi Arabia, Kuwait, and Venezuela, joined by China and India, in claiming that they had not had enough time to review the report, while stating that they found the key findings identified by other Parties to be unbalanced, etc. (see SBSTA conclusions). In the end, the SBSTA managed to include the key findings of the SAR in the report but not in the conclusions. In this context, the IPCC chair in his speech to the AGBM emphasized that uncertainty does not reduce the risk and like several delegations underscored a key finding of the SAR that a number of no regrets opportunities were available at little or no cost to reduce GHG emissions and that there was sufficient rationale for actions beyond no regrets.

The SBSTA also approved a list of activities to be undertaken by the IPCC. This list includes special reports, technical papers, and workshops on a range of topics including regional impact and scenarios, adaptation, methodologies for inventories as well as technology transfer. In addition, the AGBM asked the IPCC to prepare a technical paper on policies and measures for consideration at the 5th session of the AGBM. The SBSTA also invited the Parties to submit their views on the SAR by 30 April, 1996 for its full consideration at its next session. The secretariat was requested to prepare a summary report on quote research and observation unquote issues. Parties were requested to submit their views on this item by 15 April.

Non-Annex 1 National Communications

Most of the discussion on this item took place in the SBSTA. G 77 and China introduced a position paper on guidelines and format for preparing their initial National Communications (developed on the basis of the workshop held a day before the SBSTA session) and attempted to have it adopted by the SBSTA. However, while recognizing that it was a significant step forward, Annex 1 Parties wanted a full discussion and further consideration of guidelines. After a full day's discussions SBSTA concluded that the position paper of G 77 and China would be the principal basis for the development of guidelines for non-Annex 1 Parties and it would continue consideration of the guidelines at its next session. The expectation is to have these guidelines approved by the Second Conference of the Parties, as many non-Annex 1 Communications are due by April 1997. There was general agreement that these guidelines should ensure consistency and comparability, and enhance transparency.

There was a general support for another follow-up workshop on this issue. The SBI requested the Secretariat to facilitate assistance in this regard. The SBI also requested the non-Annex 1 Parties to nominate national focal points for the facilitation

of assistance for the preparation of initial communications.

Annex 1 National Communications

Discussions on national communications for Annex 1 Parties took place in both the SBSTA (clarify technical and scientific issues) and SBI (policy related issues) and, relative to other items, went rather smoothly. A number of critical deadlines in the preparation of the second iteration of national communications were noted. In particular, by April 1, 1996, the SBSTA will be seeking guidance from Annex 1 Parties related to the presentation of inventory data on land use change and forestry sector for years subsequent to 1990; on projections; and, on aggregating data on ghg sources and sinks from this and other sectors and projections. Also, by April 1, 1996, the Secretariat will be seeking input from Parties on revisions to Annex 1 National Communications Guidelines, particularly in the area of technology transfer. Finally, by April 15, 1996, as first set out in Decision 3 at the first Conference of the Parties, Annex 1 Parties are requested to submit their national inventory data for the period 1990 - 1993, and where available, for 1994.

The SBI invited the SBSTA to consider ways of enhancing transparency, comparability and consistency through more specific reporting guidelines, including standard formats and tables for the description of policies and measures. In that regard, the SBI invited Parties to describe, to the extent possible, the specific effects expected from individual mitigation measures. The SBI also noted, based on projections provided by Parties, that many Annex 1 Parties will have to make additional efforts beyond those included in the projections if they are to return their ghg emissions to 1990 levels by 2000. Finally, as a way to promote the exchange of national experiences in carrying out national programmes on climate change, the SBI requested the Secretariat to organize a workshop which would focus on the implementation aspects of specific policies and measures taken by these Parties, as well as assess the results of the first cycle of in-depth reviews.

Technology Inventory & Assessment and Technology Transfer

The SBSTA considered the preparation of a technology inventory and assessment (as mentioned in Decision 13 of CoP 1). A statement by Bert Metz (Netherlands) chair of the Climate Technology Initiative described work of six elements of CTI and emphasized relevance of CTI work for non-Annex 1 Parties.

SBSTA requested the Secretariat to: a) identify existing sources of, as well as gaps in, information concerning technology information centres, with a view to developing a plan for setting up specialized technology information centres that could include, inter alia, sources of financing, preparation of comprehensive catalogues, dissemination of information and assessment of suitable technologies; b) conduct a survey in order to identify

the needs of the Parties for information on technologies and know-how to mitigate and adapt to climate change; c) to prepare a programme of work; d) to prepare an initial catalogue of adaptation technologies and know-how, including information on their costs, environmental impacts, implementation requirements, probable time frames for their introduction and utilization; and, e) to prepare a progress report on these items by CoP 3. The SBSTA also requested the Secretariat to develop papers on a) information related to the terms of transfer of technology and know-how currently available; and, b) new information on mitigation and adaptation technologies and know-how at the research and development stage.

The SBI considered policy issues related to the transfer of technology and in particular, in recognizing the complementarity of the roles of public and private sectors with regard to technology transfer, urged Annex II Parties to continue to take concrete steps to promote technology transfer, and all Parties to improve the enabling environment for private sector participation in technology transfer. The SBI requested the SBSTA to prepare recommendations for improving guidelines in national communications on the reporting of technology transfer, suggesting that modifications to guidelines should aim to improve the comprehensiveness, comparability, and detail of information in national communications. The SBI requested the Secretariat to prepare a report on technology transfer cooperation by the private sector no later than CoP 4.

Intergovernmental Technology Advisory Panels

After protracted negotiations between Annex 1 and non-Annex 1 Parties on the composition and work program of the TAPs, SBSTA session concluded with no/no final decision on its establishment. The SBSTA now will be seeking guidance from the next session of the CoP on this issue, and requested that the Chairman provide a report to the CoP on the state of negotiations in the SBSTA on the TAPs. As a way of addressing the work programme of the SBSTA, most elements were directed to the IPCC for its consideration. For those elements of the work programme that may not be appropriately covered off by the IPCC, in particular items dealing with specific, innovative technologies; methodologies for measuring the effects of policies and measures; and, adaptation technologies, the SBSTA proposed that a roster of experts could be set up in the interim. SBSTA established a deadline of April 1 for Parties to submit comments on the concept of a roster, including disciplines that such a roster might cover.

Activities Implemented Jointly (AIJ)

Unlike most other agenda items, AIJ was not discussed in the Plenary of the SBSTA until consideration of conclusions on the last day. All negotiations took place in a small contact group (12 Parties) including Canada. The conclusions represent an quote initial reporting framework unquote which permits Parties to

report on both their national AIJ programs and on specific projects. There are no guidelines on what may be reported on national programs, leaving it to discretion of each Party. The requirements for reporting to the Secretariat on a project by project basis include: both participating Parties must report on a project; reports can be made at any time; reports include description of the project, government acceptance, environmental and other benefits; and, additionality to current official development assistance. The information will be synthesized in a report annually to the COP. A progress report on AIJ will be made at the next AGBM session immediately before COP2. The AIJ conclusion represents a significant step forward, particularly by developing countries, who have been reluctant to discuss specifics concerning the implementation of the pilot phase.

AGBM and COP 2 Bureau

In the absence of consensus among the Asian Group on candidates for the Bureau, Chairman Estrada (Argentina) appointed U.S. (Reifsnnyder) and Malaysia (Kee) as vice chairs, the chairs of SBSTA (Hungary) and SBI (Mauritania) and 6 advisors (Poland, Chile, Netherlands, Senegal, Trinidad and Tobago and Saudi Arabia). The bureau for COP 2 is expected to be similar in size, including Zimbabwe (chair), Germany (Quennet-Thielen, vice-chair), SBSTA AND SBI chairs, Canada (Clarke), Western Samoa (AOSIS - Slade). GULAG proposed Argentina (AGBM Chair Estrada), Antigua and Barbuda (Ash) and Costa Rica (Dengo). The Asian Group could not reach consensus on candidates but stressed that as a group they represented 58 per cent of the world's population and 50 states and therefore felt that they are under-represented by the U.N. regional groupings. They indicated that they want a vice-chair of the COP 2 bureau and in addition to the chair of SBSTA, vice-chair of SBI and a position on the AG 13 bureau. It is expected that the bureau for COP 2 will be finalized at the beginning of the session on July 8th.

Ad hoc Group on Article 13

The proposed session for AG 13 in July has been postponed to the week of December 9th 1996. However, one day will be scheduled during the July 8 - 19 sessions, for organizational matters as well as a workshop.

Relocation of Secretariat to Bonn

The SBI dealt with the issue of legal capacity for the Secretariat with respect to negotiation of a headquarters agreement and other matters relating to the relocation of the Secretariat to Bonn. The SBI requesting the Executive Secretary to enter into a HQ agreement, after consultation with the Chairman and Officers. This solution was viewed as permitting the negotiation of the HQ Agreement and thereby facilitating the relocation, without settling the status of the Secretariat.

Financial Mechanism and Technical Cooperation

SBI considered the GEF Operational Strategy and recommended that the GEF should provide expeditious support for the preparation of national communications by developing countries and enabling activities. On financial and technical cooperation, Parties noted the activities of the Secretariat including the exchange of information through CC:INFO and the coordination of activities and the effective use of resources for national communications through CC:FORUM. The Secretariat was asked to prepare a report on strengthening these activities in support of non-Annex 1 national communications.

ANNEX 1 EXPERTS GROUP ON THE FCCC

A meeting of the Annex 1 Experts' Group was held on the margins of AGBM 3 on March 6. The purpose was to review progress on the projects and to agree on the timing and a review procedure for interim products leading up to COP 2. The OECD and IEA Secretariats reported that substantial progress, with early drafts or extended outlines of all 9 projects having been sent out to experts nominated by the group. The deadline for comments is March 14. To address concerns that wider review of the first draft of projects did not leave sufficient time to provide meaningful comments, delegates agreed that distribution of the first draft would go to government and non-government reviewers, at the same time on March 29th. Comments will be due by April 19, with a second draft to be sent out for government review by May 10. Comments on the second draft are due by May 31. It was also clarified that a summary compilation report of the projects will be submitted to the FCCC Secretariat for CoP 2, since it would not be realistic to expect the full studies to be ready for general distribution before early July. Finally, Annex 1 Parties agreed that the reports submitted to the AGBM do not/not represent governments' formal approval of relevant documents. Instead studies would enjoy the recognition of governments as an input into the analytic aspect of AGBM discussions on policies & measures.

In addition, delegates were informed that the EPOC Directorate of the OECD is planning to hold a meeting of the Climate Change Forum on the first week of June or late September. The proposed agenda would focus on how Annex 1 Parties might work together more effectively in engaging developing countries to develop a global response in addressing climate change. If held in early June, the Climate Change Forum could link with meetings of the Annex 1 Experts' Group, and the IEA macro modelling study on ghg reduction scenarios.

NGO Workshop on non-governmental Advisory Committees or Consultative Mechanism, March 2, 1996

The aim of the workshop was to discuss the need for, the possible scope, structure, membership and workplan of non-governmental

Report from the Environmental Group Canadian Delegation Member

- **Subsidiary Bodies**
- **AGBM**

Delegation Report

Subsidiary Bodies February 27 - March 4

Consideration of the Second Scientific Assessment by the Intergovernmental Panel on Climate Change (IPCC) and the issue of whether or not to have a ministerial portion at the Second Conference of the Parties were key issues for members of the Climate Action Network attending the meeting of Subsidiary Bodies February 27 - March 4.

The formal submission of the Second Assessment Report, particularly the Summaries for Policy Makers and Synthesis Report, to the SUBSTA by Dr. Bert Bolin, Chair of the Intergovernmental Panel on Climate Change (IPCC) set the stage for a week-long debate on how the SUBSTA should translate the scientific assessment into policy recommendations for government negotiators.

The United States, led by Working Group II co-chair, Bob Watson, and members of JUSCANZ, including Canada, defended the key conclusions of the SAR, while China and Saudi Arabia did all they could to undermine it. The debate in plenary, as well as presentations during two workshops on policies and measures and emissions limitations focused the Climate Action Network on the key message: a doubling of carbon dioxide equivalent concentrations in the atmosphere is dangerous and must be avoided.

Results of a Dutch modelling exercise, IMAGE, clearly demonstrated that to avoid a rate of warming that exceeds the ability of many ecosystems to adapt, particularly forest ecosystems, warming should be kept to no more than 0.1°C/decade. The IMAGE project used the concept of a safe emissions corridor to explore various emissions scenarios that would be allowed between now and 2010 and still allow future generations to live within the assumed ecological limits. The results show that to keep emissions to a level which would keep temperature increases at no more than 1°C/decade emissions in Annex 1 countries must drop between 37 - 64% from their 1990 levels by 2010. To keep temperature increases from exceeding 0.2°C/decade emissions must fall between 19 and 47%.

The numbers are large and underscore more than ever that a phase-out of fossil fuel use as the world's primary energy supply is inevitable within the next 50 years.

As a result of these and other findings, the need for a ministerial portion at the Second Conference of the Parties is urgent. Ministers, in the view of CAN, must debate the critically important question of what dangerous interference with the earth's climate system is. In the view of CAN, ministers must agree at COP 2 that a doubling of carbon dioxide concentrations in the atmosphere is potentially dangerous and must be avoided. A communique with this conclusion is what negotiators need to focus the work of the AGBM in the coming months. In this regard, the intervention of the United States calling for a ministerial to deal with the greatest environmental issue facing the planet, is important. Leadership on the part of the United States is critical to progress and a significant shift from negative to a more positive approach was noted at these meetings.

Guidelines for reporting on national communications for Annex 1 and Non-Annex 1 countries, as well as reporting guidelines for projects implemented jointly were also discussed at both the SUBSTA and SBI. CAN was pleased to see a call for tighter reporting by Annex 1 countries on impacts of policies and measures and improved methodologies for assessing and reporting on sinks. Reporting requirements for AIJ were too weak in CAN's view and should have had tighter requirements with respect to frequency of reporting, content, baselines and methodologies. With respect to the Non-Annex 1 communication guidelines, CAN felt it was wise for Annex 1 governments to welcome the effort, despite its shortcomings (no emissions projections or policies and measures and impacts of action taken - but then Canada didn't report on this either!). There is also some sympathy for the view that the guidelines cannot be considered as all that's needed for compliance by developing countries with Article 4.1 despite their argument that this is the case. This negotiating stance will clearly influence the ministerial portion of the COP, as will attempts to allocate money from the financial mechanism to adaptation.

Ministers have a great challenge ahead of them at COP2. Ministers, including Canada's own environment minister, must come to the meeting with the political resolve that substantial reductions for Annex 1 countries is inevitable and necessary to generate the kind of technology transfer that's required for steep global reductions. Pushing for commitments from developing countries now would be counterproductive. The challenge for ministers at COP2 is to create the conditions for emissions reductions globally while seeking no new commitments from developing countries. The focus must be on moving forward the agenda on technology transfer, pursuing all no regrets measures wherever they are, and the use of the financial mechanism for limited adaptation.

Pembina Institute Delegation Report

Ad-Hoc Group on the Berlin Mandate (March 5-8, 1996)

The following four issues were the main ones addressed by the AGBM at its third session:

- quantified emission and limitation reduction objectives,
- policies and measures,
- features of a protocol or other legal instrument, and
- continuing to advance the commitments of developing countries.

This report will only address the first two of these issues.

I. Quantified Emission and Limitation Reduction Objectives

In the view of the Climate Action Network, the most important outcome of the AGBM process must be that industrialized countries make a legally binding commitment at COP-3 to reduce their greenhouse gas emissions 20% below 1990 levels by the year 2005. At the moment, the proposal submitted before COP-1 by AOSIS remains the only one that approaches this target.

While no industrialized country has yet signed on to the AOSIS proposal, Germany did make a new proposal at AGBM 3 that calls on industrialized countries to EACH reduce their carbon dioxide emissions 10% below 1990 levels by 2005, and 15-20% below 1990 levels by 2010. While the EU did not attach itself to this proposal, they made it clear that COP-3 must produce emission reduction commitments for the years 2005 and 2010.

If Canada is to respond to these European initiatives, it must decide what level of emission reductions it would be willing to commit to for the years 2005 and 2010.

At this time, no specific proposals have been made by JUSCANZ members, but there were signs in Geneva that it may become increasingly difficult to develop common positions within the JUSCANZ membership. In particular, the United States and Australia appear to be moving in opposite directions. For example, while the United States clearly signalled a willingness to discuss 'targets and timetables' in the AGBM process, Australia suggested that COP-3 might also produce non-binding instruments like 'resolutions' and 'declarations' in addition to a legal instrument.

If the strains in JUSCANZ increase in the months ahead, Canada must decide whether it is in the Canadian interest to side with the United States or Australia on this issue. We assume it will be important, as many have suggested in the past, to move in 'lock step' with the U.S.

No matter what targets are ultimately agreed to at COP-3, a number of countries argued at AGBM 3 that it was necessary to find a mechanism for differentiating commitments across industrialized countries. The Climate Action Network believes that negotiations on differentiation will significantly slow down the AGBM process and are unlikely to succeed. Indeed, the problematic nature of such negotiations was made clear by the fact that all countries that spoke of differentiation described how it should be structured to benefit them.

To avoid a lengthy and fractious debate on differentiated commitments, Canada must determine if concerns about 'equity' can be addressed through other mechanisms that grant 'flexibility'. For example, could common targets in each country or a single target that applies across all Annex I Parties, implemented in conjunction with joint implementation within Annex I Parties, address equity concerns?

Finally, the Netherlands put the debate on targets and timetables into context by stating that the recent findings of the IPCC make it clear that a doubling of carbon dioxide equivalent concentrations in the atmosphere is dangerous and must be avoided. This view is shared by the Climate Action Network.

Canada, as a leader in the area of climate change science, must decide if it supports the Netherlands' position and if it can support a statement by Ministers at COP-2 that this objective must guide the AGBM negotiations.

2. Policies and Measures

The Climate Action Network believes that the AGBM process should only address those policies and measures that would result in significant greenhouse gas emission reductions and require international cooperation or coordination to be implemented. Environmental groups are completely opposed to wasting the AGBM's time on the development of a 'menu' of policies and measures from which countries could voluntarily pick and choose - every country already has a menu of policies and measures it can choose from.

It was clear at AGBM 3 that a number of countries believe that there are some policies and measures that would benefit from international cooperation/coordination. Examples provided include measures to reduce HFC emissions, improve fuel economy in automobiles, or reduce emissions from aircraft fuel. While no solid proposals are yet on the table, the EU did identify four initial areas with potential for international policy coordination.

On the other hand, both the United States and Japan stated clearly that they were not interested in discussing international cooperation/coordination of any measures to reduce greenhouse gas emissions - they support the 'menu' approach. In their view, countries must design and implement greenhouse gas emission reduction measures on a unilateral basis.

Canada must decide what policies and measures require international cooperation/coordination to be implemented in Canada, and it must then advocate the adoption of such measures within the AGBM. In addition, Canada should assess what mechanisms could be included in the Protocol to be signed at COP-3 to ensure that negotiations on specific policies and measures could continue post-1997.

**Report from Industry Canadian Delegation Member
- AGBM**

THIRD SESSION OF THE AD HOC GROUP ON THE BERLIN MANDATE

Overview

The third meeting of the AGBM was dominated by a growing emphasis on the conclusions of the Second Assessment Report (SAR) of the Intergovernmental Panel on Climate Change (IPCC), particularly their finding of a "discernible human influence" on the climate. This session also saw a new dimension added as a result of a perceptible shift to the "greener" side of the issue by the United States. However, there was some uncertainty whether this was more than pre-election positioning. Another important signal was the decision by the AGBM to schedule a ministerial portion at the Second Conference of the Parties (COP-2) in July, 1996. Canada originally expressed doubt about the usefulness of a Ministerial meeting at this point in the AGBM process. However, the EU, OASIS, and the United States pushed strongly for a Ministerial. Given the inevitable political impetus to have something for Ministers to announce in July, this will increase the pressure to move toward new targets and timetables.

The AGBM moved beyond the largely procedural issues which had dominated its first two sessions and began to examine seriously the future direction of the Berlin Mandate. The two main issues of interest to Canadian business are the possibility of future commitments beyond the year 2000 -- the so-called "quantifiable emission limitation and reduction objectives" (QELROs) -- and the elaboration of policies and measures in furtherance of the commitments contained in Articles 4(a) and 4(b) of the Convention.

Quantified Emission Limitation and Reduction Objectives

The Berlin Mandate calls for the examination of possible QELROs under the time frame of 2005, 2010 and 2020. Debate ranged from those who preferred to begin setting specific objectives and timeframes for reductions by Annex I parties (some European countries, AOSIS, several developing countries), those who argued for examination of differentiated obligations (Canada, Australia, Norway, Japan), and others who stated that the consideration of new targets was premature (mainly the OPEC countries). There also were differences of view between those, such as Canada, who continued to stress the comprehensive approach versus those who preferred specific targets for individual greenhouse gases.

In a carefully worded intervention, the United States argued for flexibility and an emphasis on cost-effective action, but surprised many by making several references to "targets and timetables", words that previously had been banned from the American vocabulary.

The statement on behalf of the European Union demonstrated that there is still some difficulty in defining a common EU position on QELROs -- in particular a specific reduction objective, and if it should be a flat rate reduction or whether some differentiation among parties could be contemplated. Nonetheless, they did call for "credible and challenging" reduction objectives to be established for early in the next century. The EU pointed to the IPCC contention that significant "no regrets" actions are available, and that on the basis of potential risk significant action beyond no

regrets is warranted. It also cited the IPCC conclusion that higher emissions in early decades would require lower emissions later on. Finally, while noting that a longer term perspective is important in order to allow planning and investment decisions, the EU continued to stress the timeframes mentioned in the Berlin Mandate, and seemed to suggest that 2020 was the appropriate definition of the "long term".

The reluctance to be specific by some of their European counterparts did not hinder Germany in any way, which repeated its call for a binding protocol to be negotiated for COP-3. According to the Germans, the overall objective should be stabilization of atmospheric concentration of CO₂ at a level of 550 ppm (twice the pre-industrial level). This objective would eventually require global emissions to be 50% of their current level. Accordingly, Germany called for a 10% reduction in CO₂ emissions by the year 2005, and a ~~15%~~ 20% reduction by 2010. The Alliance of Small Island States (AOSIS) reiterated its proposal for a 20 per cent reduction in CO₂ emissions by 2005.

In its intervention on QELROs, Canada stressed the importance of equitable burden sharing and spoke in favour of differentiated commitments among Annex I parties, noting the importance of factors such as economic and political structures, natural resource endowments and geography. Australia also spoke in favour of differentiated commitments and devoted considerable time to the question of equity considerations in determining the obligations of each country, measured in terms of "broadly equivalent economic cost on a per capita basis". Japan signaled that it also would be heard on this issue, and made a case for earning credit for action already taken.

Canada also raised the idea of adopting a longer time frame in establishing emissions objectives. It was suggested that these could be combined with interim milestones, benchmarks and reviews to ensure we are staying on track. In this regard the Canadian delegation also raised the idea of developing new and innovative performance indicators to track progress. Some suggestions included indicators which would provide further information in such areas as energy efficiency investments, the development and diffusion of environmentally friendly technologies, and capacity building efforts.

Discussion continued as well on the idea of a broader group of countries agreeing to a collective emissions objective. Several delegations including Canada raised the possibility of a collective objective among the OECD countries, or possibly among Annex I parties, although Canada raised questions about how it might operate. The latter was done largely to signal that we will oppose the idea of an EU bubble. The European Union did not formally raise the idea of an EU bubble, speaking instead of an OECD or Annex I bubble.

One noteworthy item was a growing concern for the impact which new commitments by developed countries could have on the terms of trade for developing countries. In this respect, there seemed to be considerable interest in a recent Australian study which postulates that further commitments by developed countries to reduce greenhouse gas emissions would lower GDP in developing countries as a result of reduced demand for their products in developed country markets.

At the end of the session, the Chairman of AGBM offered to convene informal round tables during the fourth session of the AGBM to discuss specific points related to QELROs.

Policies and Measures

In the final analysis, the debate about policies and measures came down to two approaches: 1) a "menu" approach, which would allow Annex I Parties to choose from a long list of possible policies and measures, selecting those that are appropriate to their national circumstances; and 2) a categorization of policies and measures within several annexes to a protocol, such categorization to be on the basis of the degree to which Annex I Parties would be committed to implement them.

There was considerable discussion about the degree to which such measures should be harmonized on an international basis. While several countries noted the importance of taking measures jointly, the U.S. delegation expressed considerable scepticism about the feasibility and desirability of harmonizing policies and measures among Annex I Parties, no doubt reflecting a long-standing desire to guard their national sovereignty. Not surprisingly, this position was irksome to many, since the U.S. had been instrumental in getting policies and measures included in the Berlin Mandate in the first place, rather than an approach based strictly on new targets. The U.S. also noted that they are undertaking considerable analysis and assessment of domestic interests relative to policies and measures, which they hope to have available by the time of COP-2.

There also was considerable debate about the desirability of focusing on specific policies and measures for priority attention, or whether at this point it was better to keep all options open. Canada was among those pushing for the comprehensive approach. It had been feared that the European Union might try to focus discussion in only a few areas, but in the end their submission expressed the desire to analyze a broad array of measures in a number of different sectors.

Some of the policies and measures most often mentioned for priority attention were cross-sectoral economic instruments (a carbon tax?); the removal of subsidies and market distortions; measures dealing with renewable energy, transportation and energy efficiency; and action on non-CO2 greenhouse gases.

At its first meeting, the AGBM accepted the OECD's offer to convene an "Experts Group" to undertake assessment of a range of possible policies and measures which could lend themselves to common action by Annex I countries. Canada, as chair of the Annex I Experts Group, presented a report to the AGBM on the status of their work. The Chairman pointed out that the Common Action Study is an analytical exercise only and is not intended to prejudice nations' preferences on policies and measures. The Chairman explained the "framework" for analysis and assessment which the group was using in its study. The Experts' Group has identified six broad areas for possible common actions -- 1) sustainable transport; 2) energy market reform; 3) economic/fiscal instruments; 4) demand side efficiency; 5) sustainable agriculture/forestry; and, 6) energy efficiency reforms for the EITs. Within these broad areas, examination has been undertaken of eight discrete measures in the first tranche. A draft of these eight studies is being developed for the end of March, and these are expected to be completed in time for COP-2. The analysis of the second tranche of measures is expected to be ready for submission to the AGBM prior to COP-3.

The AGBM asked the IPCC to prepare a technical paper on possible policies and measures. This paper will be considered at the fifth session of the AGBM in December, 1996. As with QELROs, the next step will be convene informal round

tables during the fourth session of the AGBM to look at specific points related to policies and measures.

Workshop on Policies and Measures

The workshop began with a presentation by Dr. Bert Bolin, Chairman of the Intergovernmental Panel on Climate Change (IPCC). He noted that the IPCC Second Assessment Report (SAR) contends that a range of "no regrets" measures is available in developed and developing countries that could result in a 10%-30% gain in energy efficiency at little or no cost. However, he later went on to point out that these gains assume that changeovers in technology and capital stock that currently are available would be undertaken. As well, the IPCC defines "no regrets" as measures for which the environmental and societal benefits outweigh individual costs.

In one of those moments of fortuitous scheduling, Dr. Bolin was followed by a presentation from the International Energy Agency, which contradicted the IPCC assertion, noting that even with the take-up of commercially viable energy efficiency technologies, an increase of as much as 11% in global greenhouse gas emissions is expected over the remainder of the decade. The IEA also noted that over 250 voluntary programs on climate change are underway around the world, though there is little or no coordination between countries on these various voluntary programs.

In one of the other more substantive pieces of analysis presented at the workshop, the OECD Secretariat presented the results of their study on potential market instruments to reduce greenhouse gas emissions. They poured considerable cold water on the enthusiasm for "green tax reform", noting that the anticipated "double dividend" to be gained by shifting taxes from income to pollution is likely to be small. They also noted that while a carbon tax can lead to theoretical efficiency gains, there are considerable distributional issues that will make it difficult to negotiate such an instrument among countries, especially within the timeframe of the Berlin Mandate.

The workshop also included presentations on a number of programs in various sectors around the world, including transportation, electricity, agriculture, as well as programs aimed at reducing emissions of methane and HFCs.

If it was expected that the workshop would produce significant new insight into appropriate policies and measures for a host of countries, it did not meet expectations. However, it did provide a snapshot of how much is already underway in a variety of program areas in both developed and developing countries, while also demonstrating how difficult it may be to design a series of common policies and measures that will easily fit a range of national and industrial circumstances.

Possible Features of a Protocol or Another Legal Instrument

Discussion continued on the appropriate instrument to meet the requirements of the Berlin Mandate. Many parties continued to stress the importance of adopting a legally binding protocol to the Framework Convention on Climate Change. Others suggested that we should await further developments on the scope and nature of the commitments to be agreed upon before deciding on the form of the instrument. For others, an amendment to the convention appeared to be the preferred option, since the adoption and operation of an amendment could prove less complex than a protocol. The AGBM agreed on the need to avoid the proliferation of new bodies under an

amendment or protocol. Several parties questioned the need for a separate Conference of the Parties and separate Bureau to serve a protocol. However, it was noted that the parties to a protocol might be different from the parties to the Framework Convention, and thus the decision making process for a protocol likely would be different. In its intervention, Canada stressed the need for the legal instrument chosen to have the capacity to evolve in light of the future development of commitments beyond the Berlin Mandate. The Secretariat was asked to prepare a compilation of proposals relating to possible features of a protocol or other legal instrument, for consideration at the fourth session of the AGBM.

Summary

The decision by the AGBM to arrange for a ministerial meeting at the conclusion of COP-2 will add considerable political impetus to the process, given the likely desire for something tangible for Ministers to announce. While the position of the U.S. appears open to interpretation at this point, they gave strong signals that they will have a more forthright position at COP-2, based on careful consideration of their national interest.

The greatest concern from the Canadian perspective has to be that a closer alignment between the United States and the European Union will render almost unavoidable the drive for new targets and timetables to be agreed to at COP-3. The consequences for Canada could be significant. Though a Clinton Administration might agree at COP-3 to new commitments beyond the year 2000, the Congress could refuse to ratify. Canada could then be in a position of having to swallow hard and adopt new commitments, putting ourselves at a considerable disadvantage compared to the nation with which we do 80 per cent of our trade.

New climate change negotiating schedule

NEW CLIMATE CHANGE NEGOTIATING SCHEDULE
(as of March 20, 1996)

Date	Location	Meeting	Comments
July 8-19, 1996	Geneva	CoP 2 (AGBM 4, SBI 3, SBSTA 3)	Will include Ministerial segment on July 18-19
December 9-18, 1996	Geneva	AGBM 5, SBSTA 4, SBI 4, Article 13	
February 24-March 7	Bonn	AGBM 6, SBI 5, SBSTA 5	
August, 1997	Bonn	AGBM 7, SBI 6, SBSTA 6	
Fall (October?), 1997	Japan	CoP 3	

IPCC Intervention #1

Canada, too, would like to acknowledge the significant accomplishment of the IPCC, especially recognizing the participation and contributions of the science community and the leadership of Dr. Bolin in channeling their efforts to a successful conclusion. Canada is pleased to have been actively involved in many aspects of this work and especially in providing for the Technical Support Unit for Working Group III.

Canada would like to join others in urging SBSTA to accept the SAR and bring it forward to be acted upon by the COP and their supporting bodies. We support the proposal to give public dissemination of the SAR high priority. An analysis outlining the implications of SAR on Canada was recently completed and this may be helpful to other countries in assessing the implications of the IPCC findings on their own country and regions.

Canada would support the key messages brought forward by Dr. Bolin in his address morning. Of particular importance are the conclusions that:

The balance of evidence suggests a discernible human influence on global climate;

With the growth in atmospheric concentrations of greenhouse gases, interference with the climate system will grow in magnitude and the likelihood of adverse impacts from climate change that could be judged dangerous will become greater;

Significant no regrets opportunities are available in most countries and that the risk of aggregated damage due to climate change, consideration of risk aversion and the precautionary approach provide for rationales for action beyond no regrets;

There are significant implications outlined in the SAR on unmanaged ecosystems, water levels, permafrost regions and the boreal forests. This is of particular concern to Canada;

SAR identifies mitigation and adaptation options that can support sustainable economic development in all countries; and

Many of the policies and decisions to reduce emissions of greenhouse gases and enhance their sinks, and eventually stabilize their atmospheric concentrations would provide opportunities and challenges for the private and public sectors. A carefully selected portfolio of national and international responses of actions aimed at mitigation, adaptation and improvement of knowledge can reduce the risks posed by climate change to ecosystems, food security, water resources, human health and other natural and socio-economic systems.

In conclusion, we urge SBSTA to examine the implications of the SAR in the context of the overall objective of the Convention. And finally, it will be important for SBSTA to bring to the attention of governments the need for continued research and

monitoring to further reduce the uncertainties.

IPCC Intervention #2 4(b) pgm of work

Canada would support the proposals raised by the US for additional work to be undertaken by the IPCC. In addition, Canada would like to elaborate on a proposal raised by the Russian Republic, calling for a scientific definition for dangerous in the context of the convention. Canada would rather see the focus of this effort be on establishing the decision criteria of what constitutes dangerous rather than a scientific and technical focus. Finally, Canada would like to draw the attention of SBSTA, the 3 SPMs and the synthesis report which identifies the needs for future work. One that is relevant to this body is found in the Synthesis report para 7.16. The value of better information about the processes impacts of and responses to climate change is likely to be great. Analysis of economic and social issues related to climate change, especially in developing countries, is a high priority for research. Further analysis is required concerning effects of response options on employment, inflation, trade, competitiveness and other public issues.

CANADIAN GOVERNMENT INTERVENTION ON:

ASSESSMENT OF THE SECOND ASSESSMENT REPORT OF THE IPCC

SBSTA 2

Mr. Chairman,

If the Subsidiary Body for Scientific and Technical Advice is to fulfil its responsibilities and mandate to provide appropriate scientific and technical advice to the Ad Hoc Group on the Berlin Mandate and the Conference of the Parties, it must identify the key relevant findings of the most comprehensive and authoritative information available - namely, that in the Second Assessment Report (SAR) of the International Panel on Climate Change.

Decision 6 of the first Conference of the Parties explicitly states that the SBSTA will be the link between the scientific, technical and technological assessments and other information provided by competent international bodies with the policy oriented needs of the Parties. Deleting the key elements of the SAR from the Conclusions of the SBSTA Report, would seriously compromise the ability of the SBSTA to carry out its critical mandate.

Thank you Mr. Chairman.

**Canadian intervention
February 28, 1996**

Subsidiary Body for Scientific and Technical Advice

National communications

Thank you, Mister Chairman for the opportunity to speak on the issue of national communications from the Annex 1 parties.

Before presenting Canada's views on this issue, I wish to complement the Secretariat for its efforts in pulling together a number of issues on national communications which could be considered by the Subsidiary Body on Scientific and Technical Advice (SBSTA).

In Canada's view, national communications are a critical element of the Convention, and an effective and efficient review process is critical to the credibility of these communications. Canada is pleased to note that the review process is well underway and that a number of in-depth reviews, including Canada's, have been completed. This has proved to be a valuable process in focussing our national efforts in addressing climate change.

Canada supports the further development of Guidelines for Annex I national communications as suggested by the Secretariat in its document, SB/1996/1, in order to improve the consistency, transparency and comparability of information provided. In particular, we would agree with the Secretariat's proposal that guidelines be further elaborated and strengthened for: a) the descriptions of policies

and measures to limit anthropogenic emissions and to protect and enhance sinks; b) projections and effects of policies and measures to limit anthropogenic emissions; c) inventories and projections of carbon dioxide emissions in land use changes and the forestry and agricultural sectors; and, d) the reporting on technology cooperation, which is also addressed by the SBI in its document SBI/1996/2.

Canada believes that the revised Guidelines should be ready for adoption at the second Conference of the Parties, so that Parties will have sufficient time to prepare their second national communications by April 15, 1997.

Thank you Mr. Chairman.

**Canadian intervention
February 29, 1996**

Subsidiary Body for Scientific and Technical Advice

**GUIDELINES AND FORMAT FOR INITIAL COMMUNICATIONS FROM
NON-ANNEX 1 PARTIES**

Thank you, Mister chairman for the opportunity to speak on the issue of guidelines for the preparation of national communications from the non-Annex 1 parties.

Before presenting Canada's views on this issue, I wish to complement the Secretariat for its efforts in pulling together an excellent document on a number of issues involved in the preparation, compilation, and considerations of national communications, which we are happy to see is being considered both by the SBSTA and SBI.

Canada would also like to express its strong appreciation to the G 77 and China group for pulling together a position paper, which covers in a substantial manner the various issues one faces in developing such guidelines as well as provides an format for the initial communications. This document and along with the secretariat document is an excellent step forward in our deliberations on the guidelines for the non-annex 1 national communications.

Canada agrees with the secretariat that we do need to finalize the guidelines in a timely fashion in order for SBSTA to be able to make recommendations to cop 2 and in order for them to be useful in the preparation of non-Annex 1 national communications, some of which are due in April 1997. While recognizing the time pressures, my delegation believes that we do need a full discussion of these guidelines at this session, as well as an opportunity to provide written comments at a later date, perhaps by 15 April (as suggested in the Sec. Doc. SB 1996 3, PARA 32). Finally, we believe that further discussions at SBBSTA 3 should benefit the process and ensure an outcome acceptable to all Parties.

Canada would be pleased to submit further comments on this issue before April 15, as requested by the Secretariat.

Some preliminary detailed views follow:

- In Canada's view, consistency, transparency, and comparability are important guiding principles in the preparation of national communications and should be fully reflected in guidelines for all national communications.
- Canada notes its preference for the using the IPCC guidelines for preparing the national inventories - in all its aspects, i.e. estimating, reporting, and verifying, as much as possible.
- In the interests of comparability and transparency, we would also like to express our preference for the use of 1990 as BASE YEAR, along with the inclusion of of emission trends, to the extent possible.
- Canada would also like to see some information on national and regional programmes containing measures to mitigate climate change by addressing anthropogenic emissions by sources and removals by sinks of all greenhouse gases, as called for in Article 4.1 (b).
- My delegation would also wish to see more clarity on the nature of non-Annex1 activities in developing their national communicaons.
- Finally, Canada is very supportive of the workshops as a means of sharing information and dealing with practical issues.

Thank you, Mister chairman.

**CANADIAN GOVERNMENT INTERVENTION ON:
TECHNOLOGY ASSESSMENT AND INVENTORY
SBSTA 2**

Mr. Chairman,

Thank you Mr. Chairman. Our compliments to the Secretariat for a thorough, clear and focused piece of work.

Regarding the objectives of the future technology inventory and assessments, Canada believes that future work should provide information to assist developing countries in formulating and implementing national programs to mitigate and adapt to climate change. We also believe it would be useful for assessments to inform Annex I Parties about technologies that could support a process of developing appropriate policies and measures.

As to the use of such information, the Canadian delegation believes that its highest priority lies in the preparation of national communications. Canada would prefer annual progress reports that would summarize activities on all aspects of technology assessment. This could be complemented by specific themes that could treat discrete items more thoroughly. We believe that Issues related to research & development, would be more appropriately dealt with in our discussions to follow on the Technical Assessment Panels and the Work Program on the International Panel on Climate Change.

Finally Mr. Chairman, Canada recognizes, as the Secretariat notes, that other valuable reports and information sources exist. We would be pleased to provide the Secretariat with additional new information, to the extent available. We need to balance the desire and need for as complete a technology data base as possible with the resources required, on the part of reporting Parties and the Secretariat, to provide and process such information.

Thank you Mr. Chairman.

**Canadian intervention
March 1, 1996**

Subsidiary Body for Scientific and Technical Advice

LONGER TERM ACTIVITIES OF SBSTA (AGENDA ITEM 9)

Thank you, Mister chairman. I have a few brief comments on this item.

- Although the Sec. doc. 96 1 Add.1 does provide some guidance on the organization of the SBSTA sessions between COP 2 and COP 3, it does not deal with the substantive nature of SBSTA's longer term work program. In Canada views, we need to develop the longer term program of SBSTA as a first step, which complements the work program of the SBI.

- In this regard, we would request the Secretariat to prepare a document on the longer term program and related organizational matters, such as those discussed in Sec. Document 96 Add.1.

- Finally, Canada looks forward to chairman's report on March 4, regarding the schedule of meetings in 1996-97.

Thank you, Mister chairman.

Intervention to SBI re a Ministerial segment at CoP2
Thursday, February 29, 1996

Thank you Mr. Chairman

May I begin by expressing appreciation for the work of the Secretariat in preparing the document, FCCC/SBI/1996/8. Canada is committed to achieving progress on all of the issues on the agendas of the sessions planned in July.

In that respect the Canadian delegation would like to ensure that we make the most effective use of our limited time. Our intervention relates to the request for guidance on the possibility of holding a high level or ministerial segment as part of CoP 2.

On a general level, we are all aware that ministerial sessions, and the decision of whether or not to hold them, have proven a difficult issue for all environment conventions, not just climate change. Weighing the pros and cons is a balancing act of time, resources, process and substantive work.

The demand of our international environmental agenda has grown in recent years. We should be careful to ensure that ministerial participation at these meetings is effective, justified by the agenda, and has true added value to the subject at hand. Care should be taken that we are not overusing this device.

In Berlin, the Ministers gave us a clear mandate to begin a process to enable the Conference of the Parties to take appropriate action for the period beyond 2000 through the adoption of a protocol or another legal instrument. They requested a report to the second session of the Conference of the Parties on the status of this process with a view to adopting the results at CoP 3. Is the presence of the ministers necessary for a status report?

It is important that we continue to make progress on the Berlin Mandate and that the negotiations continue in a timely manner. CoP 2 is an excellent opportunity for us to advance these discussions. The work before us is difficult and complex.

Canada would like to concentrate the efforts at CoP 2 toward making more progress. We are yet to be persuaded that including a Ministerial portion on the agenda would be the most fruitful use of our time. Canada is particularly concerned in this time of scarce resources of the effort and time needed to organize a ministerial portion, not only for the secretariat but for all delegations.

Taking into consideration all these factors and the necessity of making progress on all of the issues on the agenda for the July meetings, Canada has yet to be convinced of the necessity for a Ministerial session.

Thank you very much, Mr. Chairman

Canadian intervention
March 4, 1996

AD HOC GROUP ON THE BERLIN MANDATE

IPCC: SECOND ASSESSMENT REPORT (SAR)

THANK YOU, MISTER CHAIRMAN FOR THE OPPORTUNITY TO TAKE THE FLOOR THIS MORNING.

FIRST OF ALL, MY DELEGATION WOULD LIKE TO EXPRESS ITS APPRECIATION TO THE IPCC TEAM - ITS CHAIRMAN AND THE THREE WORKING GROUPS FOR COMING UP WITH THE MOST AUTHORITATIVE AND COMPREHENSIVE ASSESSMENT OF THE AVAILABLE SCIENTIFIC AND TECHNICAL INFORMATION RELATED TO CLIMATE CHANGE - CAUSES, IMPACTS, SCENARIOS, AND RESPONSE POLICIES.

CANADA BELIEVES THAT THIS SECOND ASSESSMENT REPORT (SAR) RAISES MANY ISSUES WHICH ARE OF RELEVANCE TO THE AGBM PROCESS AND PROVIDES US GUIDANCE IN MOVING FORWARD ON THIS ISSUE. HERE, I WOULD LIKE TO MAKE A PARTICULAR REFERENCE TO THE SYNTHESIS REPORT AND THREE SUMMARIES FOR POLICYMAKERS (SPMS), WHICH HAVE THE LINE BY LINE APPROVAL OF THE IPCC DELEGATES. THESE SUMMARIES, ALONG WITH THE SYNTHESIS REPORT WILL ASSIST IN OUR DELIBERATIONS HERE AT THE AGBM.

MR. CHAIRMAN, CANADA IS ONE OF THE PARTIES, WHICH FULLY SUPPORTS THE CONCLUSIONS HIGHLIGHTED TODAY BY OUR DISTINGUISHED CHAIRMAN OF THE SBSTA. WHILE MY DELEGATION AGREES THAT SOME UNCERTAINTIES REMAIN, AND WE NEED TO CONTINUE OUR EFFORTS TOWARDS IMPROVING OUR UNDERSTANDING OF THIS ISSUE, MY DELEGATION WOULD LIKE TO REITERATE THAT, TO DATE, THE SECOND ASSESSMENT REPORT IS THE MOST AUTHORITATIVE AND COMPREHENSIVE DOCUMENT WE HAVE ON THE SCIENTIFIC, TECHNICAL, AND SOCIO-ECONOMIC ASPECTS OF CLIMATE CHANGE.

FINALLY, MR CHAIRMAN, MY DELEGATION FULLY SUPPORTS THE KEY FINDINGS LISTED IN THE FIRST SET OF CONCLUSIONS (LISTED IN THE SECRETARIAT DOCUMENT (SBSTA2/CRP2, PARA 18), AND I SHOULD NOTE THAT THERE SEEMED TO BE UNANIMOUS SUPPORT OF SUCH RECOMMENDATIONS ON THE INITIAL LIST OF ITEMS FOR IPCC'S INPUT TO THE SUBSIDIARY BODIES OF THE CONVENTION.

THANK YOU, MISTER CHAIRMAN.

CANADIAN INTERVENTION, MARCH 6, 1996

QUANTIFIED EMISSION LIMITATION AND REDUCTION OBJECTIVES WITHIN SPECIFIED TIME FRAMES

Thank you Mr. Chairman. Canada regards this session of the subsidiary bodies of the Convention as an important step in the implementation of the Berlin Mandate. One reason for its significance, is because we are meeting here very shortly after the completion and adoption of the Second Assessment Report of the IPCC.

There has been a great deal of discussion over the past week in the Subsidiary Bodies about the IPCC. Today, Canada would like to restate its support for the conclusions of the IPCC as included in paragraph 18 of document SBSTA2/CRP2.

The world's scientific community has spoken. We must listen and continue to take action.

An important challenge in reaching a collective solution is to ensure equitable burden sharing.

As a result, defining a "differentiated approach" among Annex 1 Parties will also be important. Many countries have different views as to what it could imply. In Canada's view, a differentiated approach must take into account countries' different national circumstances (for example, economic and political structures, natural resource endowments, and geography).

Finally, Mr. Chairman, Canada would like to address the issue of time-frames. When we spoke to Canadian stakeholders about what might be the most appropriate time frame, many expressed support for an approach which would see a long term approach to QUELROs, with shorter term milestones, benchmarks or reviews. A long term approach provides flexibility and the necessary time for capital stock turnover as well as for low-cost, low-emission technologies to be developed and penetrate markets.

However, if a long term objective is adopted, it is

that there is a need to develop additional innovative indicators which provide further information on such areas as energy efficiency investments, the development and diffusion of environmentally friendly technologies, and capacity building efforts.

We are operating in a complex global economy which calls for innovative ways to measure progress. But no matter which approach or time frame we ultimately choose, it is important to bear in mind that 1997 will not represent a final step. Rather, this is an evolving process, that seeks to reach the ultimate objective of the Convention.

Thank you Mr. Chairman.

**GOVERNMENT OF CANADA'S INTERVENTION ON:
STRENGTHENING COMMITMENTS IN ARTICLE 4.2(A) AND (B) -
POLICIES AND MEASURES**

Thank you Mr. Chairman. My delegation would first of all like to take note of the excellent work of the Secretariat, as found in the document AGBM/1996/2.

In our view, there is one conclusion found in the Synthesis of the Second Assessment Report of the IPCC that is particularly relevant for our discussion on policies & measures. Namely, that "(although) uncertainties remain regarding the judgement of what constitutes dangerous anthropogenic interference with the climate system, and what needs to be done to prevent such interference... significant 'no regrets' opportunities are available in most regions and that the risk of aggregate net damage due to human induced climate change, considerations of risk aversion, and the precautionary approach provide rationales for actions beyond 'no regrets.'" An elaboration of possible policies and measures for the AGBM process will need to take into account that significant opportunities are available for Parties to begin to take actions in addressing the threat of climate change.

Identifying discrete actions to address climate change, whether nationally, or in cooperation with other nations, is important if we are to begin to take meaningful and long term action to reduce our net greenhouse gas emissions. We can make serious inroads into addressing climate change if we are successful in identifying policies and measures that reinforce a positive relationship between the economy and the environment. We have already seen, over the past twenty years, the positive impacts of energy efficiency gains and air pollution controls on our quality of life. This impetus needs to be continued as we address the thorny issue of reducing our greenhouse gas emissions while maintaining a sustainable and prosperous economic growth.

My delegation noted with interest, Mr. Chairman, your remarks yesterday at the outset of this agenda item, in which you talked about the need to determine where we place our emphasis without excluding any relevant sectors. As the distinguished Ambassador from the United States also noted, it will be easier to meet emission objectives if we retain all our options. In fact, Mr. Chairman, we have taken careful note of the EU intervention from yesterday which indeed is very comprehensive by virtue of the wide range of sectors that they will eventually address.

Canada has identified nine broad areas for action covering: a) energy & transformation industries; b) heavy industry; c) residential, commercial and institutional buildings; d) transportation; e) non-combustible/industrial processes; f) agriculture; g) forestry; h) waste management & sewage treatment; and, i) cross-sectoral economic instruments. In our deliberations here, it may be useful to consider a framework for each of these areas that, besides identifying a number of policy objectives that could serve as the basis for beginning to narrow down the range of relevant actions, also promotes the concept of setting strategic directions.

My delegation is attaching to the written version of this intervention some preliminary thoughts on strategic directions and policy objectives in each of the aforementioned areas. Reaching early agreement on a set of strategic directions and policy objectives could work to guide the Berlin Mandate process and beyond - namely that the decisions reached at CoP 3 should be seen in the context of a living, evolving process that will continue to set directions, review progress and make adjustments as additional scientific and socio-economic information becomes available.

Mr. Chairman, in listening to delegations' interventions on policies & measures, it has become apparent that we are collectively grappling with how we might begin to narrow the range of policies and measures for negotiation in an eventual Protocol or other legal instrument. In that respect, Canada believes that having Parties agree to a set of guidelines in identifying appropriate policies and measures on which we want to place emphasis could be a helpful way of advancing

these discussions. In this regard we offer the following guidelines to narrow the range of policies and measures for analysis and consideration in the Berlin Mandate negotiations. This narrowing exercise should proceed on the understanding that it does not exclude any relevant sectors or greenhouse gases and includes sinks. This is consistent with the comprehensive approach adopted in the FCCC and with the conclusions at AGBM 2 that the narrowing exercise would not mean closing off options. For the purposes of a Protocol or other legal instrument, then, the AGBM could choose to place emphasis on those policies & measures that:

- will benefit from international coordination or will only be undertaken if agreed to by (a group of) countries;
- have clear potential for reducing net greenhouse gas emissions;
- have multiple policy dividends, and are consistent with other national policy priorities;
- make a positive contribution to nations' overall socio-economic status;
- are flexible, practical and innovative, allowing for their implementation across a range of national circumstances;
- are transparent, with clear accountability established;
- as a package, are comprehensive, covering all relevant sectors, greenhouse gases and sinks;
- work to enhance the development and diffusion of appropriate greenhouse gas abatement technologies; and,
- will facilitate the participation of a larger number of countries in mitigation opportunities.

Such an exercise will also help to ensure that the policies and measures under discussion for an eventual Protocol or other legal instrument will be helpful in forming the determination of appropriate net emissions objectives.

Mr. Chairman, we have heard yesterday a wide variety of ideas about how we proceed to deal with policies and measures. To assist our deliberations for the next session, my delegation would like to request that the Secretariat compile a summary of views we have heard about the ways in which we collectively could identify policies and measures on which emphasis could be placed, while at the same time ensuring that all relevant sectors are addressed.

Thank you Mr. Chairman.

STRATEGIC DIRECTIONS AND POLICY OBJECTIVES IN THE ELABORATION OF POLICIES AND MEASURES

In addition to identifying actions listed in the Annex as "policy objectives", Parties may also wish to develop "strategic directions" for each relevant sector. Reaching agreement on a set of strategic directions and policy objectives will help to more accurately describe the Berlin Mandate process and beyond - namely, that the decisions reached at CoP 3 should be seen in the overall context of a living, evolving plan that will continue to set directions, review progress and make adjustments as additional scientific and socio-economic information becomes available.

Based on our national experience, our delegation supports using the following strategic directions and policy objectives as a basis for beginning to narrow down the range of relevant actions.

Energy and Transformation Industries - as a strategic direction, Canada proposes the following: *in addition to improving internal efficiencies and promoting the use of renewable energy sources, relevant energy service and transformation industries will encourage their customers to improve their own energy consumption patterns.* Policy objectives could include a) improving energy efficiencies and reducing fugitive emissions in existing facilities; b) ensuring that, in capital stock turnover, the most commercially viable energy efficient and environmentally sustainable technologies are used; c) promoting the development and diffusion of renewable and alternative fuels as a viable energy source; d) improving efficiencies in the transmission and distribution of electrical power; e) promoting the more efficient use of energy by consumers, through Demand Side Management and Integrated Resource Planning programs, among others; and f) supporting R & D demonstration and commercialization programs for renewable energy technologies.

Industry - an appropriate strategic direction would be for Parties agreeing *to work to increase productivity, thereby promoting the competitive positions of its national industries, while reducing greenhouse gas emissions through the use of energy-efficient processes, lower-emitting technologies and renewable energy.* Policy objectives could include: a) promoting voluntary agreements within discrete industrial sectors to reduce net greenhouse gas emissions; b) supporting industry to fully take advantage of economically attractive energy efficiency improvements; and c) supporting the integration of renewable and alternative energy resources in industrial production processes.

Residential, commercial and institutional - in *undertaking to reduce the energy use and greenhouse gas emissions in the residential, commercial and institutional building sectors,* Parties could agree to: a) support research, development and demonstration projects; b) support education, training and information dissemination programs among housing and building sector professionals; c) promote financing opportunities for energy efficiency investments in buildings; d) expand energy labelling programs for buildings and appliances; and e) develop and implement energy efficiency codes and standards for buildings and appliances.

Transportation - in *encouraging and implementing opportunities to reduce energy consumed and emissions released in transporting people and goods,* Parties could agree on a set of policy objectives that would: a) seek to improve the competitiveness of other less carbon intensive transportation modes; b) enhance public transportation modes; c) strengthen vehicle emission controls; d) improve the fuel efficiency of new vehicles; and e) implement inspection/maintenance programs.

Non-combustible/industrial processes - in addition to energy related emissions, there are also opportunities within industry to reduce fugitive emissions related to the production, distribution and the non-energy use of fossil fuel, process related emissions. A strategic direction for this sector could be an agreement amongst Parties to *adopt a comprehensive approach in reducing greenhouse gas emissions, by targeting opportunities to cut methane and nitrous oxide emissions.* A related policy objective could be for Parties to promote national/international voluntary agreements with producers of adipic and nitric acid, nitrogen fertilizer and aluminum.

Agriculture - as a strategic objective, Parties could agree to *actively support and encourage opportunities to reduce ghg emissions and enhance carbon sinks in agriculture.* Policy objectives could include supporting and promoting actions that would: a) minimize the acreage of tilled summer fallow ; b) reducing soil tillage; c) improving new crop varieties and yields; and, d) increasing energy efficiencies for all types of agricultural practices.

Forestry - in *actively exploit opportunities to reduce ghg emissions and enhance carbon sinks in forestry,* Canada would support actions that: a) increase afforestation of marginal agricultural lands; b) promote sustainable forest management practices to reduce forest damage and loss; c) improve harvesting, on-site preparation and regeneration techniques; and, d) preserve and protect environmentally sound recycling processes.

Waste Management and Sewage Treatment - we propose that as a strategic direction, Parties agree to *promote best practice guidelines for the reduction of waste, and the capture of methane emissions.* We are in agreement with the policy objectives proposed in AGBM/1996/2, namely that Parties agree to promote recycling and minimizing waste, reduce emissions from sewage treatment, and reduce methane emissions from landfills.

Cross-Sectoral Economic Instruments - Canada could support an agreement amongst Parties to promote national efforts to review existing economic instruments and subsidies and to examine possibilities to restructure these policies as a way of reducing greenhouse gas emissions. In this regard, we note the ongoing work in the OECD and in the Annex 1 Experts' Group Project on Common Actions. We would also be interested to have Parties consider a decision on tradeable emission permits, one in which Parties will consider *support an initial analysis and discussion for an emissions trading scheme intended to reduce net greenhouse gas emissions, and in particular, focus on its merits in promoting cost-effectiveness and administrative efficiency.* Any statement of support for common measures on taxation and subsidies, or an agreement on a set of market signals would be too preliminary for discussions at CoP 2.

AD HOC GROUP ON THE BERLIN MANDATE (AGBM)
Second Session, March 5-8, 1996
Geneva

Canadian intervention
MARCH 7, 1996

CONTINUING TO ADVANCE THE IMPLEMENTATION OF
EXISTING COMMITMENTS IN ARTICLE 4.1

Thank You, Mister chairman.

Canada has consistently held the position that climate change is a global problem and, any substantial progress towards the ultimate objective of the convention requires an effective international response. The concept is recognized in the Convention, in particular in article 4.1, which contains commitments for all parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives, and circumstances.

In Berlin, the Conference of the Parties agreed to advance the implementation of current commitments, taking into account article 4.3, 4.5, and 4.7. In approaching this part of the mandate, Mr. chairman, we believe that one needs to look at a number of items, some of which were addressed at recently concluded sessions of SBSTA and SBI. In our view, progress has been made on some of these elements.

First of all, I would like to emphasize that the Second Assessment Report of the IPCC does contain some useful findings relevant to Article 4.1, for example, the report indicates that developing countries and small island states are typically vulnerable to climate change. In responding to that threat, development pathways that increase energy efficiency, promote alternative energy technologies, reduce deforestation, and enhance agricultural productivity, can also be economically beneficial.

Canada believes that it is important for all parties to widely disseminate the key findings of the Second Assessment Report into the public domain. We believe that increased public awareness is a key factor in building a positive public attitude towards the need for urgent action at home and abroad.

Canada continues to stress the importance of developing national inventories, national programs of measures to mitigate climate change, to adapt to climate change, to gain better understanding of climate change, and to then prepare national communications by all parties. In this regard during the SBSTA discussions last week, Parties not included in Annex 1 have shown a strong desire to advance the preparation of their initial communications. Canada would like to express its appreciation to the Group Of 77 and China for their position paper, which covers in a substantial manner, the various issues necessary to develop the guidelines as well as provides a reporting format for the national communications. We believe that this document represents a step forward. Mr. chairman, Canada looks forward to further discussions on these guidelines, so that they can be adopted by the Second Conference of the Parties.

Canada considers international cooperation and the transfer of efficient and state-of-the art technologies and know-how to facilitate endogenous capacity building as important steps in the implementation of Article 4.1. In our view, Activities Implemented Jointly (AIJ) is one mechanism which does offer the advantage of the private sector investment. Canada has long been a supporter of the concept of joint implementation (JI) as a cost-effective mechanism to reduce net greenhouse gas emissions. We believe that the concept will provide win-win opportunities for both developed and developing countries, including through the introduction of climate change friendly technologies. In this regard, we are pleased to see the progress made at SBSTA last week, with respect to the AIJ reporting guidelines.

Canada is an active participant of the Climate Technology Initiative (CTI), which was first announced in April 1995 to assist all interested Parties in meeting both the short and long term objectives of the Convention.

Canada also recognizes the importance of the useful work being carried out by the Climate Convention Secretariat in promoting the exchange of information through CC:INFO, coordination of activities through CC:FORUM and CC:TRAIN. All these activities, along with the excellent work by the secretariat on the compilation of inventory of technologies should assist Parties in their efforts in advancing the implementation of Article 4.1.

Finally, Mr. Chairman, I would like to note that Canada encourages international financial institutions such as the World Bank and its regional agencies to take into account climate change considerations in their development lending practices. In particular, in line with the SBI conclusion last week, my delegation would encourage the Global Environment facility (GEF) to provide timely support for the preparation of national communications by developing countries.

Thank you, Mister chairman.

March 7, 1996

Ad Hoc Group on the Berlin Mandate
Third Session
Geneva
March 5 - March 9

CANADIAN INTERVENTION

VI. POSSIBLE FEATURES OF A PROTOCOL OR ANOTHER LEGAL INSTRUMENT

Thank you, Mr Chairman

Mr. Chairman, the discussion on legal issues has focussed on the issue of whether the results of the AGBM process should be encompassed in a new protocol or whether they would best be accommodated in an amendment to the existing Convention. We would like to address this and other legal issues. We believe it is still too early in the process to determine whether new commitments should be contained in an amendment or a protocol and emphasize that this decision can only be made when the nature and the scope of the commitments are further developed. But discussion on these issues will inform our debate and is welcome.

We would like to thank the Secretariat for the paper dealing with the possible features of a protocol or another legal instrument. This document has assisted us in focussing our own thinking. We note and agree that the Subsidiary Bodies and the Secretariat could be directed to serve an amendment regime as well as a protocol regime. However, it is our view that it will be simpler to ensure that Convention institutions apply to an amendment than to a separate Protocol. Mandating these institutions to apply to a protocol would, in most instances, require more coordination than for an amendment and in some cases, may require consequential amendments to the existing Convention. Also, we doubt that a separate Bureau would be required for an amendment and indeed do not see the utility of a separate Bureau to serve a Protocol.

Should the protocol route be followed, the question of whether a separate Conference of the Parties would be necessary or desirable would have to be addressed. Yet we have noted that certain precedents exist where a Protocol does not have its own Conference of the Parties. We are referring to the Protocols under the Convention on Long Range Transboundary Air Pollution.

On the issue of communication of information, either an amendment or a Protocol will require some changes to the Convention text, at the very least to include the new commitments as part of the reporting requirement. Some thought will have to be given to whether the same kind of information will be required for the new commitments, and to how reporting requirements under an amendment or protocol might affect

current reporting requirements under the Framework Convention. Also, consideration will have to be given to how the multilateral consultative process that is being considered by the Ad Hoc Group on Article 13 might apply to a protocol.

Overall, it is our view that there will be less need to create new institutions or modify existing regimes with an amendment. Similarly, it is our view that the likelihood of policy divergence is less within one convention than between a convention and a protocol.

A crucial question is one of procedure. How easily will our existing rules permit us to adopt a new legal instrument. Under article 17 of the Convention, the Conference of the Parties may adopt a Protocol. But given the impasse on the Rules of Procedure under the Convention, such a Protocol can only be adopted by consensus by the Conference of the Parties of the Convention. Without consensus, it cannot go forward. An amendment on the other hand can be adopted by three-fourths of the Parties present and voting, if consensus cannot be reached.

Another legal issue to be addressed is the future evolution of commitments. Given the Canadian view that this legal instrument represents one of a number of steps to seek to achieve the overall objective of the Framework Convention, that is, stabilization of dangerous concentrations of greenhouse gases in the atmosphere, the question arises of within which legal instrument, the future development of commitments, beyond the Berlin Mandate, will take place. Will the set of commitments that are being negotiated now provide the basis for taking future action beyond this amendment or protocol? Or should future obligations beyond the Berlin Mandate take place within the Framework Convention. If a protocol is the chosen route, and it is further revised, will this diminish the significance of the Framework Convention, or the balance of interests achieved in that Convention. We must address how, and within what framework, we expect future obligations to evolve.

Related to the issue of evolution is the issue of flexibility. Flexibility has been commented upon in a number of interventions, but often in the context of policy flexibility-referring to the need to maintain choices in achieving certain ends. Canada supports the need for policy flexibility within an amendment or within a Protocol. However, in this context, we are concerned with the flexibility as a means of adaptation of a legal instrument. Whether an amendment or a protocol is decided upon, our chosen legal instrument must be able to take into account new scientific evidence, progress achieved and other relevant socio-economic data and to reflect such information in evolving commitments for all Parties. Also, relevant in this regard is the need for review and assessment of progress. The Convention does provide for several reviews-any reviews under a new instrument must take account of existing obligations and be coordinated with them. A protocol would have to contain such provisions or alternatively to rely upon and link back to Convention provisions. Lack of movement

on rules of procedure and the potential implications of this for review provisions within a protocol must be examined.

A general argument in favour of a Protocol approach would be that a Protocol could contain a more or less discrete set of commitments that could be implemented without affecting the Convention obligations. It would represent the lead that Annex I Parties are to take in addressing climate change. However, in so far as the approaches under the future instrument are to be comprehensive and do not focus on specific sectors or other discrete elements of action, it may be useful to consider keeping these commitments in the Framework Convention. We conclude that both the an amendment and a protocol approach have merit and can be structured to contain the same elements. Future work on this issue should clarify our choices on this issue.

Canada believes that as work on this issue proceeds, the following should be considered;

The use of existing Convention institutions and provisions, should be maximized, where possible;

Coordination and policy coherence are key considerations;

The implications of procedural constraints on choice of instrument should be considered, and especially with regard to adoption of a protocol or amendment, and the possibility of future amendments;

The legal instrument chosen should have a capacity to evolve; and

Appropriate roles and levels of obligation, in accordance with the Berlin Mandate, must be explored and elaborated, for all Parties.

Thank you, Mr. Chairman

ANNEX 1 EXPERTS' GROUP

Canadian statement on behalf of the Annex 1 Experts' Group

**STATEMENT BY
CANADA**

ON BEHALF OF THE

ANNEX 1 EXPERTS' GROUP ON

THE FRAMEWORK CONVENTION ON CLIMATE CHANGE

Mr. Chairman:

Canada is taking the floor to update delegates and NGOs on the work of the Annex 1 Experts' Group on the Framework Convention on Climate Change.

Mr. Chairman, it is a priority of the Annex 1 Group that our work be transparent and accessible, not only so that we can ensure that all interested groups and Parties are being kept adequately briefed, but also, more importantly, so that we have an opportunity to hear from others as to how we might be able to improve on the work currently being undertaken. It is also important that we make it clear as to what the Group believes it can realistically deliver for the AGBM in the time available.

As we mentioned at our intervention during AGBM 2, the Annex 1 Experts' Group is currently focusing its attention on two projects: 1) policies and measures for common action and 2) methodologies for estimating the effects of policies and measures and evaluating projections. As it is the first project which is of most relevance for the Berlin Mandate process, we will concentrate on its progress in this intervention.

Prior to this session of the AGBM, the Annex 1 Group submitted a second progress report on the common actions study. This report, contained in AGBM/1996 MISC/1 included:

- A revised "Framework for Assessment and Analysis of Common Actions";
- "List of Policies and Measures for the Common Action Study"; and,
- Scoping papers which briefly describe the work being undertaken on each measure in tranche I of the Common Action Study.

It should be emphasized that the Common Actions project is an analytical exercise only and is not intended to prejudge nations' preferences on policies and measures. The selection of measures for analysis in this project should not be interpreted as a sign that Parties in the Annex 1 group

necessarily support any individual measure for its inclusion in a Protocol or other legal instrument. That will of course be a choice of individual Parties. These measures were selected for analysis because they cover a broad range of sectors and instruments.

FRAMEWORK FOR ASSESSMENT AND ANALYSIS

I would first of all like to draw your attention to the "Framework for Assessment and Analysis of Common Actions". The goal of the common action study is to broadly assess the relative potential of a range of cost-effective policies and measures for common action by countries and Parties listed in Annex I to the FCCC with a view to bringing forward this analysis to the Ad Hoc Group on the Berlin Mandate. The framework for analysis and assessment that has been established for these discrete measures is intended to provide as full a picture as possible on their relative merits for the AGBM process.

This study recognizes that there are a range of definitions for common actions including:

- specific policies and measures implemented by a group of countries under some form of agreement, to increase the overall effectiveness of the measure;
- co-ordinated actions intended to implement the same or similar measures together;
- agreements to take actions in a sector towards a common aim or target; and,
- successful policies and measures that could be replicated by other Parties.

The framework we are following will ensure, to the extent possible, that the analysis of each action will cover:

- climate related and other related policy objectives;
- the approaches and methods being used to assess the measure;
- a full and concrete description of the action(s) being analyzed;
- the rationale for common action and ways in which the measure could be implemented in common;
- possible participants and vehicles for action;
- the potential of the action to reduce net greenhouse gas emissions and/or increase removal by sinks;
- the economic costs and benefits;
- its political feasibility;
- barriers to successful implementation and options for addressing

those barriers; and,
- the time needed to plan and implement the measure, as well as when the effects on ghg emissions are likely to be realized.

The studies also will consider, to the extent possible, the impact of proposed common actions on other countries, including on non-Annex 1 countries. The impact of the measure on all Parties, in terms of costs, trade impacts, greenhouse gas reductions, social, environmental and other impacts will be given important consideration.

Of course, there may be some variations to the analytical framework, as one could expect, given the diverse nature of the projects being undertaken. The weight given to each of the elements may vary according to the nature of each study. In fact, we expect that the framework may itself evolve somewhat as our analyses progress. .

COMMON ACTIONS BEING ANALYZED

Mr. Chairman, the Annex 1 Experts' Group has identified six broad areas for possible common actions. They are sustainable transport, energy market reform, economic/fiscal instruments, demand side efficiency, sustainable agriculture and forestry and energy efficiency reforms for countries whose economies are undergoing to a transition to market based economies. Within these broad areas, the Annex 1 Group has scheduled eight discrete measures for analysis in the first tranche that will be expected to be completed in time for the second Conference of the Parties. The analysis of the second tranche of measures are expected to be ready for submission to the AGBM prior to CoP 3.

I would now like to describe the work being underway for each of the Tranche 1 measures.

Sustainable Transport

In the area of sustainable transport, we will be analyzing actions that would seek to reduce CO₂ emissions from road vehicles through cost-effective measures that encourage the development and use of more energy efficient vehicles and changes in vehicle use. This measure is intended as but one piece in the sustainable transport 'puzzle' - the second tranche will look at actions to reduce CO₂ emissions from road vehicles through cost-effective measures that encourage improvements in infrastructure, reducing the need to travel; the use of alternative fuels; and changes in transport mode.

In the first tranche, the study will examine two options for common action: 1) countries agreeing to adopt packages of measures aimed at achieving negotiated CO₂ reduction targets, with the actual combination of measures being chosen by the individual countries; and 2) specific measures that could be undertaken by governments individually or in common, such as a vehicle sales tax on a sliding scale, fuel economy standards, or a common level for, or a common increase in, taxes on fuels purchased for use in road vehicles in Annex I countries.

Energy Market Reform

In the area of energy market reform, we will seek to identify those barriers to the free operation of market forces which significantly discourage the use of clean fuels or energy efficiency in the production and consumption of electricity. Barriers to be examined will include market entry barriers, regulatory or government imposed market distortions, trade barriers and barriers to consumer choice.

We will also be looking at the potential contribution of full cost pricing in energy market reforms, focusing, for illustrative purposes, on the electricity sector. In this project, the Annex 1 Group will look at the viability of reducing CO₂ and other greenhouse gas emissions, through, for instance, emission fees on pollutants such as nitrogen oxide and sulfur dioxide.

Economic/Fiscal Instruments

For economic/fiscal instruments, the analysis will explore opportunities to reduce greenhouse gas emissions associated with electricity and transport through subsidy reforms in those two sectors. In electricity, the analysis will focus on budgetary subsidies, including tax exemption and differential schemes. It will also study the impact of removing price supports for domestic fuels.

This analysis focuses on budgetary subsidies for the road transport sector, cross-subsidies between road users, indirect or implicit subsidies, including the failure to internalize the full social costs of road use. The study will briefly explore the existence of subsidies that reduce greenhouse gas emissions, such as those to alternative fuels and other transport modes.

We are also looking at how taxes could work to reduce CO₂ and other greenhouse gas emissions from fossil fuel use, while improving overall energy efficiencies. The nature of such taxes (on CO₂, all greenhouse gases, carbon/energy or a general tax on energy), their level, and the use of the tax revenues generated are key elements of the study. Countries' different

starting points, including differences in costs, time horizons, as well as existing energy tax levels and how other externalities are internalized, will be taken into account. The potential role for carbon offsets, through afforestation, will also be considered.

Demand Side Efficiency

In the area of demand side efficiency, one focus will be on voluntary agreements. Voluntary agreements have attracted interest among policy makers as a low cost, flexible tool for achieving reductions in greenhouse gas emissions from industry. For the purposes of this particular tranche, three industries will be considered, namely those producing iron & steel, aluminum and adipic acid. Drawing on Annex I country experience with voluntary agreements, the study will review their different forms, (including incentives structures), assess a limited number of specific formulations of international voluntary agreements and evaluate the feasibility of their use for "common action." A key issue for the study will address the structure and form of international voluntary arrangements and their relevance for all Annex I countries. The study will also consider different national contexts and starting points, and the trade-off between the cost and effectiveness of alternative types of voluntary agreements.

The other demand side efficiency measure being studied is energy efficiency standards for home appliances and office equipment. Product standards are playing an increasingly important role in Annex I countries' strategies to meet their energy and environmental policy goals. The effects and costs of implementing comparable minimum efficiency standards within regional sub-groups of Annex I countries will be analyzed. Other elements that will be studied include: the possible use of energy efficiency indicators on a regional or international level to judge the effects of standards; and the issues that could arise in harmonizing test protocols.

Sustainable Agriculture/Forestry

Common actions in support of sustainable agriculture and forestry can play a potentially significant role in reducing net greenhouse gas emissions. By CoP 2 we expect to report on progress on the first part of a two part study, with Tranche I exploring a wide range of cost-effective response options and identifying measures which could eventually be advocated in the form of "guidelines" for agriculture and forestry.

Specific measures to be analyzed will include opportunities, in agriculture, for improved feeding practices; reductions and changes in the application of nitrogenous fertilizers and animal wastes to farmland; the reduction of fossil-fuel use in agricultural production; and the enhancement of carbon sequestration and retention in agricultural soils.

In forestry, the project will analyze opportunities to reduce greenhouse gas emissions and enhance removals by sinks by preserving biomass in forests with forest management; encouraging afforestation; and increasing the transfer of forest biomass carbon into products such as biofuels and long-lived wood products.

Financing Energy Efficiency in Countries Whose Economies are in Transition to Market Based Economies

Finally, there may exist a significant potential for reducing greenhouse gas emissions by improving energy efficiency in Annex I countries, particularly in countries whose economies are in transition to a market based economy. The first tranche will identify opportunities for energy efficiency improvement in EIT countries, and to assess the role of financing from multilateral development banks and other institutions in realizing these opportunities. Using this information, specific measures will be developed which could be assessed during tranche II of the Common Action project.

Barriers to the realization of energy efficiency will be identified, and specific financing options will be suggested for a representative sample of projects. Emphasis will be given in the study to the role of multilateral development banks and the private sector (including venture capital) as possible "vehicles for action" to improve energy efficiency in EIT countries.

Mr. Chairman, in closing, I would like to underscore the importance Annex I countries attach to this work. We are hopeful that the analyses we produce will advance our AGBM discussions and prove a worthwhile investment for the Convention.

Allow me to also express our continued deep thanks to the staff in the OECD and IEA Secretariats for their thorough and timely work. Thank you Mr. Chairman.

Report of the Annex 1 Experts' Group Meeting

**Report on the Annex I Expert Group Meeting
held 6 March 1996, on the side of AGBM-3**

The purpose of the meeting was to review progress on the projects under the group and to agree on timing and a review procedure for interim products leading up to COP2 (July 1996). Main elements of the discussion and decisions on each of the agenda items are reported below.

Policies and Measures for Common Action Study

Since Montreux (4 November), when Delegates decided on a list of policies and measures to be studied under the project, good progress has been made. A submission (including the full list of policies and measures to be analyzed, 9 tranche I scoping papers and the framework for analysis) were submitted to the FCCC Secretariat and appeared as a miscellaneous document (AGBM/1996/misc.1) in AGBM-3. Recognizing that it is essential to attempt to draw on experience in Annex I countries, early drafts or extended outlines for the 9 tranche I studies have also been distributed for review and comment to experts nominated by the Group. It was noted that comments on these interim products have been requested for 14 March.

Agreement was reached on a further schedule to allow submission of a final report on Tranche I in time to appear at COP-2:

- | | |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 March | Early drafts and extended outlines circulated to experts nominated by Delegates to review individual studies. |
| 29 March | First draft Tranche I studies distributed to Annex I Expert Group delegates for wide review and comment (government and non-government reviewers)*. |
| 19 April | Delegation comments* due to OECD/IEA secretariat. |
| 10 May | Draft submission for COP2 (summary compilation report based on individual Tranche 1 studies) and 2nd draft tranche 1 studies distributed to delegations for Government review and comment. |
| 31 May | Delegation comments* to OECD/IEA secretariat. |
| 5-7 June** | Annex I Expert Group Meeting to finalize summary compilation report for submission to COP2. |
| early July | Working Draft Tranche I studies released widely. |
| 8-19 July | COP2 |

[* Annex I Expert Group delegates are responsible for ensuring the appropriate distribution to relevant reviewers in their country. In addition, compilation of comments coming back from these reviewers is the responsibility of Annex I Expert Group delegates.]

[** Final dates of this meeting to be confirmed; alternative dates are 3-5 June.]

To provide delegates with timely information on the status of the individual studies, the Secretariat agreed to circulate a short monthly report by email to the Annex I Group.

The Secretariat informed delegates of a possible schedule of products for Tranche II studies recognizing that a more detailed workplan and associated budget would be considered at the next meeting. Delegates took note of the 2 key milestones (10 April and 10 May) prior to the meeting:

- | | |
|------------|--------------------------------------------------------------------------------------------------------------------------------|
| 10 April | Revised scoping papers for Tranche II distributed to Delegates with a proposed budget for Tranche II. |
| 10 May | Comments from delegations due on Tranche II scoping papers. |
| 5-7 June | Annex I Expert Group Meeting: finalize scoping papers for Tranche II, agree to additional budget request and initiate studies. |
| Early Sept | First draft Tranche II studies circulated to Annex I delegations for comment. |
| End Sept | Delegation comments due to OECD/IEA Secretariats. |
| Oct 96 | 2nd draft Tranche II studies to delegations for wider review. |
| Early Dec | AGBM5/Final Tranche II studies available near this date. |

Methods for Projections and Estimating the Effects of Policies and Measures

The Secretariat presented a summary of results of the first questionnaire on methods sent to government experts on national communications. The delegates were invited to provide comments by 15 April on this document and on possible next steps for this project. Delegates agreed that this project will not be able to directly contribute to the revision of guidelines for national communications from Annex I countries, for which comments must be provided to the FCCC Secretariat by 15 April 1996.

On future work, delegates expressed the need to coordinate this work with that of the Intergovernmental Panel on Climate Change. Several options could be considered; for instance, the project could aim to contribute to the preparation of second national communications, or a longer-term contribution to methodological questions. The Secretariat would welcome comments from the Group on what practical contributions could be.

On the basis of comments it will receive, the Secretariat agreed to provide a workplan to be presented to the Annex I Experts Group at its meeting next June.

Financial Status of the Project

The Secretariat reported on the financial status of the project, especially with respect to the budget for the "common actions study." Following a funding request letter from Doug Russell, which was sent to all Annex I Group Delegates, donations from 5 countries were received totalling approximately 1,325,000 FF. This amount is roughly equivalent to the amount of funding requested to execute the Tranche I studies. At this time, the Tranche I studies are nearing first drafts and 1,300,000 of the budgeted amount of 1,350,000 has been either spent (or committed) on this effort.

Approximately 655,000 FF was carried over to the project from the previous work period. Combined with remaining funds from the Tranche I, total funding available to the project since Montreux is 1,980,000 FF. This compares to a total budget for the period through March 1997 of 3,650,000 FF. Expenditures (including necessary commitments) on core staff salaries (contracts for one full time through the end of 1996) are estimated at 775,000. To fully fund the project through to March 1997, around 1,670,000 will be needed according to the original budget. It is urgent that additional grant funds for the project be made available to allow the planned meeting of the Annex I Group to proceed in June 1996 and to allow Tranche II studies to begin in an orderly manner.

grants

Grants Responding to Request for Funds			
		Amount	Amount FF
Netherlands		FF 500000	500000
Switzerland		SF 100000	400000
Sweden		US\$ 15000	75000
Norway		NKr 400000	310080
Ireland		FF 38500	38500
Total			1323580
		Expenditures	
Beg Balance			655000
New Grant Funds			1323580
Total Available			1978580
Total Budget			3650000
Remaining Funds Needed			1671420
(to fully fund project through March 97)			
Expenditures tranche I studies			1300000
Core support			775000
(includes salaries thru 12/96 plus actual travel through Feb 96)			
		Total Expenditures	2075000
		Total Remaining Funds	-96420

KEY INTERVENTIONS BY OTHER DELEGATIONS

QELROS



AUSTRALIA

AD HOC GROUP ON THE BERLIN MANDATE

THIRD SESSION

5-8 MARCH 1996

**STATEMENT BY H. E. MR HOWARD BAMSEY
AMBASSADOR FOR THE ENVIRONMENT**

ITEM 4 OF THE AGENDA

**STRENGTHENING THE COMMITMENTS IN ARTICLE
4.2 (a) AND (b):**

**(c) Quantified emission limitation and reduction objectives
within specified time frames**

6 March 1996

GENEVA

Mr Chairman,

Australia welcomes the report to the AGBM by the Chairman of the Intergovernmental Panel on Climate Change. As SBSTA pointed out, this is the most comprehensive assessment of available scientific information related to climate change. We note, in particular, findings which are of central significance to the proceedings of the AGBM. These include:

- Atmospheric concentrations of greenhouse gases and aerosols are increasing largely because of human activities.
- The balance of evidence suggests a discernible human influence on global climate.
- Stabilisation of CO₂ concentrations at any level lower than 3 times present day levels would require emissions to eventually drop substantially below 1990 emissions.
- Flexible, cost-effective policies relying on economic incentives and instruments as well as coordinated instruments can considerably reduce mitigation and adaptation costs, or can increase cost effectiveness of emissions reduction measures.
- Equity considerations are an important aspect of climate change policy and in achieving sustainable development.

Australia considers that these points and the food for thought offered during the informal workshop on QELROs last week, together give new substance to the work of the AGBM at this session. It is important that, when considering next steps - establishing emission objectives and the policies and measures to implement them - we ensure the best match between policies and what the science and the technical, economic and social experts are telling us. The IPCC findings and the Workshop underline that there is a range of options and paths for action available.

Indeed it is evident that achievement of our environmental objectives will be enhanced by recognising the differences in country circumstances and using this constructively in addressing the variety of options for action available. Flexibility can create opportunities for wider and more effective action, not close it off. Looking at this in another way, flexibility in implementation will deliver the best and also the most equitable environmental outcome.

Australia has always supported the principle of differentiation among parties on the basis of equity as central to an effective Convention. This principle is, after all, made fundamental to the Convention in Article 4.2(a) and other places; this is carried through to the requirement in the Berlin Mandate to ensure 'equitable and appropriate contributions by Annex I parties to the global effort to address climate change'. So the principle will certainly need to be reflected in any post-2000 agreement. This was acknowledged at AGBM 2 which in respect of possible emission objectives concluded that:

- . each countries' ability to undertake mitigation action should be expected to be proportional to each country's capacity to pay for reducing emissions (calculated, for example, on the basis of GDP per capita);
- . countries of comparable income should face similar costs of reducing emissions on a per capita basis;
- . countries should equalise percentage emission reductions relative to the emission trend;
- . countries should undertake equal percentage per capita emission reductions - comparing per capita emissions in the base year with the same measure in the target year;
- . mitigation action should be proportional to a country's emissions - based on current levels or emission trends.

As negotiations proceed, we and other parties may add to or subtract from this list.

We emphasise that while the Secretariat and Parties have, for the purposes of discussion, addressed the issues of emission objectives and policies and measures separately, they are in fact an integrated whole. Negotiations on policies and measures cannot be determined in isolation of emission objectives; and negotiations on emission objectives should include consideration of the inter-linkages with policies and measures.

In this respect, we note the suggestion in the Secretariat documentation for this meeting including the annotated agenda about the need for these discussions to address the nature of the eventual quantified objectives including the linkage to the elaboration of policies and measures.

There is much work yet in front of us before we can identify emission objectives which, when linked to policies and measures, will fulfil the Mandate our Ministers gave us in Berlin. We need more analysis and assessment to assist us as we move forward. We need to base our decisions on the best advice - scientific, economic and social - available. We have to find ways to be sure that what we do is fair and seen to be fair. We must succeed in all of this or we shall fail to complete the task with which we have been entrusted.



AD HOC GROUP ON THE BERLIN MANDATE

THIRD SESSION

GENEVA, 5 - 8 MARCH 1996

**ITEM 4 OF THE AGENDA:
STRENGTHENING THE COMMITMENTS IN ARTICLE 4.2(a) AND (b):**

(c) Quantified emission limitation and reduction objectives within specified time frames

**STATEMENT BY THE REPRESENTATIVE OF ITALY
ON BEHALF OF THE EUROPEAN UNION**

6 March 1996

Mr. Chairman,

Italy, on behalf of the European Union, would like to address a few aspects of this important element of the Berlin Mandate.

- 1) As already indicated when expressing our views about the structure of the protocol or other legal instrument, the EU reaffirms the need that, in order to strengthen and enlarge the Convention commitments, the protocol or other legal instrument should be set up in a combined approach, including commitments:

- adopting policies and measures, including measures co-ordinated at international level, as well as,
- setting quantified limitation and reduction objectives within specified time-frames;

These two elements are interdependent from one another.

- 2) Limitation and reduction objectives should be ambitious enough to reflect the change in emission trends in Annex-I Parties needed in order to progress towards the ultimate objective of the Convention..
- 3) The EU, on the basis of the latest analysis, is on course to return its CO₂ emissions to 1990 levels by the year 2000, but at the same time recognises that further efforts will be necessary to achieve the stabilization objective.
- 4) The IPCC Second Assessment Report is the principal reference document for global emission reduction objectives, the technical potential and cost-effectiveness of measures to be selected within the portfolio of options defined by the IPCC.
- 5) According to IPCC, stabilization of atmospheric concentrations of CO₂ at twice the pre-industrial level, i.e. 550 ppm, will eventually require global emissions to be less than 50% of current levels of emissions. Such a concentration level will already lead to an increase of the global average temperature of around 2°C above the pre-industrial level. Given the serious risks of such an increase and particularly the very high rate of change, we think that levels lower than 550 ppm should guide limitation and reduction efforts.
- 6) Any eventual stabilized concentration is governed more by the accumulated anthropogenic carbon dioxide emissions from now until the time of stabilization, than by the way those emissions change over the period. This means that, for a given stabilized concentration value, higher emissions in early decades require lower emissions later on. The risks of delay are high however: technological changes are slow, environmental impacts will be more serious and costs may be much higher. An optimum emission reduction path should also try to minimize economic costs by making use of efficient replacement investments at the end of the economic life of a plant and equipment, i.e. at the point of capital stock turnover and cost reductions over time on the basis of RD&D.
- 7) In this context, the IPCC notes that significant reductions in greenhouse gas emissions are technically possible, and can be economically feasible. It also notes that significant "no-regrets" opportunities are available; and that there is a rationale, on the basis of potential risk, for action beyond no regrets. There are large differences in the cost of reducing greenhouse gas emissions, and enhancing sinks, among countries due to their state of economic development, infrastructures choices, and natural resource base. International cooperation in a framework of

bilateral, regional or international agreements could significantly reduce the global cost of reducing emissions and lessening emission leakages.

- 8) Based on the precautionary principle the scale of the problem requires urgent action at the widest possible level. For Annex I Parties the first task must be to succeed in returning emissions to 1990 levels by the year 2000. Annex I Parties must also agree on credible and challenging limitation and reduction objectives for the early years of the next century. The EU notes in this context the importance of coordinating efforts with the other Annex -1 Parties; it welcomes ongoing work on policies and measures for common action in the framework of OECD/IEA and expects all OECD Members to commit themselves to specific obligations of Annex-1 Parties under the Convention. Non-Annex I Parties must continue to advance the implementation of their commitments.
- 9) The formulation of quantified objectives is a complex issue which requires urgent consideration, both as regards the level of the limitation and reduction objectives and the question of time-frames. We know that the share of the global emission originating in developing countries will grow to meet their social and development needs. The message is clear: industrial countries need to continue to take the lead in gradually reducing emissions for decades after the year 2000, leading to a significant reduction by the middle of the next century for all industrialised countries together.

Based on the Second Assessment Report of IPCC more precise figures are now available for the strategic guidance of AGBM on the limitation and reduction of overall emissions: these figures suggest that, given the increasing share of the global emissions originating in developing countries and based on common but differentiated responsibility, industrialised countries, acting together, would need eventually to reduce their emissions further than the average global reduction foreseen by IPCC.

Quantified limitation and reduction objectives in the protocol or other legal instrument should be determined by the need to reduce the risks of climate change, by the technical potential to realise reductions and by their costs and economic impact. Moreover there is the question of how to distribute the commitments among Parties .

- 10) The EU considers that, for the successful negotiation of reduction objectives in the protocol or other legal instrument, further efforts in terms of political will, flexibility, imagination and equity criteria will be required between the Parties.
- 11) As agreed in the second session we need to make progress on assessing relevant information and narrowing the range of options. The EU would like to make the following remarks based upon questions raised in point 22 of Secretariat note-(FCCC/AGBM/1996/1/Add.1):

- nature of the objectives:

In the light of the Convention's ultimate objective, the absolute level of emissions and removals must play an important role, but also relative objectives such as efficiency improvement should be explored;

- individual-Party and/or collective objectives

The question is whether the use of individual-Party and/or collective objective should be pursued.

Collective objectives for Annex-1 Parties could take the form of:

- emissions for the Annex-1 Parties, as a group;
- emissions for the OECD Parties as a group and emissions for non-OECD Parties as a group;

In both cases these would require at the same time as the collective objective is set, an equitable sharing within the appropriate group or groups of the limitation and reduction objectives. Individual Party objectives could take the form of uniform limitation and reduction objectives or differentiated objectives.

These concepts however are linked to the question of differentiation which is dealt with in the next point.

-differentiation among Annex-1 Parties and mechanisms to implements it

In order to identify appropriate differentiated objectives it is essential to explore options which take account of the principles established in the Convention and reaffirmed in the Berlin Mandate. The problem is to find an equitable, acceptable and timely way of differentiation. This will undoubtedly involve methodological as well as political considerations. Inter alia economic and demographic indicators, equity criteria and flexibility to reduce economic impact and mitigation costs should be considered.

- time frames

With regard to the specified time frames, the Berlin Mandate suggest the years 2005, 2010, and 2020. There are two important aspects to take into consideration:

- a) in view of the ultimate objective of the Convention and IPCC Second Assessment Report that overall global emissions below the current levels will be required to meet that objective, a protocol or other legal instrument should encourage fundamental changes in the trends of greenhouse gas emissions; this would call for longer time frames to create a reliable strategic framework for planning and investment decisions;
- b) in view of the need for accountability of Parties and to facilitate regular monitoring of the development of overall emissions shorter time frames are also important.

The EU therefore considers it appropriate to include in the protocol or other legal instrument the time frames specified in the Berlin Mandate: 2005 and 2010 as preferable and 2020 as a possible longer term perspective.

- 12) As regards the periodical revision of commitments and monitoring, we envisage that the objectives should be periodically reviewed and updated in the light of further analysis and assessment, technological progress and agreement reached on the co-ordination of instruments in this or other international fora.
Implementation of objectives should be regularly monitored.
- 13) Finally, some further thought should be given to the possibility of creating incentives for Parties to take early action, especially since IPCC Second Assessment Report indicates that it is the cumulative emissions (sum of annual emissions over a period of time) that will determine the future level of greenhouse gas concentrations. During the QELROs workshop last week in several presentations this idea was discussed, as a contribution to both lowering overall costs as well as creating incentives for early action. We think this approach should be considered by AGBM.

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Ad Hoc Group on the Berlin Mandate

Third Session

Geneva, 5 - 8 March 1996

STATEMENT

by

Cornelia Quennet-Thielen

German Delegation

6 March 1996

Check Against Delivery

Mr. Chairman,

Germany fully supports the statement presented earlier by the Italian delegation on behalf of the European Union. We would in addition like to make some further comments on the subject of quantified limitation and reduction objectives within specified timeframes.

1. AGBM decided at its last session that it wanted to review the aspects of the IPCC Second Assessment Report (SAR) relevant to quantified emission limitation and reduction objectives within specified timeframes (QLRO).

It is Germany's firm conviction that the findings of the IPCC Second Assessment Report clearly underline the need for urgent action to mitigate climate change if we are to prevent dangerous anthropogenic interference with the climate system - which is the ultimate objective of our work under the Convention. Setting new quantified emission objectives for the years beyond 2000 is an essential and urgent task in this process.

We found that a number of IPCC assessments exist that clearly facilitate our task of assessing and narrowing down the range of options regarding QLRO. In light of the comprehensive EU statement regarding our review of the SAR findings I will only highlight a few assessments again in this regard:

- Stabilization of atmospheric concentrations at twice the pre-industrial level will eventually require global emissions to be less than 50% of current levels. At the same time, the share of global emissions from developing countries will grow to meet their social and developmental needs. For these reasons, industrialized countries need to significantly reduce emissions after the year 2000.
- IPCC also states that the steeper the increase in emissions (hence concentrations), the more quickly is the climate projected to change. In addition, it is mainly the cumulative emissions, i.e. the sum of annual emissions over time, that will determine the future level of GHG concentrations. This means that higher emissions in early decades require lower emissions later on. In a model, this can be done easily. In practice, it turns out to be far more difficult, as steep emission reductions quickly get more expensive.

- IPCC also found that significant reductions in GHG emissions are technically possible, and can be economically feasible. It also stated that significant 'no-regrets' opportunities are available with a broad range of cost-effective technologies, policies and measures to markedly reduce net GHG emissions. There is also justification for action beyond no regret.
2. In the light of the IPCC SAR findings, quantified limitation and reduction objectives are an essential instrument in developing an adequate next step towards implementing the ultimate objective of our Convention.

QLRO should promote the earliest possible application of environmentally sound and less carbon-intensive available technologies. At the same time, targets should be set sufficiently far ahead as to ensure that also investments with longer-term impacts that result in significant emission reductions as well as the necessary changes in consumption and production patterns are encouraged. Therefore, shorter- and medium-term targets are needed to set a clear and reliable framework for the development and implementation of national and regional policies and measures to combat climate change. This would allow policy makers and other actors to optimize the mix of available policies and measures.

Together with our partners in the European Union we therefore consider it appropriate for the first stage of a protocol or another legal instrument to focus on two time horizons: 2005 and 2010. This is short enough to have to step up our efforts but also long enough way to be able to develop balanced programmes and to give the different actors sufficient scope for adjustment. Such a two-phased first step would also allow for an interim monitoring and review of the effectiveness of the measures taken which we see as crucial in order to stay on track in the longer term. The year 2020 may be taken as an additional target, although in light of many uncertainties regarding, inter alia, emission trends and changing circumstances such as economic structures, trading patterns and technology development, we feel that it is too far into the future to reliably guide our efforts.

3. Germany therefore proposes as reduction objectives for Annex I Parties in a protocol or another legal instrument a reduction of CO₂ emissions
- of 10% by the year 2005, and
 - of 15-20% by the year 2010,
- both against the base year of 1990. We think this is both an ambitious and realistic approach for the next step to be decided upon at COP 3. Fully aware of the comprehensive approach inherent to our Convention, we are currently also drawing up

our proposals for targets regarding gases other than CO₂, such as methane and nitrous oxide. We would like to see these reduction objectives being binding commitments in a protocol or other legal instrument. A certain degree of flexibility should be allowed to Annex I Parties with economies in transition comparable to the stipulation in Article 4 para 6 of the FCCC.

We think that these proposals fit well into the protocol structure as proposed by the European Union at the last AGBM session as part of the combined approach in the Berlin Mandate of both elaborating policies and measures as well as setting quantified limitation and reduction objectives within specified timeframes.

We don't want to be misunderstood in this respect. Our proposal for CO₂ targets for Annex I Parties in 2005 and 2010 does in no way effect our existing national target. Germany remains committed to reducing the 1990 level of its CO₂ emissions by 25% by the 2005.

Our proposals are based on two conceptual considerations in specifying QLRO:

- Firstly, it is the single gas approach which we prefer because of its greater precision. It also avoids the methodological difficulties associated with calculating CO₂ equivalents by using global warming potentials. Even if we had an overall objective it is our view that it could initially only relate to a specifically defined list of gases owing to the varying degrees of scientific knowledge and data availability with regard to the different greenhouse gases.
- Secondly, the concept of a flat rate reduction: This concept has proven its worth in comparable environmental conventions and protocols. It has the virtue of simplicity and practicality. It also accounts for countries' differences in starting points, economic structures, resource bases and available technologies by measuring each Party's efforts against its historic levels of emissions.

We recognize, of course, that there are other ways of approaching the concept of equity, such as a differentiation of targets. However, we foresee enormous practical difficulties and obstacles in identifying the relevant factors affecting the emissions of different greenhouse gases, in deriving corresponding indicators, in generating reliable and comparable data needed, and, last but not least, in weighting these indicators. The selection of indicators as well as their relative weight is highly arbitrary, with results differing substantially. This was demonstrated once more in presentations during the workshop that was held last week. Parties therefore would

come up with very different proposals according to their individual circumstances and capabilities. This approach therefore would mean even more complicated and lengthy negotiations without necessarily ensuring a more equitable outcome.

Mr. Chairman,

These were further assessments, conclusions and proposals in addition to the German views already presented at earlier AGBM sessions and documented in different Misc. documents. We hope that they can contribute to further assess the issue of quantified limitation and reduction objectives with specified timeframes and to narrow down the range of options meriting further attention. We think that this is an important task to perform at this session in order to allow to focus our discussions and to start to shift the emphasis of this process from analysis and assessment towards the negotiation of a protocol or other legal instrument. Time is short until COP 3. We already agreed at AGBM 1 that COP 2 is to take stock of the overall process and to intensify the efforts to adopt a protocol or other legal instrument at COP 3. In order to enable COP 2 to deliver this task, we would like to propose that the Secretariat is requested to prepare a document for AGBM 4 and COP 2 that compiles - without any judgement added - the proposals made so far - ordering them according to the central elements of the Berlin Mandate:

- Strengthening the commitments in Art. 4.2(a) and (b):
 - * policies and measures,
 - * quantified limitation and reduction objectives within specified timeframes.
- Continuing to advance the implementation of Art. 4.1,
- Possible features of a protocol or another legal instrument.

In our view, such a single document - although being a preliminary synopsis of proposals presented so far - would be of considerable help to AGBM 4 and COP 2 in fulfilling their task, as a matter of urgency, to enable COP 3 to adopt an ambitious protocol or other legal instrument that is a real step forward towards achieving the ultimate objective of our Convention. For further input, AGBM 3 should invite Parties to submit additional proposals to the Secretariat by 15 April 1996.

Thank you.

**Intervention of the United States of America on
Quantified Emission Limitation and Reduction Objectives
Third Meeting of the Ad Hoc Group on the Berlin Mandate
March 6, 1996**

Thank You Mr. Chairman:

The United States would like to make a few brief remarks on this issue -- which we believe to be perhaps the most critical facing the parties as they struggle to agree on next steps to address the climate change problem. As we all heard from Professor Bert Bolin, Chairman of the Intergovernmental Panel on Climate Change, there is a growing certainty that the issue confronting us is real, and is one that has potentially catastrophic consequences for us all.

Our key tasks are understanding what alternatives exist to combat this threat in an environmentally and economically sustainable manner, and developing the political will to remedy this problem. It is for this reason that the United States has, over the past several months, intensified our own analytic efforts to look for the best solution. It was also for this reason that we so strongly urged the Parties to consider developing both their own and common efforts to analyze the effects of various targets and timetables on emission levels, as well as on our global and national economies.

The United States wishes to thank the Secretariat for its efforts in organizing the workshop on QELROs that was held last week. In our view, there are a number of important lessons to be learned both from that session, and from our own analyses of the QELRO issue:

- Though all Parties have agreed to undertake additional steps, there are different views on how we might best implement targets and timetables, and about the most environmentally beneficial and cost-effective structure for them;
- The call for possible differentiation between Parties raises many issues on which we will need to work; and
- The level, timing, location and sharing of action clearly affect the expected environmental impacts and benefits, as well as the costs, and must be more fully considered.

It is also clear to us that under the structure of the "aim" set forth in Article 4.2(a) and (b), that few countries are likely to achieve their current domestic goals with the existing array of policies and measures being taken. Given the high hopes with which all countries set out to meet their aim in 1992 when the FCCC was adopted, we must begin to consider what shortcoming afflicts us all, and why success is so elusive. We must take whatever action is necessary to make sure that our next steps are a success.

The next steps we take must meet tests of both environmental sustainability and cost-effectiveness. In our statement on this issue at AGBM-2, we noted the potential advantages of thinking about cumulative targets and multiparty targets, as well as annual or periodic targets. These concepts were elaborated on by a number of presentations at the QELRO workshop last week. The flexibility to determine the timing over which a given quantity of emissions will occur offers the potential for countries to choose the most cost-effective paths. Similarly, flexibility as to where reductions are made can offer the potential for additional cost savings.

If we choose a cost-effective structure -- that is, if we use our limited resources wisely -- we will in fact be able to afford to do more to protect the climate. This will ensure the effectiveness of the global program in the face of serious competition for scarce resources from other critical national and international problems. Environmental solutions must go hand-in-hand with economic growth. Our emphasis on cost-effectiveness is meant to capture both the environmental and economic aspects of climate strategies needed to promote sustainable development.

One of the key articles in the FCCC (Article 4, in paragraphs 2(a) and 10) speaks to the need to consider national circumstances when setting targets and timetables as appropriate incentives for additional action. The inclusion of this language underscores the agreement among parties that any future step must provide flexibility in the implementation of obligations.

Mr. Chairman, these things having been said, it is clear that we have not yet found consensus on next steps. We have been provided with proposals for a protocol from the Alliance of Small Island States, as well as a framework for a Protocol from the European Union, and suggestions on a protocol by the Russian Federation. We have had a preliminary exchange of views at our last AGBM session, and have heard from a number of technical experts on how we may move forward -- and of some of the consequences to our moving in any given manner.

The United States has made significant progress in advancing our own thinking during this analytical phase of our process. We are assessing the effects of various protocol proposals submitted by others on our own economy (a task which we have begun, and hope to complete by COP2). We need to assess how we could most flexibly implement the various proposals that have been laid before us. We look forward to sharing our results with you at the next session, and to beginning the development and negotiation, on the basis of our shared understanding, of a text for next steps to which we can all agree.

Thank you.

Policies and Measures



AD HOC GROUP ON THE BERLIN MANDATE

THIRD SESSION

GENEVA, 5 - 8 MARCH 1996

**ITEM 4 OF THE AGENDA:
STRENGTHENING THE COMMITMENTS IN ARTICLE 4.2(a) AND (b):**

(b) Policies and measures

**STATEMENT BY THE REPRESENTATIVE OF ITALY
ON BEHALF OF THE EUROPEAN UNION**

6 March 1996

EU STATEMENT ON AGENDA ITEM 4b:

POLICIES AND MEASURES

Italy, on behalf of the EU would like to make the following statement:

The Convention requires broad commitments in support of the aim of returning greenhouse gas emissions to 1990 levels by 2000. As a further step, the Berlin Mandate calls for us to elaborate policies and measures, as well as to set quantified emission limitation and reduction objectives.

The European Union believes this approach reflects both the need to take specific action to mitigate climate change and the importance, given the ultimate objective of the Convention and the size of the task before us, of putting in place new, concrete foundations on which to build in the years ahead.

We consider that this aspect of our work is crucial. The EU has therefore taken up your invitation, Mr. Chairman, to bring forward substantive inputs in order to advance the process. In this regard, the EU believes that the Secretariat has produced excellent papers introducing the concept of policy objectives and outlining the specific policies and measures which Annex I Parties have already put in place to meet existing commitments.

Such policies and measures will contribute to limiting and reducing emissions of greenhouse gases. We need to pursue this in the first decades of the next century, and we must therefore agree challenging objectives for these policies and measures.

In this context, the EU has started a programme of work on policies and measures which should take us up to COP 2 and beyond.

Firstly, we have identified eleven main areas for investigation.

Secondly, within each area we are in the process of identifying a set of key policies and measures.

Thirdly, we will need to identify indicators, objectives and possible targets for policies and measures, and to assess the expected effect on the reduction of greenhouse gas emissions.

We shall also need to consider how the measures should be distributed through the three Annexes of the draft protocol structure proposed by the EU at AGBM 2.

Mr. Chairman, this work is a substantial task, and we are, as yet, only part way through it. We expect the work to be completed by AGBM 4 and thus to feed it into COP 2. Today, we have four papers on:

- renewable energies;
- energy efficiency standards, labelling and other product-related measures;
- CO₂ emissions from the transportation sector;
- economic instruments.

For these four areas, these papers represent our contribution in order to advance discussion. While I am speaking, the Secretariat is distributing copies of these papers.

Mr. Chairman, we emphasize that these papers, as they stand now, are not intended to be incorporated directly into the protocol, or other legal instrument. We hope that it will be possible later to incorporate the policies and measures included in these papers, but further work is required.

Mr. Chairman, the Secretariat's paper invites us to identify areas for priority action. The EU believes that these should be, in addition to the four mentioned before, the following:

- energy policies;
- industrial sector emissions (including voluntary agreements);
- agricultural sector emissions;
- forests;
- waste management;
- HFCs and PFCs; and
- actions at local level in the urban environment.

By COP 2, the EU intends to present papers on policies and measures in the areas mentioned above with a view to reaching agreement on common action and necessary objectives and targets for these policies and measures. After COP 2, we believe it would be appropriate to focus on the task area by area, starting with agreed priorities, in order to complete the work in good time for COP 3. The EU would expect this detailed work to be informed by, and to draw on, the wealth of material in the IPCC Second Assessment Report and, inter alia, the work of the OECD/IEA Annex I Experts' Group on possible policies and measures for common action.

Thank you, Mr. Chairman.

**ENERGY EFFICIENCY STANDARDS, LABELLING AND OTHER PRODUCT
RELATED MEASURES**

I. INTRODUCTION

1. The aim of this paper is to give the EU position on the negotiations with respect to a protocol under the FCCC for the topic policies and measures for "products, including energy efficiency standards and labelling". The product groups to be included in the proposal are: household appliances, including personal home entertainment systems; lighting systems; heating, ventilation, air conditioning and control products (HVAC); insulation products and buildings, office equipment and air compressors.
2. These products are utilised and contribute to most of the energy consumption in the residential and service sectors. Direct emissions from these sectors account for 19 percent of CO₂ emissions of the EU in 1993. Their contribution to total CO₂ emissions is even higher if indirect emissions resulting from the demand for electricity and for fuel products are taken into account. In other Annex I countries these sectors have a similar importance, with the service sector having the fastest economic growth in our Parties.
3. There exists substantial potential for improving the energy efficiency and environmental impacts of these products. This potential may be realised by technological improvements of the products and by the way in which they are used and maintained. The utility companies and energy suppliers may also play a role in optimising the use of these products.
4. The estimation of the potential for improvements is a complex matter. The energy savings potential depends upon: the degree of technological improvement of a given model and its degree of stability with time; the cost and price increase due to the improvement; the price of energy and the economic benefits, and thus the resulting degree of return on investment to the consumer; the degree of acceptance and purchases by the consumer; the time for the product stock to turnover (product lifetime); the amount of utilization of the product and the extent of correct utilization and of proper maintenance. The same is involved for all the other product models. Thus careful study is required to estimate these potentials in the various markets with different product characteristics and use patterns. Also the national history of policy measures and achievements to date must be taken into consideration.
5. Due to these methodological difficulties it is very difficult to generalise. Most all product groups showed possible short term improvements, with existing technologies of a minimum of ten percent increase in energy efficiency. The percentage difference in energy efficiency of existing, comparable models on the market often is more. In the longer term, adding more technological improvements, combining them with product features that adapt more to users needs, insuring correct utilization and proper maintenance - we may expect additional improvements of about 20 percent. These

6. In making such estimates of potential and introducing such improvement, one assumes that no anti-economic investment is considered. In fact a lot of options result in pay back periods in the order of two to five years, reasonable for products with a duration of about ten. Thus we are generally in the area of "no regret" measures where environmental improvements can be made by sound economic purchases, without having to adjust for climate change externalities.
7. The market is far from perfect, the proper information is not usually known. And of course energy consumption is only one of the many product characteristics relevant to the purchaser, usually far from his highest priority. To correct for market imperfections and to accelerate sound economic and environmental measures, international cooperation is an essential opportunity.
8. Clearly, it is important that the consumer knows what he is purchasing. For all product groups it is essential to provide clear and harmonised labelling supported by comparative lists, manuals and other means, based upon standardised energy/environmental information, to increase awareness and to create greater market transparency and improved conditions for trade of efficient and low CO₂ emission products.
9. Annex I Parties need to continue to take the lead in reducing emissions, through the proposed protocol provisions for the products. These provisions are also in the interest of non-Annex I Parties, in order not to burden their citizens and energy infrastructure with unnecessary energy expenditures and negative environmental impacts. Finally, within a global economic system, energy efficiency standards and labelling of internationally traded products, should progressively apply world-wide..

II. POLICIES AND MEASURES THAT COULD BE INCLUDED IN A PROTOCOL OR IN ANOTHER LEGAL INSTRUMENT

10. For several different product groups Annex I Parties could agree to utilize the measure of voluntary agreements with producers and importers to ensure that more efficient and environmentally friendly products are sold. This type of policy allows for a more flexible approach that takes into consideration local technology, product and market differences and permits a more gradual elimination of the most inefficient products while achieving overall goals of energy efficiency. The general range of voluntary improvements would be negotiated between the Annex I Parties, taking into consideration their history and existing situation. Annex I Parties will also consider introducing mandatory minimum efficiency standards applying to groups of products sold on their domestic markets and measures to improve the efficiency of certain products. Cost effectiveness should be a criterion when defining efficiency targets for the different groups of products.
11. Implicit in all of the actions is a periodic revision of the measures within specified time frames to take into consideration technological progress and the ability of the consumer to pay for the technological updates at reasonable rates of return. Also for the introduction of these policies, a prerequisite is that sensitivity analysis of potential improvements and their impacts be performed, taking into consideration the measure of product functional performance. Some of this research has already begun.
12. Although the general improvement ranges are to be established, internationally, among the Annex I Parties; the methods for defining the labelling, voluntary agreements and eventual

mandatory limits can be defined at the appropriate level. This avoids all the difficulties in agreement upon single measurement codes, test protocols, and performance measures of products for all the Annex I Parties. The proposed policies and measures are organised according to product groups and potential for improvement.

13. Policies and measures for common household appliances (refrigerators, freezers, washing machines, dryers, dishwashers and water heaters); home entertainment and standby equipment, lighting products, office equipment, and air compressors include:

Measures with high potential improvements:

- a) mandatory energy consumption labelling, with defined test procedures and functional performance measures of the products;
- b) voluntary agreements with producers and importers to improve energy efficiency levels of products through clear objectives or general improvement ranges, and, if necessary or where appropriate, mandatory minimum efficiency standards of the products.

Measures with an intermediate level of potential improvements:

- c) voluntary or mandatory energy efficiency labelling and technical specifications for luminaries used in the service sector;
- d) international collaboration to establish a voluntary trademark for office equipment.

14. Policies and measures for space heating equipment, air conditioners, building energy control equipment, and buildings in general:

Measures with high potential improvements:

- a) mandatory energy consumption labelling, with defined test procedures and functional performance measures for the products;
- b) voluntary agreements with producers and importers to improve the energy efficiency levels of products through clear objectives or general improvement ranges, and, if necessary or where appropriate, mandatory minimum efficiency standards for the products.

Measures with an intermediate level of potential improvements:

- c) introduction of periodic control of space heating equipment in the residential and service sectors;
- d) introduction of use of space heating measurements and control systems in new multiple family dwellings;
- e) establishment of energy certification schemes and audits of existing residential and commercial buildings;
- f) establishment of environmental certification, including energy, of new residential and commercial buildings.

Measures with a lower level of potential improvements:

g) energy efficiency labelling of construction, thermal insulation products, and in particular for window and window frames.

15. General policies and measures for all of the previously mentioned products include:

- a) increased support as well as private concertation of demand side management initiatives in markets; where applicable. International collaboration for the comparison of results and transfer of techniques;
- b) introduction of energy efficiency criteria for public procurement of products, with possible co-ordination among Parties;
- c) public information campaigns to complement labelling and voluntary agreements;
- d) public information campaigns regarding high efficiency products;
- e) education and training for retail staff in respect of energy efficient products;
- f) public incentives for research, development and technical demonstration regarding the improvement of energy efficiency and environmental characteristics of the products;
- g) increased use of economic instruments to improve energy efficiency and to internalise external effects.

16. For all measures, a schedule and a procedure for the establishment and periodic revision of labelling, voluntary agreements, and if necessary or where appropriate mandatory minimum efficiency standards, should be established.

ECONOMIC INSTRUMENTS IN THE FIELD OF CLIMATE CHANGE

1. INTRODUCTION

General about economic instruments

One important aspect of the future policy mitigation of climate change must be to increase the cost-effectiveness of actions. The Rio Declaration, Agenda 21 and the Fifth Environmental Action Program call for a wider use of economic instruments in environmental policy. The IPCC Second Assessment Report concludes that instruments that provide economic incentives, such as taxes and tradeable quotas/permits, are likely to be more cost-effective than other approaches. The IPCC Second Assessment Report also concludes that carbon dioxide, in respect to other greenhouse gases, is the major responsible of anthropogenic forcing of the climate system. The importance of CO₂ emissions is also likely to increase in the future.

In this paper economic and fiscal instruments, including tradeable quotas and permits and subsidies reduction/removal, are considered. Tradeable quotas and permits and fiscal incentives are economic instruments that can be used with the aim of changing relative prices. Subsidies of fossil fuels affect relative prices. A phasing out of such subsidies would work in the same direction as the use of taxation and tradeable permits. Furthermore, voluntary agreements, which stimulate the development and application of efficient technologies, are also considered.

In view of the estimated total costs to mitigate climate change the cost-effectiveness of actions should be a main aspect in future policy-making, including international agreements on new commitments.

Agenda 21 recalled that "Without the stimulus of prices and market signals, that make clear to producers and consumers the environmental cost of the production of energy, material and natural resources and the generation of wastes, significant changes in the consumption and production patterns seems unlikely to occur in the near future."

Cost effectiveness and reduction potential

Economic instruments provide flexibility for producers and consumers and stimulate the development of new technologies and practices. The efficiency and cost-effectiveness of economic instruments in meeting particular targets should be compared with the use of other types of measures. Due to the large number of emission sources and widely varying marginal cost for CO₂ reductions, increased use of economic instruments often imply lower cost for CO₂ reduction. Traditional regulation approaches, such as standards and individual technical requirements on emissions, often demand heavier enforcement efforts than economic instruments. Effective economic instruments should result in a wide range of response measures such as fuel-switching, increased energy efficiency, thermal insulation of buildings, lower emissions from vehicles and development of renewable

energy sources etc. A regulatory approach to achieve the same result could be difficult both to design and to implement.

Considerable theoretical evidence exists with regard to the advantages of using economic instruments in climate change policies. Studies by OECD show that the global macroeconomic cost of achieving a specific reduction target of global CO₂ emissions could be reduced by half by using a harmonised tax or tradeable quotas or permits instead of a flat-rate reduction target for all countries. These savings result from the fact that different countries face different marginal costs for CO₂ abatement. Some countries can achieve large reductions with very low costs, while others may face very high costs in order "only" to stabilise their CO₂ emissions. These differences in marginal abatement costs are closely linked to national circumstances.

Substantial savings may thus be obtained if emissions are reduced where it is cheapest to do so. This might require international mechanisms ensuring appropriate capital flows and technology transfers between countries. The concept of activities implemented jointly may also be used to reduce the global cost of reducing emissions.

Designing a taxation scheme

The potential advantages of the economic instruments may be often offset by practical difficulties concerning the design and implementation especially as regards product-related taxation. The establishment of uniform rates is required for reasons of cost-effectiveness, but the resulting distribution of costs may not conform to principles of equity and justice. The introduction of an environmental taxation should be designed so that it preserves fair business competition among Parties.

The "linkage" issue is central, i.e. finding the link between the tax base and the achievable environmental effect. For instance, the linkage between an environmental taxation on fuels and the emission of CO₂ is obvious for at least two reasons. One is that all carbon in fossil fuels is eventually released during the combustion as carbon dioxide. Another is that in many cases there is no technically or economically feasible way of removing CO₂ from the combustion process. A taxation on the carbon content is thus equivalent to a charge on emissions.

Furthermore, the efficiency of any regime is likely to be considerably lowered if it leads to higher emissions in non participating countries (carbon "leakages"), either owing to the relocation of production activities or as a consequence of a fall in the world prices of fossil fuel energy. The introduction of a taxation scheme could also entail distortion of competition between industrial companies from different countries if appropriate provisions are not allowed for. Similar problems can be expected from uniform reductions or tradeable CO₂ permits, if not all countries participate.

Finally, the distributive consequences of any taxation regime should also be considered.

The introduction of such a taxation may also lead to other (secondary) benefits to the environment. Other pollutants like sulphur and nitrogen oxides might be reduced. Should they wish so, Parties could use revenues from the taxation to improve environmental quality and induce environmentally friendly investments, or to reduce distortional taxes elsewhere in the economy. The economic burden of the existing tax system could be reduced and potentially yield an additional economic benefit.

Reduction/removal of subsidies and of other economic disincentives

Subsidies of fossil fuels and other distortions affect relative prices and represent disincentives to an efficient use of fossil fuels and energy in general. A prerequisite for an appropriate use of taxation on energy products is that market prices (pre-taxation) reflect costs for all other scarce resources. This implies that subsidies, tax schemes or regulations which counteract the use of environmental economic instruments should be progressively reduced/removed in case they are not justified, to avoid other market imperfections.

Voluntary agreements

Voluntary agreements may stimulate the development and application of cleaner and more efficient energy technologies and thus contribute to reducing CO₂ emissions. To be effective in meeting environmental objectives, such as the ones under the Climate Convention, general principles and guidelines for voluntary agreements should be promoted on a local or regional level.

Tradeable quotas and permits

In principle, tradeable CO₂ quotas or permits may also prove cost-effective in meeting agreed CO₂ emission limitation and reduction objectives, if the problem of effective implementation can be resolved.

A tradeable permit scheme could, in theory, be introduced at a national or international level, with the former representing a more feasible option in practical terms, and the latter the potential for greater cost savings. The main advantage of a tradeable permit system over a tax system is that it provides a certainty in establishing a ceiling to carbon emissions, based on the total supply of permits. However, unlike the tax, the quota price is uncertain and there are, therefore, also uncertain distributional effects through quota trade. These arguments apply equally to a national permit scheme as to an international version.

Trade in permits should take place between participants on the basis of differences in the marginal costs of abating carbon emissions. Producers facing high abatement costs will prefer to buy permits rather than undertake costly abatement options, whereas producers with low abatement costs will find it cost-effective to abate further and sell any surplus permits.

A crucial issue in the design of a tradeable permits scheme, whether on a national or international basis, is how to allocate initial permits. This not only has distributional implications, but can also influence how willing industries or countries are to sign up to an agreement.

Economic instruments in the transport sector

The economic instruments in the transport sector are discussed in the EU document "CO2 emissions from the transportation sector".

2. POLICIES AND MEASURES THAT COULD BE INCLUDED IN A PROTOCOL, OR IN ANOTHER LEGAL INSTRUMENT

1. Reduction/removal of subsidies of fossil fuels and such subsidies, tax schemes and regulations which counteract an efficient use of energy.
2. A framework for introduction of an environmental taxation scheme for all Annex I Parties. This could include:
 - a common environmental taxation structure;
 - minimum taxation target rates, with an effective multilateral consultative process for reviewing taxation rates and possible exemptions, and monitoring the effects of taxes in reducing emissions;
 - study of a phasing-in mechanisms, including agreement on a transitional period and possible exemptions during that period;
 - consideration of the sectors, sources and fuels which could be subject to taxation;
 - timetable for implementation.
3. Introduction/increase of environmental taxation by one or more Parties.
4. A framework for furthering voluntary agreements
5. A framework for tradeable quota schemes or permits.

CO2 EMISSIONS FROM THE TRANSPORTATION SECTOR

I. INTRODUCTION

The reduction of CO2 emissions from the transportation sector, which represented in 1991 about 25% of total emissions in the European Union and about 28% of total emissions in OECD countries, is one of the most relevant elements of the strategy to combat anthropogenic climate change. In this regard it is recognised that the IPCC Second Assessment Report indicated that measures in the transport sector, "taken together, provide the opportunity for reducing global transport energy related greenhouse gas emissions by as much as 40% of projected emissions by 2025". In line with this the EU believes that CO2 emissions from transport can only be effectively reduced by a package of measures, which include addressing the structure of the demand as well as the supply side for the transport services.

Such measures could include:

- target value(s) for average fuel efficiency and/or average g-CO2/km emissions of newly registered cars per year by a given date;
- fiscal instruments, such as fuel taxation. An increase of energy prices through the use of fiscal instruments should in principle contribute to increase the energy efficiency and to limit or even reduce CO2 emissions. Moreover such fiscal instruments would contribute to internalise external effects;
- incentives to promote more efficient vehicles with low CO2 emissions;
- research and development aimed to low CO2 emissions vehicles;
- promotion of alternative modes of transport and automobile traffic demand management aimed at reducing the use of motor vehicles;
- exploration of the feasibility of introducing air fuel taxation and efficiency standards for all ICAO members;
- voluntary agreements;

With reference to Civil Aviation, it should be noted that its contribution to global total CO2 emissions is about 2-3%; NOx emissions at cruise altitudes are of similar order, but considerable scientific uncertainty remains about their effect. Reductions could be achieved in several ways. Technological means of reducing emissions, through improved aircraft or engine design, remain a key industry objective in the longer term, and the drive to reduce NOx emissions could affect fuel efficiency. Systematic changes, for instance through improved airline or air traffic management efficiencies, offer scope for reduced emissions, as may economic or fiscal instruments affecting demand. Aviation-related measures on CO2 for inclusion in a protocol should include Parties' agreement to support what is outlined in par. 10.

II. POLICIES AND MEASURES THAT COULD BE INCLUDED IN A PROTOCOL, OR IN ANOTHER LEGAL INSTRUMENT

1. *Transport fuel taxation.* One important way to limit or reduce CO₂ emissions from the transport sector, the least ambiguous for all the actors involved and the least costly in terms of management cost, is to tax fuels. Fuel taxation is currently applied to all modes of land transport. It shall be coordinated and regionally harmonised as far as possible in order to preserve conditions of fair business competition, in particular for the road freight transport sector.

The underlying argument for such a taxation is that the transport sector (as other sectors) should cover its external costs, including environmental costs. The impact of fuel taxation on CO₂ emissions can be estimated using the elasticity of the fuel consumption relative to the fuel price.

The EU has set minimum excise duties on fuels. Minimum excises duties could be set in the protocol to be applied to all Annex 1 countries.

The fuel taxation system should reflect external costs, in particular, as far as possible, the carbon content of each fuel.

2. Reduction of CO₂ emissions from newly registered cars

A strategy to reduce the CO₂ emissions from newly registered cars could be based on the promotion of measures aiming at reaching target value(s) for average fuel efficiency and/or average g-CO₂/km emissions of newly registered cars per year by a given date.

The above measures could include:

- a) voluntary agreements with the car industry;
- b) complementary measures aimed at developing the market for fuel efficient, low CO₂ emitting cars as well as alternative fuels;
- c) fiscal instruments to promote the introduction into the vehicle fleet of more energy efficient cars, especially in terms of fuel consumption (e.g. registration or annual circulation taxes, also for the existing vehicle fleet).

3. Research and development aimed at low CO₂ emissions vehicles and fuels.

4. *Fuel economy labelling.* This would be a complementary measure to support some of the other measures indicated above.

5. *Development and implementation strategies of alternative modes.* The development and implementation strategies of urban public transport and of alternative intercity transport modes that are low CO₂ emitters should be encouraged. Several measures can be envisaged, such as incentives aimed at encouraging the development of urban public transport.

6. *Motor traffic management.* Demand side management, in particular to limit the use of private cars in the congested areas and to promote a change in mobility patterns, could be envisaged through regulatory and price mechanisms. In a similar way, the interactions between land use, urban development and transport could be taken into account in planning policies in order to reduce the need for travel by private vehicles and facilitate the use of modes of transport that save space and energy. Traffic management schemes, such as measures designed to encourage optimum traffic flows which reduce overall greenhouse gas emissions from traffic, should be promoted. These policies are mainly matters for local authorities, but the protocol, or other legal instrument, could include measures aiming at making these authorities aware of their relevant responsibilities.

7. *Urban transport.* Support to conversion to low CO₂ emitting urban fleets, namely public transportation fleets and professional vehicles.

8. *Inspection of road vehicles.* Mandatory inspection of road vehicle, which allows to control periodically the efficiency of motors, should be introduced..

8. *Action to reduce CO₂ emissions from freight transport.* Agreement should be sought on action to reduce inefficiencies in the freight transport sector, which distort the market and lead to imbalances between the different transport modes. Action should include:

- fair and efficient pricing to ensure fair competition between modes;
- the development of guide lines to avoid empty running of freight vehicles, and improvement in logistics;
- introduction of or improvements in the application of social legislation in freight transport on a regional basis;

9. *Awareness / behaviour.* Measures could be implemented to provide information and raise public awareness of the implication and environmental costs of the growth in transport emissions and the need to modify behaviour. Such measures could include the promotion of in-car technical tools to inform drivers of energy-inefficient behaviour.

10. *Civil aviation.*

- The feasibility of introducing air fuel taxation and efficiency standards for all ICAO members should be explored.
- Work through ICAO to maintain and develop NO_x emissions standards which minimise NO_x emissions without compromising technological gains in fuel efficiency and CO₂ reduction should continue.

RENEWABLE ENERGIES

I. INTRODUCTION

- A. With reference to the text of the Agenda 21, Chapter 9, Protection of the Atmosphere:

"The need to control atmospheric emissions of greenhouse and other gases and substances will increasingly need to be based on efficiency in energy production, transmission, distribution and consumption, and on growing reliance on environmentally sound energy systems, particularly new and renewable sources of energy¹⁾. All energy sources will need to be used in ways that respect the atmosphere, human health, and the environment as a whole". It is necessary that Nations work together in the promotion of renewable energy at the largest level. In this regard it is suggested here to strengthen and to support activities such as the UN Committee for New and Renewable Resources of Energy and on Energy for Development (UNCRREED).

- B. Renewable sources of energy, according to the IPCC Second Assessment Report, could meet in the long run a major part of the world's demand for energy.

The stimulus of prices and market signals that make clear to producers and consumers the environmental costs of conventional energy production and consumption is essential to obtain such significant changes in the patterns of consumption and production of energy.

¹⁾Renewable energy resources, in this paper are defined as solar thermal, solar photovoltaic, wind, hydro, biomass, geothermal, ocean, landfill gas, sewage gas, energy from certain waste, animal and human power.

C. Potential to reduce greenhouse gas emissions

1) Current use of Renewable Energies in the World and in the EU²

a) worldwide

Renewable energies contribute to the world energy needs (8800 Mtoe; 1 toe = 1 tonne of oil equivalent = 41,87 GJ) by about 1559 Mtoe (17,7% - data referred to 1990); the rest is mainly satisfied by fossil fuel and, to a minor degree, by nuclear energy.

The contribution of renewable energies consists primarily in the traditional use of biomass (930 Mtoe) and of large hydro power systems (465 Mtoe), this means from the so called "conventional renewable energies", which, however, unless managed in a sustainable manner cause environmental damage. Apart from these two previously mentioned sources, the contribution from the "new renewables" (efficient use of biomass, geothermal, small hydro, solar, wind and ocean energy) is small. Some technologies are still quite immature and or relative costly and most renewable energy systems still have higher capital cost than fossil fuelled systems. In some cases renewables can already compete with conventional systems.

b) European Union

Analysing the situation of renewable energies in the European Union shows that their share is significantly different compared to their world-wide contribution: in the EU, renewable energy contribution is 71 Mtoe, that is 5.3% of the total energy demand of the EU (1331 Mtoe)³. The main reason for this situation are the continuing difficulties renewable energies have in penetrating the market, in some cases the negligible use of biomass for domestic fuel and the difficulty and limited potential in the EU to build large hydro power systems. However in some Countries the contribution of new and renewable energies is substantial.

2) Scenarios worldwide⁴

The following scenarios identify two different types of policies. While the first scenario is based on extrapolation of current policy trends,

²⁾World Energy Council, New Renewable Energy Resources, Kogan Page, 1994.

³⁾ Eurostat: European Commission, Statistics in Focus/Energy and Industry, Nov. 1995.

⁴⁾ World Energy Council, 1994, as cited in IPCC Second Assessment Report 1995.

the second scenario is a more ambitious one and represents the real challenge for the future in the field of renewable energies; the dominance of fossil fuels in the next century can be avoided only if an acceleration of the penetration of renewables takes place within the next 25 years. To achieve the level of penetration of the first scenario will be relatively easy although it will involve the active effort of a large number of people over the entire period from now until 2020 (timeframes considered by the World Energy Council Report of 1994). The real challenge is represented by the second scenario that will require fundamental changes in choosing energy sources in the public and private sector.

a) **First Scenario**

In this scenario, the increasing use of renewable energies is related only to the implementation of already existing policies and measures adopted by the various countries in the world and by international organisations.

The result of this scenario is basically a linear growing of the use of renewable energies from 1559 Mtoe in 1990 (17,7% of the total energy needs) to 2844 Mtoe in 2020 (about 21% of the total energy needs). In this context new renewable energies will grow from 160 Mtoe to 540 Mtoe in 2020.

b) **Second Scenario**

This scenario requests the implementation worldwide of new policies and measures.

In this case the increase in the use of renewable energies is more than linear. It would go from 1559 Mtoe in 1990 (17,7%) to 3279 Mtoe in 2020 (about 30% of the total energy needs); also the share of the new renewable energies would increase, going from 160 Mtoe in 1990 to 1343 Mtoe in 2020.

To pursue the penetration of renewable energies, investments and sharing of technologies between developed and developing countries are necessary in the future to reach this goal, taking into account that most of renewable energies are located in developing Countries.

3) **Technical Potential**

Mankind's annual primary energy consumption is only about 0,01% of the amount of solar radiation reaching the Earth's surface per annum. About 30% of the Earth's total surface area is made up of land, so that the amount of solar radiation reaching the Earth's land surface per annum is about 3,000 times greater than the world's primary energy consumption.

As a matter of principle, therefore, there is a large technical potential for using solar energy, both directly and indirectly. If only a few percent of the Earth's land area -i.e. a few million square kilometres- were used on a long-term basis for converting the energy of solar radiation with an overall average efficiency of five percent (including all conversion, distribution and storage losses) and if, in addition, part of the technically usable hydro and wind power and biomass potential would be utilised, it would be possible to cover two to three times the current global primary energy demand by means of renewable energies.

4) Cost benefits estimates of renewable energy technologies

Information on the cost of renewable energy technologies are given in the IPCC Second Assessment Report. Figures diverge widely between technologies and vary with local conditions. In some applications, current prices of hydro, wind and some solar and biomass technologies can already compete with conventional energy technologies.

For some classes substantial cost reductions are likely within the next few decades, which could make these technologies competitive.

There is, however, a need always to recognise the relative environmental impacts and costs of different energy technologies.

II Policies and Measures for the diffusion of Renewable Energies
Elements of a Protocol or another legal instrument

- 1) increase and optimisation of the co-operation between the Parties with the aim of achieving a comprehensive exchange of experience also with regard to the planning and implementation of specific projects for the use of renewable energies;
- 2) promotion of demonstration projects for both Annex I and non Annex I Parties;
- 3) definition of a major item 'renewable energies' within the framework of the existing international financing mechanisms, e.g. World Bank, GEF, Regional Development Banks, Phare, Tacis etc.;
- 4) identification, reduction and progressive of existing barriers, which prevent the penetration of potentially cost effective renewable energy routes in the market.
- 5) economic or other incentives for the diffusion of emerging technologies in the field of renewable energies. Fiscal instruments can make an effective contribution. However, without the carrot of an expanding market and sufficient volumes of sale,

the manufactures of renewable energy technology will not be able to pursue the technological development of design and manufacturing processes which is needed to achieve the improvement of competitiveness of these technologies. Annex I Parties should agree to secure proper incentives during market build up, and secure an expanding market for potentially cost-effective renewable technologies.

- 6) Strengthen research and development with the aim of a technological initiative for the future, in particular in the areas in which technologies are not yet ready for implementation.
- 7) Strengthen the socio economic research in order to facilitate the integration of renewable energies into the market (including the research on internalisation of environmental costs);
- 8) increase in information, advice, education, training, and awareness regarding the use of renewable energies;
- 9) increase of CO2 reduction potentials by combining technologies for the use of renewable energies with measures for energy-saving and efficient energy use (for example better heating insulation and use of solar energy);
- 10) promotion of other specific actions of financing such as new private financing schemes (third party financing etc.).
- 11) Implementation of voluntary agreements with energy suppliers, industrial users or local authorities in order to introduce renewable energies into the energy systems.
- 12) reporting of Parties of renewable energies in their National Communications, focusing in particular on supply of each type of renewable energy, penetration of renewable energy and evaluation of relative costs compared to conventional alternatives.

Intervention of the United States of America on
Policies and Measures
Third Meeting of the Ad Hoc Group on the Berlin Mandate
March 6, 1996

Thank you, Mr. Chairman.

We are very grateful to the Secretariat for the significant effort it has made in the paper on "Policies and Measures" (FCCC/AGBM/1996/2) to come to grips with this issue and to help advance our work. We are also grateful to the Secretariat for organizing the workshop on this issue that took place on March 4-5.

Among other things, the Berlin Mandate calls for this process in which we are currently engaged to elaborate "policies and measures". The first communications of Annex I Parties describe over one thousand policies and measures. After eliminating duplication and overlap, the compilation and synthesis of those communications suggests that some 270 different measures remain, fitting into some 30 different categories. This extensive list of action items suggests that parties are indeed finding enormous numbers of ways to reduce emissions -- and suggesting that there are significant opportunities available as we work to assess ways to meet our new targets.

We recall that last year, in the first paper on Policies and Measures, the Secretariat provided nine useful categories into which they could be divided, following a sectoral approach. And the current paper also draws our attention to the "policy objectives" or "areas of opportunities" for greenhouse gas reductions, including regulations and guidelines, economic instruments and incentives, voluntary agreements and actions, information, education and training and research, development and demonstration. An alternative effort to categorize opportunities was provided in the EU framework, which included three categories for policies and measures: (1) those that would be adopted in common; (2) those that would be commonly considered; and (3) those that would be commonly recommended.

Mr. Chairman, we very much appreciate all of the conceptual effort that has gone into these suggestions and approaches, and acknowledge their contribution toward advancing the work of this body. Categorizations such as these provide a valuable framework for considering each of our own programs to address climate change.

At the same time, we should not confuse our decision at the last session to narrow down our analysis and assessment of policies and measures with eliminating potential approaches for action in the broader context of our negotiations. On the one hand, this desire to narrow down for purposes of analysis and assessment is understandable -- in the short time available to us, how are we to progress without choosing areas of emphasis and setting priorities? On the other hand, we are only likely to be able to meet the targets and timetables which the Berlin Mandate calls for us to set if we retain the flexibility provided to us by the full array of policy choices. Would it not be easier to meet these targets and timetables if we retain all of our options?

Moreover, efforts to narrow the scope of our negotiations promise to have two other consequences, neither of which would hasten our progress to protect our global climate system. First, it has the potential to run roughshod over the very real and very great differences in national circumstances that we face. Second, it has the potential to be contentious and protracted. It could yield results that are meager in comparison with the level of action we seek and that the IPCC's Second Assessment Report clearly indicates is needed. In our efforts here, as in our efforts at home,

we must use our resources as effectively and efficiently as possible.

The United States agrees that the entire array of options may be too vast for individual consideration by all Parties, and that some criteria may be usefully developed for categorizing our choices. One alternative is to examine first those actions which already have the greatest commonality. The Secretariat paper identified seven specific measures that were undertaken by more than 15 Annex I countries. In addition, another 19 measures (with some overlap) were undertaken by 11 to 15 Parties, suggesting that there is a total of approximately 25 different types of measures that may be considered broadly similar, and that are already being undertaken by a large number of Parties. Clearly, efforts with widespread support must merit broad consideration by individual countries – both those which are taking these measures, and those that might benefit from considering other ways to implement their programs. They may also be of interest to countries that have yet to consider these kinds of actions.

Another way to categorize the policies and measures deserving further attention might be to consider those areas in which only a few Parties have chosen to act – but which yield significant climate protection benefits. For example, in the United States:

- last week, we promulgated a rule controlling methane emissions from landfills resulting in reductions of 37 MMTCE in the year 2000, equivalent to eliminating the greenhouse emissions of 21 million cars;
- Another measure, designed to reduce uses of HFC and PFCs by nearly 5 MMTCE, and is equal to nearly half the entire effort contained in the national plan of the United Kingdom.

Other countries have similar success stories – but these efforts have not yet been widely duplicated.

Another promising method for categorization may be made on the basis of the economic benefits of available alternatives. Again, examples from the U.S. Climate Change Action Plan may be instructive – although we are fully aware of similarly effective efforts in other national programs. The U.S. "Motor Challenge Program" is projected to cost our federal government approximately \$30 million and involve private sector capital investments of \$4 billion over the next five years – but it is projected to lead to savings of more than \$5.3 billion over the same period through energy savings. And, it is anticipated to reduce U.S. greenhouse gas emissions by some 8.8 MMTCE. Some of our State and local air pollution prevention efforts are even more cost effective per ton of CO₂ equivalent removed: for approximately \$90 million each of federal and private investment, a savings of \$5.4 billion is projected to go along with emissions reductions of 4.2 MMTCE.

Mr. Chairman, let me turn now to another issue that has been extensively discussed here: that of the harmonization of measures. In order to do so, let us consider again the list of the most commonly adopted measures (i.e., those undertaken by more than 15 Parties). Few if any of the measures on this list are undertaken in a coordinated or harmonized manner. For example, we find that many Parties have set minimum appliance efficiency standards. In fact, the United States has such standards, as do most countries in the OECD.

However, even in the case of such a universal appliance as the refrigerator, significant differences exist. We have different size refrigerators, with larger freezer compartments in the United States than is common in Europe (U.S. residents tend to shop less frequently, further from their homes, and buy in greater bulk than do their European counterparts). Recognizing that improvements

in refrigerator efficiency are desirable, are harmonized standards for refrigerators therefore an appropriate tool? Even if we could definitively answer this question, it seems doubtful that we will succeed in the time available to us in harmonizing the complex appliance sector. In this regard, we note that it has proven impossible, after decades of effort, to standardize the voltage or even the size of electrical outlets within the OECD, a standardization that would certainly benefit consumers in purchasing the most efficient appliances wherever produced.

A gasoline tax is another example of a commonly applied policy that is not fully harmonized. All countries have set taxes on gasoline; these are usually fed directly into national, state and local treasuries as revenue raising measures. In the United States, taxes are considerably lower than those in Switzerland – or for that matter in other countries in Europe. Clearly our countries have managed to decide to impose gasoline taxes without the need to coordinate. The differences between our taxes reflect historical choices about the sources on which to put the emphasis when raising revenue (for example, income taxes, VAT, property taxes).

Harmonization certainly has a role in environmental management, yet it can be a double edged sword. Harmonized standards are not always consistent with compliance or implementation flexibility. Despite attempts to avoid it, harmonized standards often tend to the lowest common denominator. Harmonized standards are not necessarily consistent with innovation – while harmonization at a high level of environmental protection at one point in time may be successful, the standard can tend to dampen innovation. Finally, setting harmonized standards and measures will always be complex and will undoubtedly entail high transaction costs. In light of the problems that are clearly foreseeable, we must ask whether efforts to harmonize or coordinate measures that are already common to a large number of Parties is the best use of the time available to us under the Berlin Mandate.

Mr. Chairman, several key points emerge from the considerations we have discussed here:

- 1) While we must reduce the number of variables to a manageable set for purposes of analysis and assessment, we should clearly acknowledge that such a narrowing down will be counterproductive if carried forward into our negotiations – if anything, we will need more options, not fewer, if we are to set meaningful targets and timetables as we are called upon to do by the Berlin Mandate.
- 2) In constructing a common menu of available actions, we should seek to learn from the experience of others – if specific and effective actions have been adopted only by a few countries, we should seek to determine why, and whether they may be of interest more broadly.
- 3) While it is desirable to construct a common menu of available actions, seeking to harmonize or coordinate common measures may not achieve the greatest environmental protection, or be worth the limitation of national flexibility and the adverse impact on innovation.
- 4) Also in constructing a common menu of actions, we should pay particular attention to those that hold significant promise to reduce emissions of greenhouse gases and to be the most economically beneficial and environmentally sustainable.

Thank you, Mr. Chairman.

STATEMENT DELIVERED BY COSTA RICA
ON BEHALF OF THE GROUP OF THE 77 AND CHINA.
By Ambassador Manuel Dengo

I have the honour to speak on behalf of the the Group of 77 and China under the deliberations of the Ad Hoc Group of the Berlin Mandate.

Mr. Chairman,

The G77 and China consider that the thrust of AGBM is, in accordance with Art. 4.2(d), to strengthen the commitments of Annex I Parties under Art. 4.2 (a) and (b), and that the aspects of policies and measures and quantified emission limitation reduction objectives are entirely integrated issues. We consider AGBM has to move forward, rapidly and steadily, on emission targets, since policies and measures are a means or instrument to achieve the specific targets established.

In this context, our Group has insisted throughout the process, and again it is timely to emphasize today, that we consider the overall emissions as the important issue on which to focus.

Of course, all of the above keeping in mind, that the overall emissions of CO₂ and other GHG of Annex I countries, as stated in Article 4 Paragraph 2 should return to the levels of 1990 and not grow beyond these 1990 levels.

With reference to policies and measures G-77 and China would like to play an active role in the discussion process. This role is concerned with any discussion referring to the flexibility in time and place for applications of these policies and measures, in order to take into consideration the possible effects of these policies and measures on developing countries.

In this context the Group urges AGBM to accelerate the narrowing down of the list submitted to AGBM-2.

Mr Chairman,

As to the Non-Annex I Parties, the Group of 77 and China has repeatedly stated that we understand understand this process as established in the decision 1 /CP.1, which states that the process will not introduce new commitments for Non Annex I countries but reaffirm the commitments in art 4.1 and continue to advance the implementation of this commitments in order to achieve sustainable development taking into account art 4.3, 4.5, and particularly art 4.7 which states that " the extent on which developing countries Parties will effectively implement their commitments will depend on the effective implementation by developed Parties of their commitments

According to the Convention the necessary resources shall be provided to meet the full cost incurred by developing countries in complying with their obligations under art 12.1. This resources should be provided through the interim mechanism, the Global Environmental Facility of the Financial mechanism, however, putting the resources in the GEF is not necessarily the same as making them available to developing country Parties.

It is in this context that we will be able to fulfill our commitments under the Convention.

AOSIS interventions to AGBM-2 in response to interventions from other Parties on the agenda item of Policies and Measures.

AOSIS:

- Finds in several proposals a range of extremely useful policies and measures,
- Welcomes the effort at categorising and prioritising policies and measures and, in particular, the proposal to place these activities into a legally binding context.
- Feel, however, that such proposals alone, without the driving force of QELROs are not enough to significantly advance the process
- Feels that the approach indicated in the European interventions can be strengthened in two ways:
 - First, by placing these policies and measures within the context of a legally binding emissions target and
 - Secondly, by developing specific performance targets, such as efficiency targets or "sectoral coverage" targets, for each of the appropriate policies and measures
- This second, important element, the development of specific performance targets, will, however, take time -- more time than we fear we have before COP 3
- We would, therefore, like to explore with other interested parties, the extent to which the detailed negotiation of policies and measures, including the use of annexes indicated in the European proposal, might be supported in the longer term, by the coordination mechanism in Article 4 of the AOSIS draft protocol
- Mr Chairman, we heard yesterday from the distinguished Chairman of the IPCC, known for the moderation of his tone, as well as his great expertise, clearly identify a figure of 10-30% reductions of projected emissions of CO2 with the potential of low or no cost measures currently available. It is, therefore, clearly possible to identify a progressive emissions target with confidence that it is achievable, without agreeing in detail which policies and measures are necessary to achieve it. This is the approach reflected in the AOSIS protocol, and, we feel, essential to our making progress.

Article 4.1



AUSTRALIA

AD HOC GROUP ON THE BERLIN MANDATE

THIRD SESSION

5-8 MARCH 1996

**STATEMENT BY H. E. MR HOWARD BAMSEY
AMBASSADOR FOR THE ENVIRONMENT**

ITEM 5 OF THE AGENDA

**CONTINUING TO ADVANCE THE IMPLEMENTATION OF
ARTICLE 4.1**

7 March 1996

GENEVA

Mr Chairman,

My delegation made a substantial intervention on this subject at the last AGBM session, which remains our position. I do not need to repeat it today.

We thank the Secretariat for its suggestions in the AGBM3 annotated agenda and for the other documentation provided on this item. We agree that the focus of our consideration now should be on whether there are new actions that would continue to advance the implementation of Article 4.1. We welcome several recent indications that Parties have increased their efforts in this direction.

For example, the work on initial national communications from non-Annex I Parties advanced considerably last week through the workshop that preceded the SBSTA meeting and in the SBSTA itself. We were pleased to accept an invitation to pass on to the workshop some of Australia's experience in preparing national communications. We look forward to the SBSTA resuming its consideration of the guidelines and format for the preparation of the initial communications from non-Annex I Parties at its next session.

The adoption last week of an initial reporting framework on activities implemented jointly under the pilot phase, working from a text put forward by the G77 and China, is another step. So, too, were the reports on action to develop emissions inventories and reduce greenhouse gas emissions conveyed in the very encouraging and informative presentations by representatives of several developing countries at the informal session last week on work being done through the US Country Studies Program. My delegation was impressed by the enthusiasm, professionalism and commitment to action shown by all these presenters.

The action agreed last week by SBSTA on preparation of a technology inventory and assessment, and on related issues including adaptation technologies, information related to the terms of transfer of technology and know-how currently available, information on technologies and know-how in the research and development stage, and the diffusion and commercialisation of such technologies and know-how, will over time contribute to advancing the implementation of Article 4.1.

Exchanging information on all aspects of climate change is an important element of this Article. The shared experiences of the past week, through the four workshops here in Geneva and through the other activities I have just mentioned, have provided us with some valuable insights.

We note the statement of interest by developing countries, in the light of the IPCC Second Assessment Report, in adaptation planning.

Mr Chairman,

We want to ensure that the financial mechanism is responsive to the needs of developing countries, particularly the small island countries. In this regard, we note the recent regional conference on climate change in Sendai, Japan, where some developing countries expressed concern about the timeliness of GEF funding. Through the GEF Council, we will work to improve its functioning in accordance with COP guidance.

All these are, however, but first steps in some areas and we must ensure they lead us further forward in our response to this element of the Berlin Mandate.

Professor Bolin's statement on Tuesday to the opening session of AGBM3 on the Second Assessment Report of the IPCC, among other things, included some comments we should all consider carefully as we look to advancing the implementation of Article 4.1. We note in particular, his timely reminder that the Second Assessment Report contains numerous analyses of available policies and measures, including a large number of opportunities for significant emissions reductions at little or no cost during the next few decades. In commenting on this, Professor Bolin added, among other things, that "for their own benefit, developing countries could increase efficiency in their energy use and take advantage of new technologies and renewable forms of energy."

We have taken careful note of these comments. We consider that in order to advance the implementation of Article 4.1 as set out in the Berlin Mandate, all Parties, including non-Annex I Parties, need to take on specific new action beyond the action already under way under the convention, and that in particular there are many "no regrets" measures available to most Parties, including non-Annex I Parties, which can provide an effective way forward in advancing the implementation of Article 4.1.

A concerted effort by all Parties to examine and, where benefits are clearly identified, implement "no regrets" opportunities without delay, supported by further action in relation to national communications, activities implemented jointly, and the identification and assessment of environmentally sound and economically viable technologies and know-how conducive to mitigating and adapting to climate change, would be a significant next step in advancing the implementation of Article 4.1 of the convention.



AD HOC GROUP ON THE BERLIN MANDATE

THIRD SESSION

GENEVA, 5-8 MARCH 1996

**ITEM 5 - CONTINUING TO ADVANCE THE IMPLEMENTATION
OF ARTICLE 4.1**

**STATEMENT BY THE REPRESENTATIVE OF ITALY
ON BEHALF OF THE EUROPEAN UNION**

7 March 1996

Mr. Chairman,

Italy on behalf of the European Union would like to express its views on this important topic.

The EU believes that the information provided in national communications is an essential first step to identify the perspective and processes necessary to advance the implementation of article 4.1 and to further the involvement of all Parties in the global climate change mitigation effort.

In this context, the EU shares the concerns expressed yesterday by the Chairman that the GEF should expedite the dispersement of resources to meet the agreed full costs for the preparation of first national communications by non-Annex I Parties. The EU asks the Secretariat to report on this matter to AGBM 4.

The EU notes that SBI requested the Secretariat to prepare a report on technology transfer cooperation by the private sector for an SBI session, preferably before COP 3. We note that a statement on the Climate Technology Initiative will be made at SBI 3. This will be also relevant in the longer term to the advancement of the implementation of article 4.1 and should equally be considered at AGBM 4.

In this context the EU fully supports the proposal by Germany that for COP 2 the Secretariat compiles the proposals made on each of the central elements of the Berlin Mandate including continuing to advance the implementation of article 4.1. Parties should be invited to submit additional comments to the Secretariat by the 15 of April 1996.

Furthermore, on the question raised by the Secretariat on how issues under this item are to be reflected in the results of the Berlin Mandate process, the EU would remind Parties that in its proposal for the structure of a Protocol submitted to AGBM 2 in October 1995 it indicated that provisions for continuing to advance the implementation of article 4.1 should be included .

Taking into account the IPCC Second Assessment Report and given the projected increase in global emissions, the programmes contained in the national communications of non-Annex I Parties will allow Annex I Parties to identify how their policies and measures could enhance technology cooperation and capacity building. This would be a first step towards a global coordinated approach needed to achieve sustainable development. We therefore urge non-Annex I Parties to continue to make an active contribution towards this goal.

**United States Statement on Advancing Article 4.1 Commitments
Third Session of the Ad Hoc Group on the Berlin Mandate
March 7, 1996**

Mr. Chairman;

I would like to take this opportunity to convey our thoughts on this very important aspect of the Berlin Mandate: advancing the implementation of the Parties' existing commitments under Article 4.1 to mitigate greenhouse gas emissions. I note that the Secretariat has once again prepared several useful documents relevant to this discussion and I would like to thank the Secretariat for its valuable and timely work in this area.

At the second session of the AGBM, we heard presentations from a number of parties emphasizing the positive and diverse activities they are undertaking to implement their existing commitments under Article 4.1. We listened with interest to these presentations and were impressed with the wide array of activities. We are pleased that our cooperative work with many other countries through the U.S. Country Studies Program has played a valued role in their programs and activities addressing climate change.

As the Secretariat has noted in document FCCC/AGBM/1996/1/Add.1, advancing the implementation of Parties' commitments under Article 4.1 entails more than reporting on their current activities.

The United States believes there is a tremendous potential for all countries, including developing countries, to further their objectives for economic development and growth and to protect the earth's climate system at the same time. The IPCC Second Assessment Report concluded that there is a range of policies and actions to mitigate greenhouse gases that are appropriate, feasible, and cost-effective for all Parties. The IPCC report noted that many opportunities to reduce greenhouse gas emissions at little or no cost, or even at a profit, are available to developed and developing countries alike. By seizing these opportunities, all countries can, and must, contribute to changing the path of dramatic emissions growth that the world currently faces.

Finding and seizing these opportunities are, we believe, at the heart of the obligation of all countries to advance the implementation of existing commitments under Article 4.1.

There is much scope for developed and developing countries to work together in this endeavor. Through the Country Studies program, which I have already mentioned, the United States has been able to provide developing countries and countries with economies in transition with technical and financial help to understand the sources of greenhouse gas emissions and identify attractive options to reduce them. Through this process, and similar efforts by other countries, a number of countries have built invaluable planning capacities and technical capabilities for dealing with climate change. A few examples may help illustrate the breadth and significance of these opportunities:

- Improved refrigerator designs consume less energy while eliminating ozone-destroying CFCs. More efficient refrigerators translate directly into reduced pressure on scarce capital for expansion of power production and transmission capacity. And with power demands reduced, the path of greenhouse gas emissions growth can be reduced. Design codes and product standards for buildings, appliances and other equipment may also be useful to developing countries.

- Nutritional supplements can improve the health and productivity of cattle -- and reduce their methane emissions.

- Methane gas can be profitably recovered from coal beds before coal is mined, recovering fuel and reducing accident risks while preventing greenhouse emissions.

Countries can also improve conditions for economic development, climate protection and overall environmental quality by identifying and eliminating market imperfections, barriers to technological development and diffusion, administrative inefficiencies and constraints, and legal instabilities. Such actions lay the foundation for a cost-effective and comprehensive long-term strategy for addressing the climate change problem.

The United States believes that all parties have the opportunity to learn from one another in carrying out their Article 4.1 commitments. The open exchange of experiences and information is critical to understanding and overcoming barriers and identifying win-win solutions. To this end, we support the proposal of the G-77 and China for additional workshops as a valuable contribution to this process. There may also be value in additional meetings, perhaps on a regional basis, on opportunities to adopt best practices and other means to promote economic growth and climate protection at the same time.

We would also like to suggest that consideration be given to the possibility of using the multilateral consultative process yet to be defined under Article 13 as a vehicle for facilitating the implementation of commitments for all parties. Such a process could draw upon the expertise of a range of technical experts from both developed and developing countries. The experts would provide advice and guidance on an as-needed basis to assist parties with questions, concerns and problems relating to the full range of commitments: national inventories, assessment of mitigation and adaptation options, development of climate response strategies and programs and preparation of national communications.

An additional component of the AGBM's work to advance the implementation of Article 4.1 must be a firm commitment to an ongoing workprogram on technology. We fully support the decisions of the SBSTA and SBI on these matters and urge that the Secretariat's valuable work in this area serve as a initial step in a multi-pronged effort on technology.

Advancing the implementation of existing commitments will be a long-term process for all parties. We see it not as an objective, in and of itself, but rather as a foundation laying exercise. What we are seeking to do, at a national and global level is to lay the groundwork for a long-term strategy to meet the threat of climate change. The successful implementation of such a strategy is the key to our sustainable development.

IPCC



INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE



STATEMENT

**TO THE SECOND SESSION OF THE
SUBSIDIARY BODY
FOR SCIENTIFIC AND TECHNICAL ADVICE (SBSTA)**

Geneva, 27 February 1996

Bert Bolin

Chairman of the Intergovernmental Panel on Climate Change (IPCC)

STATEMENT

TO THE SECOND SESSION OF THE SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNICAL ADVICE (SBSTA)

Geneva, 27 February 1996

Bert Bolin

Chairman of the Intergovernmental Panel on Climate Change, (IPCC)

Chairman,
Distinguished Delegates,
Dear Colleagues,

It is a pleasure to address you on this occasion, when the IPCC has just completed its Second Assessment Report, SAR. I will try to bring home a few key messages in order to be of assistance, when you are now preparing for your advice to the AGBM. The SAR consists of:

- * the IPCC Second Assessment Synthesis of Scientific-Technical Information Relevant to Interpreting Article 2 of the UN Framework Convention on Climate Change;
- * the Science of Climate Change, the report of Working Group I of the IPCC;
- * the Scientific-Technical Analyses of Impacts, Adaptations and Mitigation of Climate Change, the report of Working Group II of the IPCC;
- * the Economic and Social Dimensions of Climate Change, the report of Working Group III of the IPCC.

The Working Group reports are very detailed and serve as the basis for the three Summaries for Policymakers (SPMs). The SPMs have been approved line-by-line by the respective IPCC Working Groups and accepted by the IPCC. These have been made available to you, in English only, together with the IPCC Second Assessment Synthesis. The last addresses the issue of stabilizing the concentrations of greenhouse gases in the atmosphere. The versions in the other UN languages should be available in about three weeks' time.

The material in the SPMs and in the rest of the SAR may need further elaboration in the context of their use both by you and by the AGBM. This could be well served in the two informal workshops that are being arranged during the next two weeks. The IPCC welcomes this initiative and will participate. You may view my presentation today as an introduction to the more detailed accounts by other representatives of the IPCC that will be given at these workshops.

It is not possible to summarize the SAR in a small amount of space. Hence, my presentation today will necessarily be selective and in that sense to some degree subjective. My aim is to address the broad, overall issues that are emerging. The choice of key points by other representatives from the IPCC that may be introduced in the workshops should speak to the

breadth of the contents of the SAR. Also, I recommend that you consult the SAR, particularly the SPMs, for many of the details.

Several key findings in the Second Assessment Report deserve careful attention.

WORKING GROUP I

- * Atmospheric greenhouse gas concentrations continue to increase leading to an increasing positive radiative forcing of climate. This tends to warm the surface of the earth and to bring about other associated changes of the earth's climate. The slow-down in the rate of increase of carbon dioxide during 1990-1993 that was pointed out in the 1994 IPCC report has come to an end.
- * The enhanced concentrations of tropospheric aerosols resulting from combustion of fossil fuels, biomass burning and other sources cause some negative (direct and indirect) forcing. This forcing is not uniform world-wide but is felt in particular regions and subcontinental areas where aerosols are present. It can locally be large enough to more than offset the positive forcing due to greenhouse gases. It has continental to hemispheric scale effects on climate change patterns. The enhanced global radiative forcing by greenhouse gases is reduced by about one third (ranging between 20 and 40%) because of aerosols.
- * Considerable advance has been made in distinguishing human-induced climate change from that occurring naturally. A major area of progress is the shift of focus from studies of global mean changes to comparisons of modelled and observed spatial and temporal patterns of climate change.
- * Our ability to quantify the human influence on global climate is, however, still limited because the signal is just beginning to emerge from the noise of natural variability. There are still uncertainties in key factors. These include the magnitude and patterns of long term natural variability and the time-evolving pattern of forcing in response to changes in the concentrations of greenhouse gases and aerosols and land surface. Nevertheless, the balance of evidence suggests that there is now a discernible human influence on climate.
- * These findings also imply that the climate models and projections of possible future changes of climate have become more trustworthy. Nonetheless, the sensitivity of the climate system to human influences is not yet well known. However, as a result of the identification of the negative aerosol effect, it now seems plausible that the sensitivity of the climate system to greenhouse gas forcing is in the middle of the given uncertainty range (a warming of 1.5-4.5°C for a doubling of carbon dioxide) rather than in its lower part as thought before.
- * For the mid-range IPCC scenarios of emissions and assuming the best estimate value of climate sensitivity, models project an increase in global mean surface temperature of about 2°C by 2100, in addition to what may have been induced by anthropogenic

emissions so far. Due to the uncertainties in future emissions and in the sensitivity of the climate system to radiative forcing, the uncertainty range of this projection is 1-3.5°C. Also, because of the thermal inertia of the oceans, only 50-90% of the eventual equilibrium temperature change would have been realized by 2100. Temperature would continue to increase beyond 2100, even if concentrations of greenhouse gases were stabilized at that time. Projected sea level is estimated to range from 15 to 95 cm with a best estimate of 50 cm by the year 2100. Sea level would continue to rise even after the global climate and the mean temperature would have stabilized.

Also, regional temperature changes may differ substantially from the change of the global mean. It is, however, not yet possible to describe with certainty how.

WORKING GROUP II

The report of Working Group II deals with the environmental impacts of climate change of the magnitude that Working Group I projects. But we encounter the fundamental difficulty in that the regional distributions of climate change cannot still be well projected. We can tell, for example, that the continents, particularly at high latitudes, will warm more quickly than the oceans. Other conclusions of a similar general kind can be drawn, but the impacts of a climate change on individual countries and their people still remain quite uncertain. Nevertheless, we can draw the following conclusions:

- * Models project that as a consequence of possible changes in temperature and water availability under doubled equivalent carbon dioxide equilibrium conditions, a substantial fraction (a global average of one third, varying by region from one seventh to two-thirds) of the existing forested areas of the earth will undergo major changes in broad vegetation types - with greatest changes occurring in high latitudes and least changes in the tropics. Climate change is expected at a rate that would be rapid relative to the speed at which forest species grow, reproduce and re-establish themselves.
- * Deserts are likely to become more extreme - in that, with few exceptions, they are projected to become hotter but not significantly wetter.
- * Global warming will lead to an intensification of the global hydrological cycle and will have major impacts on regional water resources. Changes in the total amount of precipitation and in its frequency and intensity are likely and directly affect the magnitude and timing of runoff and the intensity of floods and droughts.
- * Productivity of agriculture and forestry is projected to increase in some areas and decrease in others. Existing studies show that, on the whole, global agricultural production could be maintained in the face of climate change projected under doubled equivalent carbon dioxide equilibrium conditions. This conclusion takes into account the beneficial effects of carbon dioxide fertilization that implies more rapid growth at higher carbon dioxide concentrations, but does not allow for possible changes in the occurrence of pests. The distribution of productive land most likely will change, improving yields in some regions but causing significant set-backs in others.

- * Climate change is likely to have wide ranging and mostly adverse impacts on human health. Direct effects include increases in (predominantly cardio-respiratory) mortality and illness due to an anticipated increase in intensity and duration of heat waves. Indirect effects of climate change include increases in the potential transmissions of vector-borne infectious diseases (e.g., malaria, dengue, yellow fever and some viral encephalitis).
- * Developing countries will most likely be more seriously affected by climate change than developed countries and they may have fewer adaptation options. Estimates of damage costs remain uncertain. Therefore the question of how serious a climate change may be must largely be judged by you on the basis of qualitative assessments such as those that the IPCC is providing.

WORKING GROUP III

- * Analyses indicate that a prudent way to deal with climate change is through a portfolio of actions aimed at mitigation, adaptation and improving our knowledge. The appropriate portfolio will differ from country to country. The challenge is not to find the best policy today for the next 100 years, but to select a prudent strategy and to adjust it over time in the light of new information.
- * The literature indicates that significant no regrets opportunities are available in most countries and that the risk of aggregate net damage due to climate change, consideration of risk aversion and the precautionary principle provide rationales for action beyond no regrets.
- * A portfolio of possible actions that policymakers could consider include:
 - implementing energy efficiency measures including removing institutional barriers to energy efficiency improvement;
 - phasing out those existing distortionary policies which increase greenhouse gas emissions, such as subsidies and regulations, non-internalization of environmental costs, and distortions in transport and agricultural pricing;
 - implementing cost-effective fuel switching measures from more to less-carbon-intensive and carbon-free fuels such as renewables;
 - implementing measures to enhance sinks or reservoirs of greenhouse gases such as improving forest management and land use practices.
- * The literature suggests that flexible, cost-effective policies relying on economic incentives and instruments, as well as coordinated instruments, can considerably reduce mitigation and adaptation costs, or can increase the cost-effectiveness of emission reduction measures.

ROLE OF AEROSOLS AND INERTIA OF THE CLIMATE SYSTEM

Article 2 of the UN Framework Convention on Climate Change refers explicitly to stabilization of greenhouse gas concentrations. This implies the consideration of all greenhouse gases, i.e., carbon dioxide, methane and nitrous oxide that are increasing above their natural concentrations in the atmosphere, as well as halocarbons and the associated decrease of ozone in the stratosphere and air pollutants which serve as precursors in changing the ozone content in the troposphere.

- * The agreements within the Vienna Convention for the Protection of the Ozone Layer imply that the combined effects of CFC-gases and changing concentrations of ozone in the stratosphere will not increase much above the present level. Their current joint contribution amounts only to about 5% of the total enhanced radiative forcing.
- * Air pollution increases ozone in the lower troposphere which contributes to the enhanced greenhouse effect significantly. Future evolution of tropospheric ozone needs to be carefully checked.
- * Methane and nitrous oxide concentrations increase approximately in proportion to the increase of the human population on earth.
- * At present, the enhancement of the carbon dioxide concentration contributes about 60% of the total enhanced greenhouse gas forcing.

The IPCC has synthesized relevant scientific-technical information on the measures that may help in stabilizing carbon dioxide concentrations in the atmosphere. The analyses are described by Working Group I and will be discussed in more detail in the presentation at the QELROS workshop. I will give here some comments on the possible use of the information by the Parties. Because of the central importance of this subject, it might be appropriate for the IPCC to prepare a more detailed Technical Paper (more on IPCC Technical Papers later) on it, based on the material in the IPCC Second Assessment Report. I shall return to this issue in my talk.

It is important first to recognize that the present (1990) global radiative forcing due to greenhouse gases (equivalent to about a 50% increase in atmospheric carbon dioxide over its pre-industrial concentration) amount to about 2.4 Wm^{-2} . About 60% of this forcing is due to CO_2 with the rest due to all other greenhouse gases, particularly methane. Counteraction by aerosols is currently estimated to be about one third (ranging between 20 and 40%) of that due to greenhouse gases (compare Figure 2.6 of the Technical Summary of Working Group I).

The total net radiative forcing due to human emissions is accordingly today about 1.6 Wm^{-2} (i.e., just about equivalent to an increase of carbon dioxide of about 30% over its pre-industrial concentration). The change in the global mean temperature because of such an increase in the radiative forcing, with due regard taken of the role of the aerosols and the inertia of the climate system, agrees quite well with the observed change of the global mean temperature so far. It also implies, again, that the sensitivity of the global climate system to greenhouse gas warming seems to be about in the middle of the range of 1.5 to 4.5°C , estimated by the IPCC.

The IPCC has also provided a set of scenarios of possible future emissions of greenhouse gases, IS92a-f, if no preventive measures are taken. They span a rather large range of uncertainty. The IPCC has emphasized that ... an intermediate scenario is not the same as being the most likely scenario and our evaluation did not reveal one IS92 scenario to be more likely than any other and therefore ... it is recommended to use the full range of the IS92 scenarios as input to atmospheric climate models rather than any single scenario. The climate change issue should be viewed in terms of the possible risks for severe damage. The following account is based on the central scenarios IS92a, but can easily be expanded to include the other scenarios.

Based on the Technical Summary of Working Group I, we find that the increasing human-induced emissions of greenhouse gases according to the IS92a scenario would lead to enhanced radiative forcing equivalent to a doubling of carbon dioxide concentrations by about 2030 if the compensating effects of aerosols are ignored, and by about the middle of next century if the global effects of aerosols are included.

Any change in climate would, however, be considerably delayed because of the inertia of the climate system. Using again the IS92a scenario, the change of the global mean temperature would, at the end of the century, be between 1 and 3.5°C. This would be in addition to the change observed so far (0.3-0.6°C), i.e., rather close to the equilibrium change corresponding to a doubling of the carbon dioxide concentration over its pre-industrial value. However, emissions of sulphur would double in the course of the next century according to the IS92a scenario. The direct impacts of aerosols, primarily in the form of more severe air pollution in industrialized regions and acidification of fresh waters and soils, might call for substantial reductions of sulphur emissions (see further below also).

The discussion above is important, since it clearly shows how the long-term effects of greenhouse gas emissions are to a considerable degree hidden by the short-term enhanced aerosol concentrations and the delay due to the inertia of the climate system.

STABILIZING GREENHOUSE GAS CONCENTRATIONS IN THE ATMOSPHERE

The IPCC has analysed in some detail the issue of stabilizing the concentration of greenhouse gases. The emission scenarios for carbon dioxide that would be possible in order not to exceed given stabilization levels are given in the report. It is also in this context important to keep in mind the requirement that the issue of climate change be approached comprehensively and include consideration of the role of the other greenhouse gases and aerosols. With regard to sulphate aerosols, about 90% of the sulphur emissions are associated with the use of oil and coal and, because of the short residence time of aerosols in the atmosphere, their negative forcing would decline in pace with the reductions of carbon dioxide emissions that are required to stabilize carbon dioxide concentrations.

Since the human-induced increases of greenhouse gases already is equivalent to a carbon dioxide concentration of 420-430 ppmv, it is obviously not possible to stabilize the total radiative forcing due to greenhouse gases at a level equivalent to a carbon dioxide concentration of 450 ppmv.

If no further increases in the concentrations of greenhouse gases other than carbon dioxide are assumed, carbon dioxide itself must be stabilized at a level below 500 ppmv if atmospheric greenhouse gases are to be stabilized at a level equivalent to about a doubling of the carbon dioxide concentration (i.e., about 550 ppmv). Correspondingly, stabilization at a level equivalent to a carbon dioxide concentration of, for example, 750 ppmv, implies that carbon dioxide itself needs to be stabilized at about 650 ppmv. The increasing world population during the next century (plausibly reaching between 9 and 10 billion people by the middle of the next century) implies increasing emissions of methane and nitrous oxide, if no preventive actions are taken. This would place even more stringent restrictions on carbon dioxide emissions.

The path towards stabilization becomes important from a cost point of view and is a key issue in designing action for the future. Figure 1 of the IPCC Second Assessment Synthesis clearly shows that a delay of actions and an increase of emissions approximately along the path of the IS92a emissions scenario for another decade or two, implies a more rapid switch over to a reduction of emissions later. The question then arises: how rapidly would global society be able to change course and which path might be optimal from an economics point of view? Analysis of this question is being pursued by the expert community but no firm conclusions can be drawn.

Finally, the Berlin Mandate prescribes that the responsibility for action still primarily rest with the developed countries. Developing countries today on the average emit about 0.5 tonnes (of carbon) per capita, while emissions by developed countries are five to six times larger. The former obviously will require more energy for their sustainable development and are presently increasing the use of fossil fuels. The question arises: how are future emissions by developing countries dependent on the future emissions by developed countries, if stabilization of greenhouse gas concentrations in the atmosphere were to be achieved? It is obvious that the projected increase of world population will restrict the maximum per capita emissions for the world as a whole, for the developed and the developing countries. Further more detailed technical analyses of this issue might be helpful.

Reductions of carbon dioxide emissions to stabilize its concentration would necessitate the development and deployment of a global sustainable energy supply system.

An assessment as given above might be useful and could be extended to include a more elaborate uncertainty analysis in order to provide clearer background for answering key questions that confront the Parties of the Convention:

- How quickly should restrictions on greenhouse gas emissions be introduced?
- How far-reaching should they be?
- How effective are measures aimed at more efficient production and use of energy in slowing down and eventually reducing emissions?
- Can natural sinks (forest soils and agriculture) serve as more efficient sinks for carbon dioxide?
- At which pace should carbon-emissions-free energy systems have to be introduced in order to achieve different stabilization concentrations of carbon dioxide (as well as other greenhouse gases)?
- What do delayed actions imply?

Analysis by Working Group II of the IPCC reveals many new facets of likely impacts, but it is not yet possible to quantify these, because the geographical distribution of a climate change cannot yet be given more than in broad terms. However, even though the rate of climate change over the next few decades probably will be somewhat less than that given in earlier IPCC Reports, an important characteristic of the climate change issue that ongoing changes can only be modified gradually because of the inertia of the natural systems, remains unchanged.

The work of Working Group III of the IPCC also clearly shows that it will take time to introduce effective measures because of the inertia of the socio-economic system. It is, for example, worth noting that the major changes on the oil market that occurred during the 1970s are not visible in the changes in the observed carbon dioxide concentration, because the latter is primarily determined by the cumulative emissions over decades or longer. Major and persistent efforts are therefore required to achieve significant results. Other findings from Working Group II assessment on mitigation and adaptation options will be presented at the informal workshop on "Policies and Measures".

The conclusions drawn by Working Group III are also illuminating, i.e., "earlier mitigation action may increase flexibility in moving toward stabilization of atmospheric concentrations of greenhouse gases" and "the choice of abatement paths involves the balancing of economic risk of rapid abatement now (that premature capital stock retirement will later be proven unnecessary) against the corresponding risk of delay (that more rapid reduction will then be required, necessitating premature retirement of future capital stock)". Opportunities for abatement will be available in the context of capital stock turnover.

THE VALUE OF INFORMATION

The value of better information about the processes of, impacts of and responses to climate change is great. In order to continue to address climate change detection, model validation and model improvement, and impact analyses, long-term global observations of a host of climatological/meteorological, oceanographic, chemical, biospherical and other parameters and further research are vital.

PARTICIPATION BY INDUSTRY

For the kind of assessment conducted by the IPCC to succeed, participation in its activities of experts from all segments of society from all parts of the world is vital. The IPCC welcomes, indeed requests, nominations of experts from governments and intergovernmental and non-governmental organizations including different sectors of industry to serve as lead authors, contributors and reviewers.

CONTINUING WORK PROGRAMME OF THE IPCC

Now let me say a few words about the continuing work programme of the IPCC. The IPCC will conduct a third assessment to be completed ca. 2000. In the interim, it would continue work on methodologies, prepare short reports (called Technical Papers) for your and other use and conduct workshops and write Special Reports to prepare for the third assessment (see appendix, attached).

The IPCC has put in place procedures for the preparation and dissemination of a new kind of IPCC product, the Technical Papers. These are to be based on the material in the SAR. The IPCC Technical Papers would be produced on topics that are requested by you or can be initiated by the IPCC. They would be written by teams of lead authors, subject to expert and government review and take about six months to produce, under the auspices of the IPCC Bureau. As an example, the IPCC has proposed to produce a more detailed technical analysis on global stabilization of greenhouse gas concentrations (looking at scenarios and pathways to stabilization) in order to clarify issues of the kind that I have touched upon in the analysis above (see the appendix for other proposals from the IPCC). I should like to have your decisions on the topics for the Technical Papers so that the IPCC Bureau which is meeting on 28-29 March 1996 can take appropriate action.

The IPCC also continues to accord high priority to the further development of the Guidelines for National Greenhouse Gas Inventories. Three workshops are planned over the next couple of months on (i) sources and removal by sinks of greenhouse gases from land use and forestry (Sao José dos Campos, Sao Paulo, 21-22 March 1996), (ii) emissions from fuel combustion and industrial processes (Abingdon, UK, 29-30 March 1996) and (iii) methane emissions from rice cultivation (Bangkok, 30 April - 2 May 1996). The results would be incorporated as additions/revisions to the Guidelines. Current plans are to have these approved at the Twelfth Session of the IPCC in Mexico during the week of the 9th of September 1996, in time for you to consider for adoption.

In this connection, the IPCC will be transmitting a request to the COP/UN FCCC for \$310,000 for 1996 to cover part of the IPCC budget of CHF 494,000 for the continuing developmental work on the Guidelines for National GHG Inventories.

The IPCC has earlier expressed the view that the so-called operational aspects of the work on inventories such as the collection and interpretation of data on the emissions by sources and removals by sinks of the greenhouse gases not controlled under the Montreal Protocol, translation, publication and distribution of the Guidelines and training in the application of the Guidelines properly belong directly under the Convention. The IPCC is prepared to assist in transferring these tasks to you whenever you are ready.

The IPCC will pursue further work on methodologies as may be required.

I am very much looking forward to your work and that of the AGBM during the next two weeks. I hope that your efforts in collaboration with the IPCC will be of use in the pursuit of the work under the UN FCCC. The IPCC Bureau will meet at the end of March to follow up on the decisions and recommendation agreed by SBSTA and AGBM.

Many thanks for your attention.

CONTINUING IPCC WORK PROGRAMME, 1996-2000

1. Basic principles for the future work of IPCC

1.1 A number of principles of the IPCC process have served well through 1995 in enabling the IPCC to produce highly respected reports, which have become the standard works of reference in this field. These principles include transparency, participation by authors representing the full spectrum of relevant scientific views, expert and government review, involvement of authors, reviewers and researchers from developing countries and participation of a wide range of stakeholders, including industry and NGOs. These should continue to guide the future work of the IPCC.

1.2 As the UN FCCC is now operative, the types of scientific, technical and other information it requires and the time available for developing it needs evaluation. This has become clear since the first session of the COP. In this context, it would be useful to examine the sorts of reports that IPCC produced through 1995 and may provide in the future. It would also be useful to examine the procedures the IPCC has used to complete these reports in order to be more helpful to COP in meeting its time constraints.

2. IPCC products

2.1 The IPCC (i) assesses available, scientific, technical and socio-economic information on climate change and had produced two kinds of reports, namely, the full assessment reports and special reports through 1995 and (ii) develops and/or improves comparable methodologies (e.g., on national greenhouse gas inventories, on assessment of impacts and adaptations). The latter are published as stand-alone documents after approval following the IPCC Procedures¹ and revised as necessary in the light of new data, research, or experience in application.

2.2 After the completion of the Second Assessment Report, in accordance with the IPCC views expressed at IPCC-X of conducting full assessments every five years or so, the Third Assessment Report (TAR) should be begun ca. 1998 and completed ca. 2000. At the time of the initiation of TAR, the Panel would consider whether it would be better to complete and release the reports of the Working Groups sequentially, say, in 6-9 month intervals.

2.3 In the interim, the IPCC agreed with the view of its Bureau as to the need for a series of Special Reports. These would be on topics that would be helpful to the third assessment, or, in a general way, to COP. Their completion should take 12-18 months and would follow the IPCC Procedures.

¹ The IPCC Procedures for Preparation, Review, Acceptance, Approval and Publication of Its Reports

2.4 The two reports that could be categorized as special reports among the earlier reports are the IPCC 1992 Supplement and the IPCC 1994 Special Report. Producing these reports takes considerable time and follows these steps: Panel agreeing upon the topics to be considered; request to governments and participating organizations for nominations of lead authors; selection of, offer to and acceptance by lead authors; soliciting of inputs from other experts by lead authors, reviewing literature, producing zero-order drafts; revising the drafts in the light of comments following peer review and subsequent technical review by governments; preparation of final drafts for acceptance and draft summaries for policymakers for approval at the Working Group stage and acceptance by the Panel.

2.5 This process is the basic strength of the IPCC - its products are widely accepted as authoritative and legitimate. But its time-consuming nature means that the Panel is unable to respond in a timely manner to requests for scientific, technical and other information and advice.

2.6 The Convention through its bodies has identified needs for scientific and technical information and advice. Increasingly, it appears to be turning to IPCC as a major source of such information and advice.

2.7 Accordingly, the Panel also agreed with the proposal of its Bureau for the need for a third kind of IPCC document, the IPCC Technical Papers. At its Eleventh Session (Rome, December 11-15, 1995), the IPCC adopted by consensus the following procedures for the preparation of Technical Papers.

2.8 Procedures for the Preparation of Technical Papers

- i. IPCC Technical Papers are prepared on topics for which an independent, international scientific/technical perspective is deemed essential. They:
 - a. are based on the material already in the IPCC assessment reports and special reports;
 - b. are initiated: (i) in response to a formal request from the Conference of the Parties to the UN Framework Convention on Climate Change or its subsidiary bodies and agreed by the IPCC Bureau; or (ii) as decided by the Panel;
 - c. are prepared by a team of authors, including a convening lead author, selected by the IPCC Bureau, in accordance with the guidelines for the selection of lead authors contained in the IPCC Procedures²;
 - d. are submitted in draft form for simultaneous expert and government review at least four weeks before the comments are due³;

² The Procedures state: "Preparation of the first draft of a report should be undertaken by lead authors identified by the relevant Working Group bureau from those experts cited in the lists provided by all countries and participating organizations, with due consideration being given to those known through their publication or work. Insofar as practicable, the composition of the group of lead authors for a section of a report shall reflect fair balance among different points of view that can reasonably be expected by the Working Group bureau, and should include at least one expert from a developing country.

³ It may be recalled that in the preparation of its contribution to the IPCC Second Assessment Report, Working Group I conducted the expert and government reviews concurrently. The time given for expert and government comments was eight weeks.

- e. are revised by the lead authors based upon the comments received in the step above;
- f. are submitted for final government review at least four weeks before the comments are due;
- g. are finalized by the lead authors, in consultation with the IPCC Bureau which functions in the role of an editorial board, based on the comments received; and,
- h. if necessary, as determined by the IPCC Bureau, would include in an annex differing views, based on comments made during final government review, not otherwise adequately reflected in the paper.

ii. Such Technical Papers are then made available to the Conference of the Parties or its subsidiary body, in response to its request, and thereafter publicly. If initiated by the Panel, Technical Papers are made available publicly. In either case, IPCC Technical Papers prominently state in the beginning :

"This is a Technical Paper of the Intergovernmental Panel on Climate Change prepared in response to a [request from the United Nations Framework Convention on Climate Change] / [decision of the Panel]. The material herein has undergone expert and government review but has not been considered by the Panel for possible acceptance or approval."

iii. The Panel agreed that these procedures should be reviewed in 1997.

iv. The IPCC requested its Bureau to consider initiating Technical Papers on the following topics (which respond to requests from the Subsidiary Body for Scientific and Technological Advice of the Conference of the Parties to the UN Framework Convention on Climate Change) in 1996, after consultation in the IPCC/SBSTA (COP) Joint Working Group:

- * Technologies, options and transfer;
- * Impacts (scientific, economic and environmental) of climate change and of response measures emphasizing the needs and opportunities for developing countries;
- * Global stabilization of greenhouse gases concentrations (looking at scenarios and pathways to stabilization);
- * Simple climate models.

2.9 Possible Topics for Special Reports

The Panel decided that no new Special Reports would be begun in 1996 before its Twelfth Session. The following might be considered as subject matter for future Special Reports (this is not an exclusive list):

- * Simple climate models;
- * Global Stabilization of greenhouse gases concentrations and associated costs;
- * Aquatic and terrestrial ecosystem vulnerability;
- * Risk of instabilities;

- * Detection of anthropogenic climate change;
- * Cross-sectoral and integrated assessment of land-use implications of climate change.

2.10 Workshops

i. The IPCC decided to undertake the following workshops in 1996:

- * Regional climate prediction;
- * Emissions from land-use and biomass (under the work on National GHG Inventories)
- * Methane emissions from rice cultivation (under the work on National GHG Inventories).

ii. The IPCC would consider ways and means of undertaking most efficiently the following workshops (this is not an exclusive list):

- * Integrated assessment models;
- * Comparison of top-down/bottom-up emissions aggregations;
- * Projections/scenario methodologies for the Third Assessment Report;
- * Methodologies for economic/social impact assessment in developing countries;
- * Methodologies for estimating climate change damages;
- * Oceans/coral reefs and their roles in the carbon cycle;
- * Adaptation.

2.11 The Panel authorized the IPCC Chairman, the Co-Chairmen of the three IPCC Working Groups, the heads of the three Technical Support Units and the Secretary of the IPCC to meet to the extent required with representatives of SBSTA (and other bodies of the Convention) to exchange views on ongoing and future assessments and to finalize the topics for the Technical Papers to be begun during 1996.

ABBREVIATIONS USED

COP	Conference of the Parties to the FCCC
FAR	IPCC First Assessment Report (1990)
FCCC	United Nations Framework Convention on Climate Change
GHG	Greenhouse Gas as defined in the FCCC
INC	Intergovernmental Negotiating Committee for a Framework Convention on Climate Change
SAR	IPCC Second Assessment Report (in process of completion)
SBI	Subsidiary Body for Implementation of COP
SBSTA	Subsidiary Body for Scientific and Technological Advice of COP
TAR	IPCC Third Assessment Report (ca. 2000)

STATEMENT TO THE
THIRD SESSION OF THE
AD HOC GROUP ON THE BERLIN MANDATE

Geneva, 4 March 1996

Bert Bolin
Chairman of the Intergovernmental Panel on Climate Change (IPCC)

I appreciate this opportunity to speak to you today. I addressed the SBSTA last week on some of the essential findings of the IPCC Second Assessment Report (SAR). That address can apply here also and is available to you. I wish to make a few additional comments and clarifications in view of the discussions of the SAR in SBSTA and then also elaborate on the outcome of the two AGBM workshops held over the last few days.

Let me begin by expressing my appreciation for the serious consideration of the SAR given by SBSTA. While not in any way attempting to judge the interpretation placed by various governments on the contents of the SAR, I find that the conclusions drawn by the SBSTA are exclusively based on the IPCC report. I take this to imply that the SAR has been and is useful for all Parties.

I recognize that any kind of extraction from the SAR, including the one I did last week for SBSTA, will provide an incomplete version of its full message. This is why I recommended to SBSTA last week "to consult the SAR and particularly the three Summaries for Policymakers for many of the details". I ask you now to take into account the objectivity of the IPCC analyses in your deliberations, an objectivity that the IPCC has always been striving for.

I also wish to note that, while the IPCC has been careful to point out the uncertainties associated with its conclusions, there are several important findings in the SAR that are quite robust.

Let me briefly dwell on perhaps the most important finding of the SAR, i.e. "the balance of evidence suggests that there is a discernible human influence on global climate". This statement has been very carefully arrived at based on the following four factors:

- (i) The global mean surface air temperature has increased by about 0.5°C during the last hundred years; this, because of natural variability, is in itself not sufficient to draw the above conclusion.

- (ii) Model computations indicate that increasing carbon dioxide in the atmosphere will lead to increasing temperatures in the lower atmosphere and a cooling in the stratosphere. Observations agree with these indications.
- (iii) The Southern Hemisphere has warmed somewhat more than the Northern Hemisphere during the past about 50 years. This is consistent with the fact that more than 90% of the anthropogenic sulphate aerosols are found in the Northern Hemisphere.
- (iv) Similarities are found between the observed spatial patterns of climate change in the Northern Hemisphere during the last 50 years or so and model projections.

It has not been possible to explain these factors by any theory other than that of human influence on global climate. These findings also have added to the validation of climate prediction models. Projections of future changes of climate due to given emission scenarios have become somewhat more trustworthy, as a result.

Natural variability does not negate the conclusion about the human influence on global climate. But, it makes it as yet difficult to narrow the range of the uncertainty in climate sensitivity (1.5 to 4.5°C for a doubling of carbon dioxide concentration over its pre-industrial value). In this sense, uncertainty remains.

I would like to remind you in this context that the IPCC has always emphasized that the full range of the uncertainty, from the lower to the upper bound, be recognized. Uncertainty does not eliminate risk but makes it difficult to assess it quantitatively.

I would also like to remind you of my statement last week that "no regrets" opportunities are available in most countries to address climate change and that the expectation of aggregate net damages, risk aversion and the precautionary principle provide rationales for actions beyond "no regrets". The challenge is not to find the best policy today for the next 100 years but to select a prudent strategy of adaptation, mitigation and research and to adjust it over time in the light of new information.

I discussed in some detail the issue of stabilization of greenhouse gases in my presentation to SBSTA last week, which issue was also discussed during the QELRO workshop. The SBSTA is requesting the IPCC, inter alia, to carry out a more detailed analysis of the implications of choosing a large variety of stabilization pathways and to derive associated emissions profiles for all greenhouse gases. The IPCC Bureau will decide at the end of this month on the preparation of a Technical Paper on this topic. It should be available before the AGBM session planned for December 1996. It would seem appropriate in this context to examine also the modifications of the scenarios of future greenhouse gas concentrations that would result from the reductions of emissions proposed by AOSIS and others.

The first session of COP agreed that the current commitments in the Convention were inadequate to reach the Objective (Article 2) of the Convention. This is of course the reason why the issue of policies and measures is high on your agenda for this session. The SAR contains numerous analyses of available policies and measures, including a large number of options which can achieve 10 to 30% emissions reductions at little or no cost during the next few decades.

Document 2 presented to you by the Secretariat attempts to structure these for your use. The IPCC can, if requested, through a Technical Paper, further elaborate on this issue by December of this year, to assist your task.

In the course of the IPCC assessment, I was struck by the increasing interest by industry and business in Annex I countries to develop these options for implementation. This was reinforced during the workshop yesterday. It is becoming clear, from the analyses of possible emission profiles for stabilizing concentrations, that cooperation between developed and developing countries will become increasingly important. Commercial and other interactions between the developed and the developing countries are bound to continue to increase in the future. For their own benefit, the developing countries could increase efficiency in their energy use and take advantage of new technologies and renewable forms of energy. This will also contribute to the reduction of greenhouse gas emissions gradually.

Thank you for your attention.



**SUBSIDIARY BODY FOR SCIENTIFIC
AND TECHNOLOGICAL ADVICE
SECOND SESSION**

GENEVA, 27 FEBRUARY - 4 MARCH

ITEM 4 - SCIENTIFIC ASSESSMENT

**(A) Consideration of the Second Assessment Report of the
Intergovernmental Panel on Climate Change (IPCC)**

**STATEMENT BY THE REPRESENTATIVE OF ITALY
ON BEHALF OF THE EUROPEAN UNION**

27 February 1996

1. The EU congratulates the IPCC on the successful completion of the Second Assessment Report and extends its thanks to the scientists, experts and officials who were involved in its production. This comprehensive and authoritative report is a major achievement and provides a sound and compelling basis for developing policy further under the Framework Convention on Climate Change.

2. The EU requests the SBSTA commends the whole of the IPCC summaries and the synthesis report to the bodies of the Convention as valuable for their work., since the IPCC documents were extensively discussed in the various IPCC plenary sessions in last year and represent finally balanced text already approved by delegations. Of course this work should also be addressed to Parties, organizations and institutions, accompanied by a call to disseminate the information in these reports as proposed in paragraph 29 of document SBSTA/1996/7.

3. Additionally, mister chairman, the EU would like to see that the recommendations on the issue of research and observation, are brought together and forwarded to CoP 2 as a point of action. Further on this matter we think it would be helpful if the secretariat could prepare a document on priority actions, to be discussed by SBSTA 3.

4. The concentrations of all GHGs in atmosphere are increased since pre-industrial era. These trends can be attributed largely to human activities, mostly fossil fuel use, land-use change and agriculture. The increase has led to a positive radiative forcing of climate, tending to warm the surface of the earth and to produce climate change. An increase of mean global surface temperature has been also recorded in the last century.

5. The EU notes with concern that IPCC has stated now that the balance of evidence suggests a discernible human influence on global climate. Unless urgent action is taken the global mean surface temperature is projected to rise by about 2°C by 2100. This rate is about four time faster than in the previous century, an average rate of warming which is probably greater than any seen in the last 10,000 years. Since the IPCC's First Assessment Report in 1990 there has been a reduction in the scientific uncertainty attached to this change in temperature.

6. Climate change will produce many effects on human health, terrestrial and aquatic ecological systems, and on socio-economic systems. The IPCC report points out that as a consequence of this temperature rise the sea level is projected to rise by about 50 cm. by 2100; and that there will be other adverse effects of climate change, some of which are potentially irreversible.

7. If emissions of carbon dioxide were maintained at current levels, atmospheric concentrations would rise steadily, and would continue to do so for several hundred years. Stabilization of atmospheric concentrations at twice the pre-industrial level will eventually require global emissions to be less than 50% of current levels. At any rate, such stabilization will require not less than a century.

8. Any eventual stabilized concentration is governed more by the accumulated anthropogenic carbon dioxide emissions from now until the time of stabilization, than by the way those emissions change over the period. This means that, for a given stabilized concentration value, higher emissions in early decades require lower emissions later on.

9. Nevertheless, the IPCC notes that significant reductions in greenhouse gas emissions are technically possible, and can be economically feasible. It also notes that significant "no-regrets" opportunities are available; and that there is a rationale, on the basis of potential risk, for action beyond no regrets. There are large differences in the cost of reducing greenhouse gas emissions, and enhancing sinks, among countries due to their state of economic development, infrastructures choices, and natural resource base. International cooperation in a framework of bilateral, regional or international agreements could significantly reduce the global cost of reducing emissions and lessening emission leakages.

10. The scale of the problem requires urgent action on the precautionary principle at the widest possible level. For Annex I Parties the first task must be to succeed in returning emissions to 1990 levels by the year 2000. Annex I Parties must also agree on credible and challenging limitation and reduction objectives for the early years of the next century. They must develop policies and measures which will continue to contribute towards the eventual aim of reducing global emissions by more than 50%, in the longer term in order to lessen the impacts of climate change spelt out in the IPCC's Second Assessment Report.

11 If we are to achieve the ultimate objective of the Convention, all Parties must strengthen and renew their efforts. As the Berlin Mandate says, "the Parties [to the Convention] should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and capabilities". The EU believes that Annex I Parties must take the lead in combating climate change and its adverse impacts; non-Annex I Parties must continue to advance the implementation of their commitments.

Importance and Implications of the IPCC Second Assessment Report

U.S. Intervention at the SBSTA meeting during the discussion of the IPCC

The USG finds the IPCC Second Assessment Report to be an extremely useful document. It has achieved the goals of being scientifically credible and policy relevant, without being policy prescriptive.

In our opinion the key findings of the IPCC can be simply summarized:

- (i) the atmospheric concentrations of greenhouse gases and aerosols are increasing because of human activities;
- (ii) the balance of evidence suggests a discernable human influence on the Earth's climate, remaining uncertainties not withstanding;
- (iii) without global climate specific policies to mitigate greenhouse gas emissions, the Earth's temperature is projected to increase by between 0.8 to 3.5 degrees centigrade by 2100: a rate faster than anything observed during the last 10,000 years;
- (iv) the atmospheric lifetime of many greenhouse gases, coupled with the thermal inertia of the oceans, means that the warming effect of anthropogenic emissions will be long-lived--even extremely sharp reductions in greenhouse gas emissions would reverse warming only slowly;
- (v) these projected changes in climate will result in adverse affects on human health (particularly via vector-borne diseases) and many ecological systems (especially forests) and socio-economic sectors (e.g., the regional production of food). Developing countries would be particularly vulnerable to these impacts;
- (vi) a range of cost-effective technologies and policies can be used in both developed (Annex I) and developing (non-Annex I) countries to markedly reduce the net emissions of greenhouse gases from industrial, energy supply, energy demand, and land management practices;
- (vii) we must all recognize that international and intergenerational equity issues are critical for policy formulation; and
- (viii) there is justification for going beyond a no-regrets strategy.

We would like to congratulate and thank everyone involved in the IPCC on completing this assessment in a timely manner. We recognize that many scientific and technical experts generously donated their time both to the preparation and review of the SAR. We also recognize that IPCC had to tackle a number of complex and often controversial issues and appreciate their fortitude in successfully resolving each of them.

We believe that the IPCC has matured significantly since its creation in the late 1980s, and has made major strides since its first assessment report in ensuring broad stakeholder involvement, including participation of experts from both developed and developing countries, scientific credibility, and transparency in its process. However, we, like others, have suggestions on how the process can be even further strengthened, but these suggestions should in no way diminish the outstanding accomplishments to date. We believe the IPCC process would be significantly strengthened with a greater involvement of industry, business and

and environmental NGO experts, especially in the assessment of technologies, policies and their costs, and we must seek ways to make the assessment process less of a time burden for scientists, who, after all, are the ones that must have time to advance the understanding that we seek and will need in the future.

While the IPCC clearly recognizes that significant scientific uncertainties exist, its findings underscore the importance of the Climate Convention, and clearly demonstrate that the current measures for Annex I countries alone are inadequate. They also show that there are many cost-effective approaches to reduce net emissions in all parts of the world, which if implemented would provide significant environmental benefits. In non-Annex I countries, many of these options will improve prospects for sustainable development and management of resources. While we are clearly not technology limited in making some initial progress in reducing projected greenhouse gas emissions, deep long-term cost-effective reductions will require an intensive R&D program into energy, industrial and crop technologies. Therefore, it is clear that we collectively must redouble our efforts in identifying the most cost-effective global approaches to reduce emissions in both the near- and far-term utilizing a broad portfolio of actions.

The US strongly endorses the procedures developed in Rome to commission, prepare and peer-review a limited number of "policy relevant" technical papers of value to the COP or one of its subsidiary bodies during the coming year.

We believe that the following three topics, in order of priority, are appropriate topics for IPCC technical reports. In each case the work should be based upon the models and underlying work undertaken for used in the SAR:

- o The SAR provides long-term emissions profiles to achieve different levels of stabilization of atmospheric concentrations of carbon dioxide. We believe it would be useful to provide additional emissions profiles for carbon dioxide (different pathways to stabilization, different stabilization levels, and different times of stabilization), and for mixes of greenhouse gases (and to the extent possible, aerosols).

Develop a set of emissions profiles for: (i) atmospheric stabilization levels between 400 and 1000 ppmv for CO₂ using different stabilization times and multiple pathways to stabilization at each time considered; (ii) total radiative-forcing stabilization for ensembles of greenhouse gases, and if possible aerosols, emphasizing the near-term using 20, 50 and 100 year global warming potential (GWP) coefficients. For each emissions profile simple climate models should be used to assess the implications for global mean temperature and sea level, in ten year intervals. Strengths and weaknesses of the carbon and climate models should be assessed.

Information regarding the technical feasibility, including the timing of the availability and diffusion of technologies and range of costs associated with these emissions profiles would be extremely useful. If such information is not available, then we believe that this technical paper would provide a basis for a future special report which would then include such considerations.

- We believe that it would be useful to the CoP for IPCC to assess, to the degree possible, the implications of different emissions limitation proposals.

Assess the levels of anticipated global emissions of greenhouse gases and aerosols, and potential climate change, that could occur from application of the various emissions limitation proposals under discussion in the literature and within the CoP subsidiary bodies and working groups. Include as one of the proposals, the AOSIS-proposed protocol. Indicate for the types of emission limitation proposals, what levels of change in global emissions would occur with time over the next 100 years in 10 year intervals.

We believe that this technical paper would provide a basis for a future special report which would assess the technical feasibility and range of costs associated with these emissions scenarios. This could build upon the work of the SAR, EMF-14 and other modeling activities.

- While IPCC has helped develop inventorying and reporting approaches for carbon dioxide, we believe that it would be useful to expand this work to other greenhouse gases.

Develop methodologies for inventorying and reporting greenhouse gas emissions, other than carbon dioxide.

We believe that the next three topics, in order of priority, could also merit IPCC attention prior to the Third Assessment Report. We note that SBSTA has not yet taken up the issue of the TAPS, and that there may be some overlap. If the IPCC is to do this work, we feel these topics would best be addressed as Special Reports. It is vital that the private sector (industry and business) experts be involved in the preparation of these reports. We recognize that getting the appropriate private sector experts more involved is likely to take time. Hence, special report preparation and review procedures are the most appropriate as IPCC expands into providing a new level of expert involvement.

- Provide an assessment of the major deployment and commercialization constraints to energy supply and end-use technologies that are anticipated to provide no or lower rates of greenhouse gas emissions as well as on promising methods of overcoming such constraints.
- Analyze which technologies and practices appear most fruitful for reducing emissions in the transportation sector over the next 25 years and by 2050 for both Annex I countries and developing countries, and in both in large urban centers and for inter-regional transport.
- An analysis of the potential to reduce emissions by combining options for energy demand and supply.

We believe that the following topics should be initiated at this time since the early products of these tasks are needed to provide general information for coordination of several parts of the

We believe that the following topics should be initiated at this time since the early products of these tasks are needed to provide general information for coordination of several parts of the Third Assessment Report.

- Develop new emissions scenarios, placing emphasis on:
 - how best to extrapolate demand far beyond the current income range;
 - how to treat regional differences; and
 - how to account for non-greenhouse policies (smog and acid rain, for example) that might affect emissions of sulfates and greenhouse gases.
- Short- and long-term model projections of regional climate change reflecting recent, imminent and plausible control measures for aerosols.
- An integrated analysis of land-use and land cover, involving agriculture, natural forests, food production, and biomass energy.

Climate Technology Initiative

Statement made by the delegation of the Netherlands on behalf of OECD countries participating in the CTI to the second session of the Subsidiary Body on Scientific and Technological Advice, Geneva, March 1, 1996.

CLIMATE TECHNOLOGY INITIATIVE

Mr. Chairman,

Delegates will recall that the Climate Technology Initiative (CTI) was announced on behalf of participating OECD countries by The Minister for the Environment of The Netherlands during COP-1 in Berlin. I would like to provide a brief progress report on activities since then to further develop and implement the CTI, again on behalf of participating OECD countries.

In recognition of the fundamental importance of technology development and deployment in the context of combatting global climate change, the CTI was established to assist all interested countries (and not only those belonging to the OECD) in meeting both the shorter and longer term objectives of the Climate Convention. The CTI aims to enhance markets for and reduce barriers to available new and improved technologies which have the potential to reduce net greenhouse gas emissions. It also stimulates research and development and diffusion of medium to long-term technologies that can contribute to more far reaching reductions that will eventually be required to meet the Convention's ultimate objective.

Since April 1995, when the CTI was first announced, participating countries have continued to take a wide variety of actions. Some examples of recent developments in four (out of a total of eight) areas covered by the CTI are:

- new national initiatives and international exchange of experience in promoting cooperation between governments and the private sector via voluntary agreements on the application and diffusion of cost-effective climate-friendly technology
- an international workshop organised in the context of the CSD discussion on technology issues on methods and approaches to assess national technology needs in developing countries
- the further expansion and linking of IEA's GREENTIE information system on greenhouse gas reduction technologies with the Convention's CC:INFO electronic information system
- continued expansion of cooperative arrangements between countries on research and development regarding energy efficiency, renewable energy and greenhouse gas reduction technologies.

For five areas covered by the CTI, Task Forces were established to develop additional action plans, terms of reference were agreed and lead countries were appointed. These Task Forces are going to engage also, where appropriate, developing countries and multilateral development banks and institutions in their work. The areas are:

- technology aspects of national plans and programs, such as those prepared under the Climate Convention;
- the establishment and strengthening of networks between national and regional renewable energy and energy efficiency centers;
- the creation of bigger markets for emerging climate friendly technologies in order to promote reduction of costs;
- promoting the recognition of climate-friendly technologies through creation of national and international awards;

- assessment of feasibility of developing longer-term innovative technologies to capture, remove or dispose of greenhouse gases.

For the programmes on the use of voluntary agreements and research and development of climate-friendly technologies the OECD and IEA secretariats have been asked to identify additional activities that can strengthen the ongoing work.

An inventory of both national, bilateral and multilateral activities is nearing completion and will be published and made available in time for COP-2 in conjunction with an overview of any new activities that will be started as a result of the Task Force recommendations.

Let me finish by emphasising once more that CTI activities are being initiated by participating governments, but implemented in consultation and collaboration with participants from developing countries, the private sector and non-governmental organisations and that participation in CTI activities is welcomed from all interested Parties to this Convention.

Thank you, Mr. Chairman

Protocol vs Amendment



AUSTRALIA

AD HOC GROUP ON THE BERLIN MANDATE

THIRD SESSION

5-8 MARCH 1996

STATEMENT BY H. E. MR HOWARD BAMSEY
AMBASSADOR FOR THE ENVIRONMENT

ITEM 6 OF THE AGENDA

POSSIBLE FEATURES OF A PROTOCOL OR ANOTHER
LEGAL INSTRUMENT

6 March 1996

GENEVA

Mr Chairman

My delegation thanks the secretariat for its valuable work in preparing the agenda paper for this agenda item (document FCCC/AGBM/1996/4), and notes that the secretariat has suggested that the AGBM may wish to give guidance on the preparation of a more detailed document on features of a protocol or another legal instrument. I shall begin with some general observations before turning to our suggestions for further work on the issues raised by the secretariat.

Mr Chairman, the structure and features of a protocol or another legal instrument will evolve, to some extent, as the AGBM process continues. There is a need however for the AGBM to give substantial and informed consideration to these issues during this evolution. In this regard we welcome the views advanced by countries both through discussion in this forum and in countries' statements. We are sure that proposals, including the EU protocol structure, (the US statement on an amendment to the Convention) and the AOSIS protocol proposal, will prove valuable in establishing views about the form of a protocol emerging from these negotiations.

Australia reiterates the view that, irrespective of its final form, a protocol will need to contain the following key features:

- First it must address all greenhouse gases, sources and sinks in a comprehensive manner;
- It must also address all the elements and the guidance contained in the Berlin Mandate and provide practical ways of implementing these elements.

In relation to the option of an amendment to the Convention rather than a protocol as the outcome of the AGBM process, we have yet to reach a conclusion. In any case we believe that the question of form will be difficult to finalise until questions of content are more advanced.

We continue to believe that both options for the AGBM outcome should be subject to careful consideration from both the secretariat and the AGBM.

Indeed the secretariat paper might usefully be further expanded and up-dated to reflect discussion at this session and to address other issues relevant to this agenda item as providing

some additional consideration of institutional and procedural issues already identified by the secretariat. We offer the following suggestions as an aid to this process.

Turning first to general issues flagged by the secretariat, there might be value in the secretariat performing some analysis on the possible role that other types of legal instrument, such as decisions, resolutions, declaration and guidelines, might perform in addition to any formal legal instrument or instruments that may emerge from the AGBM process. The AGBM may also wish to consider the advantages and disadvantages of a completely separate legal instrument.

To assist discussion on this agenda item, the secretariat has identified a raft of institutional and procedural issues that will require consideration during the AGBM process. These include arrangements for: the conference of parties, the secretariat, subsidiary bodies, communication of information and the financial mechanism. Given that the implications of these issues are potentially wide ranging, there would be value in the secretariat investigating these issues in more depth with a view to providing a further report to the AGBM at its forth session.

In relation to arrangements for the conference of parties under a legal instrument, we note that the secretariat has suggested that, under the amendment option, decisions pertaining to the amended provision could be taken only by those parties which have formally accepted the amendments (document FCCC/AGBM/1996/4, para 10). Our own research suggests that this issue may well bear further examination. It seems that, under the Montreal Protocol, various amendments may operate simultaneously although not all amendments apply to all parties. Nonetheless, all decision-making is carried out in one forum - the Montreal Protocol Meeting of Parties. We suggest that the secretariat might consider examining the functioning of this and other treaties in relation to them handling of this issue and providing clarity on the range of options available to us.

Australia endorses the secretariat proposition that an agreed principle for the elaboration of any legal instrument would be that, in the interests of administrative efficiency and in the light of budgetary constraints, parties would prefer to avoid the establishment of new institutions. Australia supports the need for rigorous efforts to reduce additional costs that may be associated with the implementation of the outcome from the AGBM process. In this regard, it would be desirable for secretariat functions for any legal instrument to be carried out by the Convention secretariat. We suggest that the AGBM secretariat might examine how any

practical difficulties deriving from the assumption of such additional duties by the Convention secretariat might be overcome.

The AGBM secretariat could adopt a similar approach to investigating how the Convention's subsidiary bodies might perform additional tasks under a protocol or another legal instrument.

Requirements for the communication of information under a legal instrument, are important issues that will need to be kept in mind by countries as the analysis and assessment phase progresses. However the nature of, and the necessity for, reporting and review provisions will be determined, to a great extent, by the structure, content and type of outcome of the AGBM process.

Mr. Chairman,

Italy, on behalf of the EU, would like to repeat its congratulations to the Secretariat for its very clear and comprehensive document.

Since the Secretariat has been asked to submit a detailed report to AGMB4 on the issues relating to the structure of a protocol (FCCC/AGBM/1995/7 para. 52), the EU thinks that detailed consideration would benefit greatly from a structured compilation by the Secretariat, possibly as part of an annex to the report, of the various specific proposals that have been made by Parties in the course of AGBM work.

To this end, the EU would like to make the following preliminary remarks on this issue which it hopes will help the Secretariat in preparing that report.

The EU recalls that it has already expressed its preference for a protocol.

We welcome the overall approach contained in Doc. FCCC/AGBM/1996/4 and in particular its assumption that it would be preferable "to avoid the establishment of new institutions in a protocol regime unless essential". As far as possible, the Convention's existing bodies should also serve the protocol. In addition, we would like to stress that, in our opinion, an instrument of a quasi-legal or "soft law" nature would not be an adequate response to the requirements of the Berlin Mandate.

As regards the Conference of the Parties, the EU thinks meetings of the Parties to the protocol should be held, as far as practicable, in conjunction with those of Conference of the Parties of the Convention on Climate Change, comparably to the ways developed in the context of the Vienna Convention for the Protection of the Ozone Layer or the Geneva Convention on Long Range Transboundary Air Pollution. Administrative and organizational coherence between the Convention and protocol is important and must be preserved. Consequently, in order to minimize complications in the operation of the process, the Subsidiary Bodies of the Convention and the Secretariat also ought to serve the protocol.

The relationship of protocol to the financial mechanism of the Convention will need to be considered in the light of the protocol's content.

Communications and review of information will be even of greater importance under the protocol than they are under the Convention. We agree that the reporting and review procedures of the protocol should be integrated into those of the Convention.

The protocol to be designed by AGBM seems certain to lead to an increased need for the review of individual Parties' performance. An MCP established by the COP under Art. 13 should apply to the protocol. In this regard, we would like to note that the EU is on record as saying that AG13 should aim at designing the MCP procedure in such a way that it could be adapted to related legal instruments.

As regards the rules of procedure and financial procedures of the Convention, these should be made to apply to any protocol save to the extent that the Parties to the Protocol decide otherwise.

Mr. Chairman, having made these remarks the EU remains open to listen to the views of the Parties on this subject.

Statement of the U.S. Delegation on
Possible Features of a Protocol or Another Legal Instrument
Ad Hoc Group on the Berlin Mandate -- Third Session
March 7, 1996
Geneva

Thank you, Mr. Chairman. Let me begin by noting that the Ad Hoc Group on the Berlin Mandate (AGBM) will meet twice more this year and two times next year prior to the Third Session of the Conference of the Parties. While my delegation has strongly supported analysis and assessment in the early stages of our negotiation, we are also very much aware that time is of the essence. We must move forward sensibly, but progressively -- not only because we are required to do so under a decision taken last year in Berlin, but because the scientific evidence of climate change continues to mount. The Second Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) now indicates that there is discernible human influence on the climate system. Over two thousand of the world's leading scientists have now concluded that recent trends can no longer be attributed solely to natural variability.

Clearly, there are still uncertainties, but it has become increasingly certain that we cannot seek refuge in scientific uncertainty. The stakes are simply too high -- the costs of inaction are too great. We must proceed resolutely on the course set in Berlin.

I make these observations about the urgency of our work because they may have a significant bearing on the choice of instrument we will use to adopt the results of our work next year. The United States urged strongly in Berlin, and we continue to urge, that the specific instrument chosen is only a vehicle -- we must ultimately choose a specific legal instrument that provides the swiftest, most efficient means of reaching our common objective. What is important in the first instance is defining an objective. We should then be in a position to choose the specific vehicle.

Need to Resolve Rules of Procedure

At present, whether a protocol or amendment offers the clearest advantages is not discernible. Our vision is clouded, in part, because of continuing uncertainty regarding the rules of procedure we will follow in adopting a protocol. To lift the fog, we urge that COP2 in July spare no effort to resolve this issue.

Possible Advantages of an Amendment

Meanwhile, however, we think it important to restate as clearly as possible the advantages we see in an amendment -- if only to ensure that this option continues to remain at hand. Mr. Chairman, let me underscore that the United States has not as yet taken a position to support one form of legal instrument over another. To attribute even a preference to us would be to misunderstand our position in and since Berlin -- that the choice of legal instrument will depend on the commitments it is intended to reflect. So let me say in the clearest terms that we are not opposed to a protocol per se.

With regard to an amendment, we note the following points:

- * The negotiation of an amendment could focus on a handful of convention provisions, as opposed to requiring negotiation of all the provisions that the creation of a separate legal

instrument entails; as such, needless controversy might be avoided, and considerable time might be saved.

- * An amendment would not raise complex issues concerning its relationship to the convention's institutions (e.g., Conference of the Parties, Subsidiary Body for Scientific and Technological Advice, Subsidiary Body for Implementation); those institutions would simply apply. Such an approach would not only simplify the negotiation, but would be consistent with the worldwide trend toward streamlining of global institutions.
- * The rules governing the adoption of an amendment are already set forth in the convention and are not dependent on reaching further agreement on the rules of procedure.
- * If the convention is to function as a long-term vehicle for addressing climate change, it may be more appropriate to develop a series of amendments over time to one convention than to begin a proliferation of separate legal instruments.

Thus, we see a number of advantages to an amendment, and reiterate that the time has not yet come for us to settle on the specific legal instrument. I would note that the three-annex approach tabled by the European Union at our last session in November could fit as easily under an amendment as under a protocol – we saw nothing about the EU proposal that would confine it to a protocol. But again, Mr. Chairman, it may be that we will decide ultimately in favor of a protocol – and we are convinced that a protocol could also meet our needs. Let us avoid a rush to judgment, however, until we have a clearer idea of the commitments we will adopt next year.

SPECIFIC RESPONSE TO FCCC/AGBM/1996/4

Mr. Chairman, we believe that the Secretariat has done an excellent job in its paper on "Possible Features of a Protocol or Another Legal Instrument" in setting forth the issues involved. We have a number of specific points related to that paper.

- * Paragraph 2 – The paper notes that it does not address the option of a completely separate legal instrument. To our understanding, a legally binding instrument would either be an amendment or a separate legal instrument. Thus, the notion of a "protocol" that is neither a de facto amendment nor a separate legal instrument is not clear to us. If other colleagues on the secretariat can cite examples of protocols that are neither separate legal instruments nor amendments, even if they are called "protocols," we would be interested in studying them.
- * Paragraph 3 – We completely agree with the secretariat's assumption that, in the interest of administrative efficiency and in light of budgetary constraints, we should avoid the establishment of new institutions in a protocol regime unless absolutely essential.
- * Paragraph 5 – In our view, it should go without saying that it is the Parties to an amendment or protocol that should have decision-making authority thereunder.
- * Paragraphs 7-10 – We agree that a protocol would have to have its own COP.
- * Paragraph 11 – We agree that the work program of the convention secretariat could be expanded to serve a protocol regime or an amendment regime.
- * Paragraph 12 – We are not convinced that the SBI, given the language of Article 10, could

serve a protocol; we agree, however, that the only basis on which the SBI might be instructed to do so is likely that found in Article 7.

- * Paragraph 16 -- Under an amendment, the current Article 12 requirements to communicate information might not require amendment -- or might require only modest amendment. For a protocol, relevant Article 12 provisions would need either to be incorporated by reference (perhaps with appropriate modifications) or spelled out de novo in the protocol obligations.
- * Paragraphs 17-18 -- We agree that a consultative process developed for the convention would apply to an amendment, whereas the States negotiating a protocol would need affirmatively to decide whether to have such a process (either that developed for the convention or a different one) apply to a protocol.
- * Paragraph 19 -- We agree with the secretariat's paper on the applicability of dispute settlement to an amendment or protocol.
- * Paragraph 20 -- We may need to make clear in an amendment that only Parties to the amendment will be able to take decisions concerning the amendment.
- * Paragraph 22 -- The need to negotiate final clauses for a protocol, rarely a simple or speedy task, is an argument that tends to support an amendment, since these issues are already fixed for an amendment in the convention itself.

Mr. Chairman, we would like to again thank the secretariat for its fine work on this paper.

WORKSHOP ON QELROS



**Informal Workshop on
Quantified Emission Limitation and Reduction Objectives**

Wednesday, 28 February 1996
3:00 - 8:00 p.m.
Palais des Nations, room XXI

Chair: Dr. Pascale Morand Francis (Switzerland)

3:00 Opening Remarks by the Chair

A. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

3:15* Presentation on its findings relevant to quantified emission limitation and reduction objectives

Prof. B. Bolin

Chairman, IPCC

Sir J. Houghton

Co-Chair, Working Group I

Dr. R.T. Watson

Co-Chair, Working Group II

Dr. J.P. Bruce

Co-Chair, Working Group III

Discussion

B. TECHNICAL PRESENTATIONS

4:45 Model Results: What they tell us about setting QELROs

Energy systems and modelling: Capabilities weaknesses, and possible implications for the development of QELROs

Dr. M. Grubb

Head, Energy and Environment Programme, Royal Institute of International Affairs

Key messages from the International Energy Agency's World Energy Outlook

Mr. L. Solsbery

Head, Energy and Environment Division, International Energy Agency

* The time estimates are indicative only.

The Berlin Mandate: The design of cost-effective mitigation strategies. Preliminary results from the Energy Modeling Forum, Study 14

Dr. J. Edmonds

Energy Modeling Forum - 14, Stanford University, U.S.A.

What level emission reductions can be achieved at zero or negative net cost? Results from recent bottom-up and integrated bottom-up/top-down assessments

Dr. F. Krause

Director, International Project for Sustainable Energy Paths

Near-term strategies for long-term climate protection

Dr. J. Alcamo

IMAGE Project Leader, National Institute of Public Health and Environmental Protection, Netherlands

Discussion

6:30 QELROs Issues

Emissions budgets: Creating rewards, lowering costs, and ensuring results

Dr. D. J. Dudek

Senior Economist, Environmental Defense Fund

Achieving equitable outcomes between Annex I Parties

Australia

Emission reduction criteria, methodologies and differentiation

Dr. M. Sadowski

Head, Climate Protection Centre, Institute of Environmental Protection

Dr. F. Krawczynski

Director, Sectoral studies and Infrastructure, Central Office of Planning
Poland

Assessing the advantages of differentiated commitments, possibly including draft indicators

Ms. Y. Kawashima

Researcher, Social and Environmental Systems Division, National Institute for Environmental Studies

Dr. N. Matsuo

Senior Economist, Electricity Group, The Institute of Energy Economics
Japan

Discussion

7:45 Closing Remarks

**Ad Hoc Group on the Berlin Mandate
Third session
Geneva, 5-8 March 1996**

**Statement by Dr. Pascale Morand Francis
Chair,
Informal workshop on quantified limitation and reduction
emission objectives**

I am pleased to report on the results of the informal workshop on quantified emission limitation and reduction objectives otherwise known as QELROs which was held on 28 February 1996. This workshop was organized by the secretariat, in response to a request by the AGBM at its second session, in order to help the AGBM in the accomplishment of its task of setting quantified objectives within specified time-frames. Parties offered to make presentations and presentations by non-governmental organizations were entertained if proposed by a Party. The workshop was attended by a large number of delegates and observers who heard presentations by experts from five Parties, two intergovernmental organizations and three other organizations.

The workshop began with a presentation of Professor Bert Bolin, Chairman of the Intergovernmental Panel on Climate Change (IPCC), and the Co-Chairs of its three working groups, on the Panel's most recent findings relevant to quantified emission limitation and reduction objectives.

The IPCC presenters pointed out that, in setting quantified objectives, it was necessary to keep in mind that the pathway to stabilization of greenhouse gas concentrations in the atmosphere is a long one due to the long atmospheric lifetime of greenhouse gases. It will take even longer to stabilize temperatures and sea level. Both the rate and magnitude of climate change need to be considered, bearing in mind ecosystem vulnerability, expected impacts and risks.

Doubling of pre-industrial CO₂ concentrations would imply a 2.5°C mean temperature increase around the globe. Stabilization of CO₂ concentrations at 750 or 1000 ppm would mean a 5°C warming, which is a very large temperature increment similar to that observed between glacial and interglacial periods.

The potential costs of various options were found to be of value in setting objectives. IPCC presenters noted that top-down estimates for OECD countries indicate costs of -0.5 to 2% of GDP for stabilization at 1990 levels and several % of GDP for substantial reductions below 1990 levels. On the other hand, according to bottom-up studies, the cost of reducing CO₂ emissions by 20% would be negligible or even negative over the next two to three decades. There was agreement in the IPCC that energy efficiency gains of 10-30% above baseline trends over the next two to three decades can be realized at negative to zero net costs.

Participants also discussed the issue of what constitutes "dangerous" as referred to in Article 2 of the Convention. Professor Bolin held the view that it was for the Parties to decide for themselves. Others expressed the opinion that the IPCC could develop criteria or indicators to help set a threshold for "dangerous". At any rate, the Berlin Mandate does not require an explicit interpretation of Article 2 to set QELROs, and, implicitly, the Parties have concluded that present trends, without further action are, in fact, unacceptably dangerous.

The workshop heard a number of technical presentations on modelling (illustrative of the models reviewed by the IPCC), the design of cost effective mitigation strategies, the cost of emission reductions and near term strategies for long term climate protection. Economic models were seen as tools to help us understand the way forward although it was made clear that they do not adequately reflect the complexity and dynamic nature of technological development and do not take into account feedbacks. Therefore, the messages they deliver about costs and benefits are different and sometimes conflicting, as pointed out in the Second Assessment Report of the IPCC.

The workshop heard that :

- Emissions from Annex I Parties were expected to increase significantly by 2010 in the absence of additional policy intervention to accelerate structural and technological change;
- Market forces alone would not change these trends;
- Energy demand is expected to rise substantially in the coming decades, leading to increases of between 25% and 52% of CO₂ emissions worldwide in the absence of aggressive policies to find non-CO₂ emitting energy sources, a trend that is clearly in conflict with the objective of the Convention.
- Taking into account the need for long-term stabilization of concentrations at a "safe" level, models can help understand what the corresponding emission levels in the period from 1990 to any of the Berlin Mandate's suggested time horizons (2005, 2010, 2020) would need to be.

There was a general agreement among presenters on the need for commitments now to begin to limit and reduce emissions. However, there were differing views on the most appropriate and efficient timing of these limitations and reductions. Some saw action to reduce emissions in the short term as costly while others argued that there was ample scope for cost effective or even economically beneficial reductions. Concern was expressed about the risks associated with deferring action, and the question was raised as to who should pay for damages in case action was delayed.

Clearly, we will not solve the conflict between the different modelling approaches within the time-frame specified for negotiation of a Protocol. However, I believe that differing views on costs could perhaps be reconciled if the emphasis was placed on the notion of investment for future generations rather than cost, taking into account the various secondary benefits associated with emission reductions. It is important to note that the IPCC will further address the issue of costs.

The workshop then turned to consider, in some depth, specific issues related to the setting of quantified objectives such as emissions budgets and equity and differentiation among Annex I Parties. The concept of emissions budgets was explored as a mechanism to use timing to lower the costs of reduction. The possibility of a premium for early reductions was also raised.

The workshop succeeded in raising a number of issues related to the concepts of equity and differentiation among Annex I Parties. Some presenters noted the importance of differentiation both between economies in transition (EIT) and OECD Parties, and also within these groups. A number of equity or differentiation criteria and principles were put forward, including percentage of GDP foregone as a result of emission reductions, per capita GDP, per capita emissions, and a multi-criteria rule that combines carbon intensity, GDP, population, temperature and land area in addition to a differentiation criterion based on amount of emissions, the economic conditions and possibilities of a country. Such equity and differentiation criteria, along with associated rules, could provide an important element in negotiating differentiated commitments for Annex I Parties.

In the light of the discussions held at the workshop, the AGBM may wish to address the following major issues:

1. What level of emissions limitation and reduction would be most appropriate, taking into account available information on costs and benefits, risks, uncertainty, impacts and vulnerability and an ecosystem's ability to adapt and with an eye to the long term and future generations?
2. How will the implementation of quantified limitation and reduction commitments be timed, bearing in mind the specified time-frames of, for example, 2005, 2010, 2020?
3. Will equity principles be reflected in a protocol or another legal instrument through a differentiation regime? If so, how would this be developed in a timely fashion and what would it look like?
4. How can new ideas such as the possibility of drawing a distinction between production-related and consumption-related emissions, emission budgets, and the concept of "safe emission corridors" which relates climate goals with global emission targets, help us in setting quantified limitation and reduction objectives.

The discussions held during the workshop underlined that while the issue of quantified limitation and reduction objectives is of interest to all Parties and not just to Annex I Parties, the Berlin Mandate requires only Annex I Parties to set objectives within specified timeframes at this stage. A number of delegates reiterated that there should be no transfer of commitments.

In closing, I would like to underline the importance of the work of the IPCC relevant to our deliberations. In the face of the continuing debate and controversy over climate change science and response options, the Second Assessment Report constitutes the only peer-reviewed, intergovernmentally-agreed source of analytical information. My sincere thanks go to the individual presenters for their contributions at the workshop and for their wide range of views and conclusions. I would also like to thank participants for the thought provoking discussions held during our workshop. I look forward to AGBM's deliberations on these matters.

Thank you.

Report on Informal Workshop on QELROS

Presentations were divided into three sections, IPCC, model results and issues. Four IPCC Working Group chairs gave presentations summarizing the IPCC Second Assessment Report and its relevance to QELROS. B. Bolin gave a general introduction and outlined that for QELROS, many paths of emissions reductions are available, but greater emissions now require a greater rate of change in emissions reductions later. R. Watson (co-chair WGII) showed the impacts foreseen with climate change but did not define quote dangerous unquote. All chairs noted that it is not up to IPCC to interpret what is dangerous interference under the Convention, it is up to nations to assess their sensitivity to changes that might occur. J. Bruce (co-chair WGIII) explained different ways of modelling and assessment -- top down vs bottom up -- noting energy measures available at little or no cost.

Modelling presenters noted wide variation between results of top down vs bottom up models. M. Grubb (Royal Institute of International Affairs) noted that timing issue is complex because models handle technology changes poorly. L. Solsbery (IEA) summarized World Energy Outlook projections, and proposed options to accelerate structural reform and remove market distortions. J. Edmonds (Stanford University) presented a new paper on the potential for quote where and where flexibility unquote. In other words, he concluded that the maximum latitude of where climate change objectives are implemented and when they are implemented, significantly reduces the cost of implementation of commitments. Edmonds et al paper received by far the most questions of the session. F. Krause (International Project for Sustainable Energy Paths) noted biases in cost estimates of top down models and also why timing wrong -- no consideration of tax shift or correction of taxes or non-climatic externalities. Noted that 40 -50 per cent reduction by 2020 can be achieved at negative to no cost. Alcamo (IMAGE project leader, Netherlands) presented analysis based on IMAGE model. He defined quote safe emissions corridors unquote based on global indicators of effects. His conclusion was that the higher the early emissions, the smaller the corridor (and options) after 2010.

In the last section, D. Dukek (Environmental Defence Fund) explained the value of cumulative approach and importance of time. Advantages of quote emissions budget unquote are clear environmental goal, easy to measure performance and reduced investment uncertainty. M. McDonald (Australian delegation), spoke of equity as a key part of any agreement. She noted that an agreement should equalize per capita cost of reductions as per cent of GDP. M. Sadowski (Polish delegation), looked for criteria for differentiation using pollution adjusted index used by GEF for ranking. Concluded that Annex 1 countries cannot do it alone. Two Japanese speakers ended the session. First looked at stability of different scenarios under different national circumstances, concluding that differentiated targets are more reasonable and recognizing of reality. Second noted that a protocol should not copy the FCCC, it could start with a limited number of countries. Proposed agreement with 2005 target and JI crediting in 2000.

WORKSHOP ON POLICIES AND MEASURES



FRAMEWORK CONVENTION ON CLIMATE CHANGE
CONVENTION - CADRE SUR LES CHANGEMENTS CLIMATIQUES

**Informal Workshop on
Policies and Measures**

Monday, 4 March 1996
3:00 - 8:00 p.m.
Palais des Nations, room XXI

Chair: Mr. Chow Kok Kee (Malaysia)

3:00 Opening Remarks by the Chair

A. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

3:15* Presentation on its findings relevant to policies and measures

Prof. B. Bolin

Chairman, IPCC

Dr. R.T. Watson

Co-Chair, Working Group II

Dr. Hoesung Lee

Co-Chair, Working Group III

Dr. E. Haites

Head, Technical Support Unit, Working Group III

B. TECHNICAL PRESENTATIONS

4:45 Sectoral Policies and Measures

Policies and measures to limit greenhouse gas emissions from the energy sector.

Mr. L. Solsbery

Head, Energy and Environment Division, International Energy Agency

Transportation.

Ms. M. Crass

European Conference of Ministers of Transport

Policies and measures to reduce emissions in the industrial sector with a focus on voluntary agreements.

Dr. F. J. Schafhausen

Division Head, Energy and Environment, Ministry for the Environment, Nature Conservation & Nuclear Safety, Germany

Residential and commercial sector: product standards and labelling.

Dr. W. Mebane

Head of Division, Promotion of Efficient Uses of Energy and Renewable Energy, National Agency for New Technology, Energy and the Environment, Italy

* The time estimates are indicative only.

Success stories in the comprehensive approach:

a) Sustainable agriculture and non-CO₂ gases.

Dr. M. Barson

Principal Research Scientist, Australian Bureau of Resource Sciences

b) Adipic acid and HFCs.

Mr. J. Drexhage

Manager, Climate Change - International, Global Air Issues Branch, Environment Canada

c) PFCs and methane programs and approaches.

Mr. P. Stolpman

Environmental Protection Agency, USA

6:00 Cross-Sectoral Policies and Measures

Possible measures to mitigate climate change for Annex I Parties with economies in transition.

Mr. A. Bedritsky

Head, Russian Federal Service for Hydrometeorology and Environmental Monitoring
Russian Federation

Market instruments: Taxes and subsidy removal.

Mr. T. Jones

Organisation for Economic Co-operation and Development (OECD)

The response to energy and environmental issues in the 21st century.

Mr. T. Kanou

Chairman, Committee on Global Environment, Keidanren (Federation of Economic Organizations),
Japan

The effects of policies and measures in order to mitigate and adapt to climate change.

Ms. Y. Kawashima

Researcher, Social and Environmental Systems Division, National Institute for
Environmental Studies, Japan

7:15 Lessons from National Experiences

The climate change policy in the context of the National Action Plan for the Environment.

Dr. S. Adler

Expert Air Pollution, Ministry of Waters, Forests and Environmental Protection
Romania

Some measures to reduce emission in greenhouse gas emissions implemented in the Polish energy and industry sector during the transition period.

Dr. F. Krawczynski

Director, Sectoral Studies and Infrastructure,
Central Office of Planning
Poland

7:45 Closing Remarks

PRESENTATION BY CANADA AT POLICIES AND MEASURES WORKSHOP

Success Stories in the Comprehensive Approach - PFCs, HFCs and Adipic Acid

Thank you Dr. Barson. Canada strongly supports your statements that a comprehensive approach is critical if we are to effectively address all elements of the climate change issue.

Although blanket generalizations are nearly always suspect, perhaps some conclusions could be drawn regarding the relative ease with which greenhouse gases can be limited or reduced which are a byproduct or used in industrial processes. Unlike carbon, which can be regarded as a factor of direct combustion, PFCs and adipic acid are environmentally threatening byproducts which are not essential to the manufacture of the relevant product. In addition, I will also be addressing HFCs as an example of a discrete element which can be effectively limited in its contribution to greenhouse gas emissions.

PFCs

Perfluorocarbons currently represent a total of around 1% of Canada's total greenhouse gas production. This represents about twice the level of PFC concentrations globally - the latest data estimates that the contribution of PFCs to greenhouse emissions represents about .5% of global emissions.

That said, we must also take into account Dr. Watson's comments earlier today on the vast Global Warming Potential (GWP) of two PFCs - namely carbon tetrafluoride (CF_4) with a GWP of 8800 over 500 years, and carbon hexafluoride (C_2F_6) with a GWP of 17,300 over the same period.

Actions to eliminate these PFCs, due to their significant GWP potential, should be strongly supported, as their emissions represent a byproduct of an industrial process.

Actions in Canada to reduce PFCs include:

Participation in the Voluntary Challenge & Registry - all Canadian primary aluminum industries have joined the Canadian Industry Program for Energy Conservation (CIPEC) as well as the Climate Voluntary Challenge and Registry, both established by the Government of Canada. The Canadian industry is also working closely with its aluminum partners in the United States, who are registered in a similar voluntary program.

Process Control - there are various technologies for the electrolysis process: in older technologies (Soderberg), the process is manually controlled whereas the majority of prebaked anode technologies are now computer monitored. In all cases, considerable efforts have been made to reduce the anode effects and to

diminish their intensity and duration.

Alumina feeding - lack of alumina in the pot causes the anode effect. Therefore if the pots are fed more frequently with smaller quantities, the number of anode effects will be reduced. In the most recent technologies, alumina feeding operation is automatic and precisely controlled.

Operational practices - whereas for a long time anode effects have been considered as "normal" occurrences in the aluminum production process, recent findings related to CF_4 and C_2F_6 emissions have led to reconsider the practices. Campaigns conducted among staff people at every level are aiming at raising awareness about negative environmental effects of too frequent and too long anode effects.

HFC EMISSIONS

Hydrofluorocarbons (HFCs) are a group of gases that were developed to replace chlorofluorocarbons (CFCs) and other ozone-depleting substances. HFCs have no ozone depletion potential but they generally present high global warming potentials (GWP).

A study prepared in 1994 by the Bilthoven (the Netherlands) National Institute of Public Health and Environmental Protection concluded that HFCs could contribute 7% to 17 % to global warming by 2035 if no control measures are taken to reduce their emissions. Canada has already started to act to reduce HFC emissions.

HFCs were not used in Canada before 1990. The most commonly used HFC is HFC-134a. It has a GWP of 1300 (100 years time horizon), compared to CO_2 which has a GWP of 1. At the moment, HFC-134a main use is in mobile air conditioning. It is also used in other residential, commercial and industrial air conditioning and refrigeration applications. HFC-134a has the potential to be used in other applications such as foam blowing and aerosols but at the moment its use in these sectors is very limited.

A number of measures are being implemented in Canada to reduce HFC emissions.

The Environment Canada environmental awareness course that is given to refrigeration and air conditioning technicians recommends that recovery, recycling and emission reduction practices applicable to ozone-depleting substances also be applied to HFCs. This course is mandatory in 8 of the 10 provinces. More than 65,000 technicians have already taken it.

The Environment Canada Code of Practice for the refrigeration and air conditioning sector is being updated to recommend that the recovery, recycling and

emission minimisation practices applied to CFCs be also applied to HFCs. This code of practice is considered as a yard stick in refrigerant emission reduction by other levels of government and industry.

At its May 1995 meeting, the Canadian Council of Ministers of the Environment endorsed recommendations to strengthen the Canadian Ozone Layer Protection Program. One recommendation was to include HFCs in the existing emission control programs for ozone-depleting substances. The provinces of Prince Edward Island and Ontario which represent 40 percent of Canadians, have already implemented this recommendation in their regulations controlling emissions from refrigerant uses.

Environment Canada plans to amend its regulations in 1996 to require that HFC uses be limited to the replacement of ozone-depleting substances uses.

ADIPIIC ACID

The leading industrial source of N₂O emissions in Canada is from the manufacturing of adipic acid. It is estimated that .303 kg of N₂O are released for each kg of adipic acid produce. The IPCC has estimated that the Global Warming Potential of nitrous oxide is 330 over a 100 year time horizon. Globally, adipic acid has, based on 1990 figures, contributed to approximately 25% of all anthropogenic sources of nitrous oxide. Adipic acid is produced primarily in the production of nylon, and is also used substantially less in the production of plasticizers and food additives. It should be also kept in mind that, besides its strong Global Warmin Potential, nitrous oxide is estimated to have an ozone depletion potential of .17.

There is only one adipic acid manufacturing facility in Canada, owned by Dupont and located in Maitland, Ontario. It is estimated that the Maitland plant produced and emited 100 kilotonnes of adipic acid which released about 30 kt of N₂O in the atmosphere each year.

Under the Canadian Chemical Producers Association Responsible Care Program, Dupont Canada has shown environmental leadership by voluntarily committing to reduce its 1990 nitrous oxide emissions by 95% by the end of 1996. As a result of that commitment Dupont is installing abatement facilities that will cost them in the order of \$8.5 million. This facility will break down the nitrogen and oxygen into distinct element through catalytic decomposition. These two discrete elements will be vented into the atmosphere. In addition to this action, Dupont Canada has added an energy efficiency component to its operations by capturing and recycling the heat expelled in this operation.

It should be noted that there is no direct net economic return to Dupont for taking such an action - the motive, while not necessarily wholly altruistic, lies in developing and maintaining a reputation as a corporate citizen with strong

environmental sensibilities integrated into its decision making process.

Thank you.

**Statement by Mr Chow Kok Kee
Chair,
Informal workshop on policies and measures**

It is my pleasure to report on the informal workshop on policies and measures held on 4 and 5 March 1996. This initial workshop was organised to help the AGBM in its analysis and assessment and in narrowing down the vast array of possible policies and measures. All requests by Parties to make presentations were accepted, and presentations were given by non-governmental organizations where they were proposed by a Party. The workshop was attended by a large number of delegates and observers who heard presentations by experts from 9 Parties, and 4 intergovernmental organizations. The number of presentations, and the level of discussion, was such that the workshop, which had been scheduled for one session, was continued the following day.

The workshop commenced with presentations by Professor Bert Bolin, Chairman of the Intergovernmental Panel on Climate Change (IPCC), and two of his colleagues. It considered that there are considerable opportunities for no regrets actions, including implementing policies and measures that could improve energy efficiency by 10-30% at little or no cost. The IPCC emphasised that policies and measures would have different impacts on different greenhouse gases, and that a range of policies and measures was needed to cover all gases and sectors. The IPCC noted that there is no universal set of optimum policies and measures, but that each country had to develop those which were best suited to its specific situation.

A number of challenging issues were discussed. The need for policies and measures was highlighted by the fact that many energy efficiency measures which were technically and economically feasible had not automatically been implemented. Policies and measures were needed to bridge this gap between private decision making and optimum social results. The measurement of non-market issues is an area of current research. The IPCC noted that while such valuations were essential to measuring the benefits of policies and measures, current uncertainty on non-market valuation methodologies was no impediment to selecting and instituting policies. A third difficult issue is equity between countries.

The energy supply sector is an area of rapidly growing emissions in many countries, where the need for policies and measures was seen as particularly strong. There is an inverse relationship between the carbon content of fuels, and both their rate of taxation and their cost to consumers. There is considerable potential to reduce emissions by employing high efficiency technologies, and by increasing the number and range of voluntary programs which have been instituted by industry in recent years. The need to promote renewable energies was also highlighted.

Transportation is currently responsible for around 30% of greenhouse gas emissions in OECD countries, and this percentage is rising. Air travel, the most energy intensive mode of transport, is growing the fastest. There are three main areas where policies and measures can be effective: in the organization and operation of transportation systems (including traffic management and public transportation); in fuel efficiency; and in the development of

alternative fuels. The importance of integrated packages was emphasised to maximise efficiency in this area.

Policies and measures in the industrial sector, particularly voluntary agreements, were addressed. Voluntary agreements vary greatly, but have several basic prerequisites for success. They have to go beyond what would occur anyway; they should include a clear definition of the starting position and articulation of their target; they should be readily comprehended by outsiders; and there should be regular means of reporting. The workshop heard of a number of successful voluntary agreements. Such agreements were fostered by strong signals from government, via for example the encouragement of research and development, the internalisation of external effects, and the use of other economic instruments.

Product standards and labelling have been highlighted, as 90-95% of energy consumption occurs during the use, not the manufacture, of products. Product standards and labelling may help reduce emissions by affecting both consumer purchase decisions, as well as patterns of product usage.

The workshop also heard some significant success stories from some countries, including:

- actions to promote sustainable agriculture, involving a comprehensive approach that takes account of all activities affecting greenhouse gases. This includes the education of specialised groups and the general public, as well as macro level policies and measures.
- measures taken to utilise methane gas emitted from landfills, and reduce the emissions of PFCs.
- action to reduce the emissions from the production of adipic acid and emissions of HFCs by improving the efficiency of industrial production processes.

In all three cases, a mix of voluntary agreements and regulatory approaches have been employed to achieve a comprehensive approach to reduce emissions.

Virtually all of these accounts of sectoral policies and measures concerned activities taken within particular countries; to date there are relatively few sectoral policies and measures applying between countries. There was considerable variety in accounts of national sectoral policies and measures, and clearly scope for learning from experiences elsewhere.

Market instruments, in particular the removal of subsidies, and the strategic use of taxes, is a complex area. Some countries would benefit from international action, though a few others could suffer a drop in GDP. But removing taxes and subsidies is politically difficult, and insufficient in itself to stabilise global emissions of greenhouse gases. The problem of leakage, where industries would simply move from one country to another with a more favourable tax and subsidy regime, highlights the need for internationally coordinated action in this area.

The workshop heard that in the 21st century there will be three 'D's which will grow in importance: dematerialisation (the reduction of dependence on material goods, and their more efficient use); decoupling (separating energy demand from economic growth and carbon emissions); and decarbonisation (use of more renewable fuels, and the use of nuclear energy). All will constitute important responses to future climate change.

The final part of the workshop heard presentations covering lessons from national experiences. The main points to emerge from this section were that:

- The Russian Federation expects to continue to emit lower levels of greenhouse gases for at least the next 15 years, according to a national plan which was finalised recently. This reduction will occur in the context of economic growth, and will primarily be achieved by improved energy efficiency, and fuel switching.
- While there is considerable research needed to develop a more detailed picture of the Romanian situation, it is evident that there is much scope to reduce greenhouse gas emissions, improve energy efficiency, and further develop natural forest sinks. These issues have recently been integrated into a national environmental plan.
- The Polish economy is now far less reliant than previously upon the emission of carbon. Thus Polish GDP is currently equivalent to 1989 levels, though emissions of CO₂ are far less. This has predominantly been achieved through structural change to the economy.
- The Japanese economy has over the past two decades successfully decoupled economic growth from CO₂ emissions. This has resulted from the expanded use of nuclear power, changes to lifestyles, improved energy efficiency, changed energy mix, a shift in industrial practices, and a reduced rate of GDP growth. Economic incentives, combined with the setting of standards, had been required to achieve this effect.

These national presentations showed how planning to reduce the emissions of greenhouse gases can occur even in countries which have experienced severe economic disruptions. This encouraging message should be a timely reminder that action to reduce the emissions of greenhouse gases is not simply dependant upon an environment of economic growth.

From the discussions held in the workshop, the AGBM may wish to note the following major issues which emerged:

1. It is important to develop packages or portfolios of measures, within and between sectors. These packages, which will evolve over time, should comprise a mix of market based solutions and government intervention. It is important to underline that government action was seen as necessary to provide the right signals to influence investment, research (which is crucial for the long-term), and consumption decisions.
2. Packages or portfolios of policies and measures must be tailored to national circumstances. A wide range of cost-efficient policies and measures are available, though there is no single best set overall. In almost all cases, however, it is clear that

the energy and transport sectors are vitally important. The normal replacement cycle for capital stock provides opportunities for cost effective action.

3. A great deal can be done at little or no cost, even in the context of the most difficult economic circumstances. However, a number of barriers must be overcome. The focus needs to be upon policy interventions to overcome these barriers.
4. Many policies and measures which reduce emissions also have other important economic or environmental benefits.

Let me address some of the shortfalls of the workshop:

1. There was a lack of socio-economic and environmental impact assessment of the implementation of policies and measures on non-Annex 1 Parties. This is probably due to the fact that such analyses and assessments are still in their infancy.
2. There is a need for further appreciation of economic models and their applications.

The workshop provided a first opportunity for delegations to exchange their views and experiences. I personally would like to suggest that as the AGBM process advances, we should consider the option of holding another workshop to facilitate experience-gaining on these important issues.

In closing, I wish to thank the individual presenters for their contributions to the workshop, and for their diverse range of perspectives and presentations. I also thank participants for the discussions held during the workshop. I look forward to the AGBM's deliberations on these important matters.

Report of Informal Workshop on Policies and Measures

The workshop began with a presentation on findings of the Second Assessment Report of the IPCC. Some discussion arose about the difference between the results which say it is a sensible thing to take measures and the "reality" of the discussions in plenary. The point was made that the "no regrets" includes societal benefits which are not the basis for private decision making.

A series of presentations was made on sectoral policies and measures (P&Ms). Lee Solsbery from the International Energy Agency (IEA), made an excellent presentation on policies and measures to limit emissions from the energy sector. He showed that fuels with highest carbon content are taxed the least and that any new taxes we might propose would be laid on top of this scenario rather than a level playing field. The technical barriers differ for each fuel type and only about three out of nine are cost related. Mr. Solsbery also indicated that the IEA is finishing a study on renewables which should be ready by CoP 2. He further noted the relatively small spending on R&D for renewables compared with other fuels and the fact that it is very sector and country specific. Since there is little coordination across countries, there is potential for cross border cooperation. He also acknowledged that we should pay attention to policies which result in increases in greenhouse gas emissions.

A presentation on Transportation by Ms. M. Crass (European Conference of Ministers of Transport) stressed all the various areas for policy development such as vehicle fuel efficiency, traffic management, alternative fuels, transit systems, etc.

Dr. W. Mebane from Italy made a presentation on policies and measures in the residential, commercial and institutional sectors and outlined the following examples:

- Choice of Product - Standards, Information, Promotion;
- Technical Characteristics - Voluntary agreements with manufacturers, minimum energy efficiency, public procurement, R&D, demos;
- Proper utilization - design for user needs, flexible;
- Mandatory equipment maintenance;
- Possible international co-operation on standards, voluntary agreements, minimum level of energy efficiency, and avoiding dumping on international markets;

As far Non-Annex 1 countries are concerned, existing work on standards, testing and technology can be used but would need to be adapted to climate, user patterns, etc.

Dr. F.J. Schafhausen from Germany made a presentation on P&Ms in the Industrial Sector with a focus on voluntary agreements. There are not just economic barriers to the setting of voluntary agreements but also information, administrative, legal and institutional barriers. Prerequisites of voluntary agreements include the need for public pressure to go beyond everyday business, a clear definition of base, time-frame and limitation objectives, and transparent monitoring.

Three presentations were made by Australian, American and Canadian delegates on success stories in the comprehensive approach with respect to P&Ms addressing non-CO2 gases. Dr. M. Barson (Australia) made a presentation on sustainable agriculture. Mr. P. Stolpman (US

EPA) made a presentation on landfilling regulations. Landfills contribute to 36 per cent of U.S. methane emissions. Methane has a high warming potential. Collection and combustion of methane in large landfills is rather economically attractive. Using methane as a fuel reduces the need for another fuel with its associated emissions. Mr. J. Drexhage made a presentation on ways in which Canadian industries are addressing PFCs, HFCs and adipic acid emissions (see paper: Presentation by Canada at Policies and Measures Workshop).

Second half of workshop dealt with cross sectoral P&Ms. Mr. T. Kanou from Japan made a presentation on response to energy and environmental issues in the 21st century. He emphasized three aspects to reducing GHG :

1. Dematerialization: reduce energy consumption;
2. Decoupling: separate energy demand from economic growth;
3. Decarbonization: dissociate carbon content from energy supply by changing sources and expanding renewables.

This was followed by a presentation by Japanese Ms. Y. Kawashima on effects of P&Ms. Key factors for Japan include: decrease of GDP growth rates, changes in lifestyle, change in energy mix (increase nuclear share), and energy efficiency. Presentation further outlined that the rate of technology improvement depends on energy prices and on what industry believes. It is Japan's view that carbon tax would have to be implemented in all countries. This process will take time because of long-term industry investments.

LIST OF DOCUMENTS AVAILABLE FROM DFAIT/AGE*

- Dr. M Grubb: On the differentiation of QUELROs for Annex 1 Countries
- J. Alcamo & others: The global climate system: Near term action for long term protection
- R. Richel & others: The Berlin Mandate: The design of cost-effective mitigation strategies
- Y. Kawashima: A review of CO2 emission reduction policies in Japan and an assessment of Annex 1 Parties for beyond 2000
- D.J. Dudek: Emission Budgets: creating rewards, lowering costs and ensuring results
- Y. Kawashima: Differentiation of QUELROs according to national circumstances: Introduction of equity criteria and reduction of excess emission objectives
- N Matsuo: A proposal for the protocol(s) on climate change - for innovative and substantial quantified objectives
- Danish intervention to the workshop on QUELROs
- Australia: Equity and the Berlin Mandate
- M. Barson: Success stories in the comprehensive approach: Sustainable agriculture
- J. Edmonds: The design of cost-effective mitigation strategies: preliminary results from EMF, study # 14

*These documents can be obtained from Doreen Ong (tel 613-995-4788, fax 613-944-0064)

NGO WORKSHOP



ACADEMIE INTERNATIONALE
DE L'ENVIRONNEMENT - GENEVE

INTERNATIONAL ACADEMY
OF THE ENVIRONMENT - GENEVA

ANNOUNCEMENT

Workshop on Consultative Mechanisms for Non-Governmental Organization Inputs into the United Nations Framework Convention on Climate Change - 2 March 1996

Climate change and responses to it affect diverse sectors and interests. Drawing these stakeholders into the UNFCCC process will help Parties to implement their commitments more effectively, in particular in elaborating policies and measures to address climate change and its impacts.

The International Academy of the Environment (IAE), with guidance from the UNFCCC secretariat, will therefore convene a workshop which will focus on exploring possible mechanisms which could facilitate inputs from non-governmental organizations into the Convention process. The decision to hold the workshop was taken by the Conference of the Parties at its first session. The Conference also decided that the workshop should be held within the framework of the Subsidiary Body for Scientific and Technological Advice (SBSTA). Specifically, the workshop will examine the need for, and possible scope, structure, membership and work plans, of non-governmental advisory committees and/or a business consultative mechanism. The workshop will not dwell on the substance of the issue of climate change itself.

An Organizing Committee for the workshop that met on 12 January 1996, co-chaired by Mr. B. Hawrylyshyn, Director of the IAE, and Mr. M. Zammit Cutajar, Executive Secretary of the UNFCCC secretariat, agreed that the workshop should take place on Saturday, 2 March 1996, at the Palais des Nations. It was agreed that the workshop would have a plenary co-chaired by Mr. B. Hawrylyshyn and Mr. Tibor Faragó, Chairman of the SBSTA, and three working groups, each co-chaired by a representative of a Party to the Convention and a representative of the relevant NGO constituency, as mentioned below.

A number of presentations will be made during the opening plenary session of the workshop. The time for the presentations will be allocated in a balanced manner among the three major constituencies of the Convention (business and industry associations, environmental organizations, and municipal leaders and local authorities). The presentations in each of these three areas should focus on elements for appropriate consultative mechanisms, drawing on lessons to be learned from other treaty bodies and inter-governmental organizations. They may also address mechanisms that could apply to all constituencies. Should you wish to make a presentation, we ask that you contact a member of the Organizing Committee (listed below) for further details. Presentations should be of no more than ten minutes in length and respective papers of no more than five single-spaced pages. Please find attached the agenda for the workshop.

Should you know of any NGO not accredited to COP-1 that wishes to be represented at the workshop, please contact a member of the Organizing Committee with the information as special arrangements will have to be made for them to have access to the Palais des Nations.



**ACADEMIE INTERNATIONALE
DE L'ENVIRONNEMENT - GENEVE**

**INTERNATIONAL ACADEMY
OF THE ENVIRONMENT - GENEVA**

Alternatively, the access of these NGOs would be greatly facilitated if your organization would consider including those individuals in your own delegation.

An oral report on the workshop will be made by a Plenary co-Chair to the second session of the SBSTA on 4 March 1996. A written report, including the reports of each of the working groups, will be made available to the SBSTA at its third session in July 1996. While the workshop will be held in English, the report to SBSTA-3 will be made available in the six languages of the Convention. Given the nature of the discussion, participation in the workshop by all Parties and interested non-governmental representatives is particularly encouraged.

The Organizing Committee members are:

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**ACADEMIE INTERNATIONALE
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OF THE ENVIRONMENT - GENEVA**

**Workshop on
Consultative Mechanisms for NGO Inputs into the United Nations
Framework Convention on Climate Change
Palais des Nations - Geneva**

**Saturday, 2 March 1996
9:00 a.m. to 6:00 p.m.**

Agenda

- 9:00** **Plenary**
- Introduction and opening remarks**
 Dr. B. Hawrylyshyn, Director, IAE
 **Mr. Tibor Faragó, Chairman, Subsidiary Body for Scientific and
 Technological Advice (SBSTA)**
- Presentations on NGO Consultative Mechanisms for:**
- 9:30** **Business and Industry**
10:00 **Municipal Leaders and Local Authorities**
10:30 **Environmental Organizations**
- 11:00** **Working Groups (Meeting simultaneously)**
 Business and Industry
 Municipal Leaders and Local Authorities
 Environmental Organizations
- 13:00** **Lunch**
- 15:00** **Plenary**
- Presentations by co-Chairs of Working Group**
- 15:45** **Discussion**
 Comments on conclusions from Working Groups*
 Need for cross-constituency consultations?
- 17:30** **Closing remarks**
- 18:00** **Adjourn**

*** The written report of each working group would be prepared after the workshop, and included as a distinct part of the report on the workshop to be submitted to SBSTA-3.**



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MEMORANDUM/ *Note de service*

DATE: March 13, 1996

TO/À: Sushma Gera
Foreign Affairs and International Trade

FROM/De: Pierre Guimond
Senior Advisor, Government Relations

SUBJECT/Objet: Report on the Business and Industry Session of the NGO
Workshop held March 2, 1996 on non-governmental Advisory
Committees or Consultative Mechanism

This note reports on the business and industry portion of the NGO workshop held in Geneva on March 2, 1996. The workshop's aim was to discuss the need for, the possible scope structure, membership and workplan of non-governmental advisory committees, and/or a business consultative mechanism for inputting to the Subsidiary Body for Scientific and Technical Advice (SUBSTA).

Three papers representing the consensus view of the business and industry organizations participating in the workshop were presented in the morning plenary for business and industry NGOs. The first paper outlined a set of ten principles fundamental to any consultation mechanism with business and industry. The second presented an outline of a broad mechanism which would strengthen the FCCC process by opening an avenue of communication between business and industry and the FCCC process. The third paper discussed the critical need for business and industry participation in any technical and economic analysis processes established in support of the FCCC. The afternoon session provided discussion of the thoughts and concepts expressed in the three papers.

As a result of the discussions, business and industry NGOs reached some conclusions and the FCCC Secretariat has been apprised accordingly. When the Secretariat has made a decision on next steps, industry will be pleased to further address the details of a technical and economic analysis mechanism.

REPORTS OF THE SBSTA, SBI AND AGBM

Reports of the SBSTA



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SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE

Second session

Geneva, 27 February - 4 March 1996

Item 10 of the agenda

**REPORT OF THE SUBSIDIARY BODY FOR SCIENTIFIC AND
TECHNOLOGICAL ADVICE**

Draft report of the Subsidiary Body for Scientific and Technological Advice
on its second session

Rapporteur: Victor CHUB (Uzbekistan)

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Annex

I. OPENING OF THE SESSION

(Agenda item 1)

1. The second session of the Subsidiary Body for Scientific and Technological Advice (hereinafter referred to as "the SBSTA") was held in Geneva from 27 February to 4 March 1996.
2. The Chairman of the SBSTA, Mr. Tibor Faragó, opened the session at the first meeting, on 27 February 1996. He welcomed all delegates and observers from non-parties, United Nations bodies and organizations, and intergovernmental and non-governmental organizations. He referred to the heavy agenda for the session and the need to coordinate the work of the session with that of the Subsidiary Body for Implementation (SBI) and the Ad Hoc Group on the Berlin Mandate (AGBM) which would also be meeting. He was confident that the work of the session could be completed successfully in a cooperative and timely manner.
3. The Executive Secretary, Mr. Michael Zammit Cutajar, made an introductory statement in which he provided information on the state of ratification of the Convention and of the documentation for the session. He suggested that, while the secretariat should improve its delivery of documentation, subsidiary bodies might evaluate more carefully the utility of new documents, before requesting them of the secretariat. He also stressed the need for the current session of subsidiary bodies to pay attention to the inputs that will be required of them by the Conference of the Parties (COP) at its second session. He asked that this statement be taken into account by the SBI and the AGBM at their forthcoming sessions.
4. On the subject of applications for accreditation to sessions of the subsidiary bodies of the Convention, the SBSTA agreed to admit new applicant organizations that had been screened by the secretariat, on the basis of the provisions of Article 7.6 of the Convention, without prejudice to subsequent action by the COP.
5. Further, in accordance with the recommendation of the Bureau of the COP, the SBSTA agreed to maintain its policy that non-governmental organizations would be admitted to the floor before and after meetings only. In relation to this, the Chairman indicated his readiness to explore the possibilities for flexibility on this policy and expressed his willingness to discuss the matters, as necessary with concerned non-governmental organizations.

II. ORGANIZATIONAL MATTERS

(Agenda item 2)

A. Adoption of the agenda

6. At its 1st plenary meeting, on 27 February, the SBSTA adopted the following agenda:

1. Opening of the session.
2. Organizational matters:
 - (a) Adoption of the agenda;
 - (b) Organization of work of the session.
3. Establishment of intergovernmental technical advisory panel(s).
4. Scientific assessments:
 - (a) Consideration of the Second Assessment Report of the Intergovernmental Panel on Climate Change (IPCC);
 - (b) Cooperation with the IPCC.
5. National communications:
 - (a) Communications from Parties included in Annex I to the Convention:
 - (i) Progress report on in-depth reviews;
 - (ii) Elements of the second compilation and synthesis report (technical aspects);
 - (iii) Report on guidelines for the preparation of communications.
 - (b) Communications from Parties not included in Annex I to the Convention: issues related to the preparation of communications.
6. Activities implemented jointly under the pilot phase.
7. Technology inventory and assessment.
8. Workshop on mechanisms for inputs by non-governmental organizations.
9. Longer term activities.
10. Report on the session.

B. Organization of work of the session

7. At its first meeting on 27 February, the Chairman recalled that there would be services available for formal meetings in the mornings between 10 a.m. and 1 p.m. In addition, facilities would be available in the afternoons between 3 p.m. and 6 p.m. for informal meetings with the exceptions of the afternoons of 28 February and 4 March when workshops of the Ad Hoc Group on the Berlin Mandate (AGBM) would be held.

C. Attendance

8. The list of delegations attending the second session of the SBSTA are given in annex I.

(to be completed)

D. Documentation

9. The documents prepared for the second session of the SBSTA are given in annex II.

(to be completed)

**III. ESTABLISHMENT OF INTERGOVERNMENTAL TECHNICAL
ADVISORY PANEL(S)**

(Agenda item 3)

1. Proceedings

10. At its ... plenary meeting, on .. February, the SBSTA addressed the item on the establishment of intergovernmental technical advisory panel(s). It had before it a note (FCCC/SBSTA/1996/2) prepared by the secretariat.

11. Statements were made by the representatives of ... Parties [including one speaking on behalf of the European Community and one speaking on behalf of the Group of 77 and China] [and non-parties].

12. The representatives of --- also made statements.

2. Conclusions

13. On the basis of proposals by the Chairman, the SBSTA, at its ... meeting on ... February, adopted the following decisions.

(to be completed)

IV. SCIENTIFIC ASSESSMENTS

(Agenda item 4)

A. Consideration of the Second Assessment Report of the Intergovernmental Panel on Climate Change

1. Proceedings

14. At its 1st and 2nd meetings on 27 February, the SBSTA considered this item on the Second Assessment Report of the IPCC. It had before it a note prepared by the secretariat (FCCC/SBSTA/1996/7 and Adds. 1, 2 and 3).

15. The Chairman of the IPCC introduced the Second Assessment Report.

16. Statements were made by the representatives of [including one speaking on behalf of the European Community and one speaking on behalf of the Group of 77 and China] [and non-parties].

17. The representative(s) of ... also made statements.

2. Conclusions

18. On the basis of proposals by the Chairman, the SBSTA adopted the following conclusions.

(See document FCCC/SBSTA/1996/L.1/Add.1)

B. Cooperation with the Intergovernmental Panel on Climate Change

1. Proceedings

19. At its 2nd meeting on 28 February, the SBSTA addressed the item on cooperation with the IPCC. It had before it a note prepared by the secretariat (FCCC/SBSTA/1996/6).

20. Statements were made by the representatives of ... Parties [including one speaking on behalf of the European Community and one speaking on behalf of the Group of 77 and China] [and non-parties].

21. The representatives of --- also made statements.

2. Conclusions

22. On the basis of the proposals by the Chairman, the SBSTA adopted the following conclusions.

(See document FCCC/SBSTA/1996/L.1/Add.1)

V. NATIONAL COMMUNICATIONS
(Agenda item 5)

A. Communications from Parties included in Annex I to the Convention

(i) Progress report on in-depth reviews

1. Proceedings

23. At its ... meeting on ... February, the SBSTA addressed the item on national communications from Parties included in Annex I to the Convention. It had before it a note prepared by the secretariat (FCCC/SB/1996/1).

24. Statements were made by the representatives of ... Parties [including one speaking on behalf of the European Community and one speaking on behalf of the Group of 77 and China] [and non-parties].

25. The representatives of --- also made statements.

2. Conclusions

26. On the basis of the proposals by the Chairman, the SBSTA, at its ... meeting on ... February adopted the following conclusions.

(to be completed)

(ii) Elements of the second compilation and synthesis report

1. Proceedings

27. At its ... meeting on ... February, the SBSTA addressed the item on elements of the second compilation and synthesis report. It had before it a note prepared by the secretariat (FCCC/SB/1996/2).

28. Statements were made by the representatives of ... Parties [including one speaking on behalf of the European Community and one speaking on behalf of the Group of 77 and China] [and non-parties].

29. The representatives of --- also made statements.

2. Conclusions

30. On the basis of the proposals by the Chairman, the SBSTA, at its ... meeting on ... February adopted the following conclusions:

(to be completed)

(iii) Report on guidelines for the preparation of communications

1. Proceedings

31. At its meeting on ... February, the SBSTA addressed the item on report on guidelines for the preparation of communications. It had before it a note prepared by the secretariat (FCCC/SB/1996/3).

32. Statements were made by the representatives of ... Parties [including one speaking on behalf of the European Community and one speaking on behalf of the Group of 77 and China] [and non-parties].

33. The representatives of --- also made statements.

2. Conclusions

34. On the basis of the proposals by the Chairman, the SBSTA at its ... meeting on ... February, adopted the following conclusions:

(to be completed)

B. Communications from Parties not included in Annex I to the Convention

1. Proceedings

35. At its meeting on ... February, the SBSTA addressed the item on communications from Parties not included in Annex I to the Convention. It had before it a note prepared by the secretariat (FCCC/SB/1996/3).

36. Statements were made by the representatives of ... Parties [including one speaking on behalf of the European Community and one speaking on behalf of the Group of 77 and China] [and non-parties].

37. The representatives of --- also made statements.

2. Conclusions

38. On the basis of the proposals by the Chairman, the SBSTA adopted the following conclusions.

(to be completed)

VI. ACTIVITIES IMPLEMENTED JOINTLY UNDER THE PILOT PHASE
(Agenda item 6)

1. Proceedings

39. At its meeting on ... February, the SBSTA addressed the item on activities implemented jointly under the pilot phase. It had before it a note prepared by the secretariat (FCCC/SBSTA/1996/5).

40. Statements were made by the representatives of ... Parties [including one speaking on behalf of the European Community and one speaking on behalf of the Group of 77 and China] [and non-parties].

41. The representatives of --- also made statements.

2. Conclusions

42. On the basis of the proposals by the Chairman, the SBSTA adopted the following conclusions.

(to be completed)

VII. TECHNOLOGY INVENTORY AND ASSESSMENT

(Agenda item 7)

1. Proceedings

43. At its ... meeting on ... February, the SBSTA addressed the item on technology inventory and assessment. It had before it a note prepared by the secretariat (FCCC/SBSTA/1996/4 and Add.1).

44. Statements were made by the representatives of ... Parties [including one speaking on behalf of the European Community and one speaking on behalf of the Group of 77 and China] [and non-parties].

45. The representatives of --- also made statements.

2. Conclusions

46. On the basis of the proposals by the Chairman, the SBSTA adopted the following conclusions.

(to be completed)

VIII. WORKSHOP ON MECHANISMS FOR INPUTS BY NON-GOVERNMENTAL ORGANIZATIONS

(Agenda item 8)

47. At the ... meeting of the SBSTA on ... , the Chairman reported briefly on the proceedings of the workshop on mechanisms for inputs by non-governmental organizations on 2 March 1996. The SBSTA decided to postpone discussions on the workshop until its third session when the formal report would be available in all languages.

IX. LONGER TERM ACTIVITIES

(Agenda item 9)

1. Proceedings

48. At its ... meeting on ... February, the SBSTA addressed the item on longer term activities.

2. Conclusions

49. On the basis of the proposals by the Chairman, the SBSTA adopted the following conclusions.

(to be completed)

X. REPORT OF THE SESSION
(Agenda item 10)

50. At its ... meeting on ... March 1996, the Rapporteur presented the first part of the draft report of the session (FCCC/SBSTA/1996/L.1). The SBSTA considered and adopted the first part of the draft report. It also requested the Rapporteur under the guidance of the Chairman and with the assistance of the secretariat, to complete the report taking into account the discussions during the session and the need for editorial adjustments.

51. The Chairman, after thanking all participants for their constructive cooperation, declared the second session of the SBSTA closed.



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SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE
Second session
Geneva, 27 February - 4 March 1996
Item 10 of the agenda

**REPORT OF THE SUBSIDIARY BODY FOR SCIENTIFIC AND
TECHNOLOGICAL ADVICE**

**Draft report of the Subsidiary Body for Scientific and
Technological Advice on its second session**

Addendum

NATIONAL COMMUNICATIONS

**Agenda item 5 (a): Communications from Parties included in
Annex I to the Convention**

Draft conclusions proposed by the Officers of the SBSTA

1. The Subsidiary Body for Scientific and Technological Advice (SBSTA) took note of the progress report on in-depth reviews (FCCC/SB/1996/2) and of the in-depth review reports issued so far (FCCC/IDR.1/CZE, FCCC/IDR.1/SWE, FCCC/IDR.1/AUS, FCCC/IDR.1/USA, FCCC/IDR.1/CAN, FCCC/IDR.1/CHE). The SBSTA endorsed the format, scope and approaches of the in-depth review reports and emphasized the importance of monitoring the overall implementation of the Convention. The SBSTA took note that the time schedule for these reviews as set by the first session of the Conference of the Parties (COP 1) could not be met owing to resource limitations and/or scheduling problems. It stressed the importance of completing the first cycle of in-depth reviews by the end of 1996 and of issuing as many reports as possible before the next sessions of subsidiary bodies, with a view to holding a substantive discussion at those sessions.

2. The SBSTA endorsed the proposed outline and approaches to be taken during the second compilation and synthesis of first national communications, as suggested by the secretariat in its document FCCC/SB/1996/1. The SBSTA requested the secretariat to explore ways to use tables in the compilation of policies and measures and to describe national circumstances, *inter alia*, national policy targets.

3. The SBSTA took note of preliminary data presented in document FCCC/SB/1996/1/Add.1 on projections of emissions of greenhouse gases for the year 2000 which indicate that many Annex I Parties will have to make additional efforts beyond those included in projections in order to fulfil their aim of returning greenhouse gas emissions to 1990 levels by 2000, and stressed the need for more transparency in the assumptions made in these projections.

4. The SBSTA recalled decision 3/CP.1 (FCCC/CP/1995/7/Add.1) requesting Annex I Parties to submit to the secretariat national inventory data for the period 1990-1993 and, where available, for 1994 by 15 April 1996, and encouraged these Parties to submit these data at an earlier date to facilitate preparation of the second compilation and synthesis report. It recognized that Annex I Parties with economies in transition may exercise a certain degree of flexibility based on Article 4.6 of the Convention regarding these submissions.

5. The SBSTA invited Annex I Parties to forward to the secretariat their suggestions related to presentation of inventory data on the land use change and forestry sector for years subsequent to 1990 and on projections in this sector, as well as on aggregating data on greenhouse gases sources and sinks from this and other sectors, by 1 April 1996.

6. The SBSTA will consider technical aspects of the second compilation and synthesis report at its third session in order to draw relevant conclusions to the attention of the Subsidiary Body for Implementation and the Ad Hoc Group on the Berlin Mandate at its fourth session and to the COP at its second session.

7. The SBSTA took note of document FCCC/SBSTA/1996/3 and endorsed the proposals regarding the revisions to the Guidelines to ensure consistency with COP decisions. The SBSTA requested that revised guidelines contain more specific guidance on the description of policies and measures and their effects, projections and underlying assumptions and technological cooperation and transfer using, where feasible, standardized formats and tables. The SBSTA invited Parties to submit views on possible revisions to the Guidelines as suggested in document FCCC/SBSTA/1996/3 by 1 April 1996.

8. The SBSTA requested the secretariat to prepare a report suggesting possible revisions to the Guidelines, taking into account the submissions by Parties and the experience from the review process, for consideration at its third session, aiming at adopting revised guidelines in time for the preparation of second national communications by Annex I Parties.

9. The SBSTA, with a view to overcoming inconsistencies in the presentation of data on inventories, requested the secretariat to address issues such as temperature adjustments, electricity trade, bunker fuels, use of global warming potentials, land use change, and forestry in the documentation to be prepared for consideration by the SBSTA at its third session.

REPORT OF THE SUBSIDIARY BODY FOR SCIENTIFIC AND
TECHNOLOGICAL ADVICE

Draft report of the Subsidiary Body for Scientific and
Technological Advice on its second session

Addendum

SCIENTIFIC ASSESSMENTS

Agenda item 4 (a): Consideration of the Second Assessment Report
of the Intergovernmental Panel on Climate Change

Draft proceedings proposed by the Officers of the SBSTA

1. Proceedings

18. Some delegations drew attention to a number of important findings in the Second Assessment Report which they felt should be communicated to all bodies of the Convention and particularly to the AGBM, for consideration. These delegations highlighted that these findings underlined the necessity for urgent action to climate change.

Philippine
↓
address effects
of cl. ch.
including
mitigation and
adaptation

- (a) Atmospheric concentrations of greenhouse gases and aerosols are increasing largely because of human activities (IPCC Synthesis Report, Section 2.2, 2.3);
- (b) Climate has changed over the past century (S.R. 2.4);
- (c) The balance of evidence suggests a discernible human influence on global climate (S.R. 2.4);
- (d) Without specific policies to mitigate climate change, the global mean surface air temperature relative to 1990 is projected to increase by about 2 degrees Celsius (between 1.0 and 3.5 degrees Celsius) by 2100. This is probably greater than any observed during the last 10,000 years (S.R. 2.8);
- (e) Average sea level is projected to rise by about 50 centimetres (between 15 and 95 centimetres) above present levels by 2100 (S.R. 2.8);

- (f) Stabilization of atmospheric concentrations at twice pre-industrial levels will eventually require global emissions to be less than 50 percent of current levels (S.R. 4.10);
- (g) Even if the concentrations of greenhouse gases were stabilized at 2100, global mean surface air temperature would continue to rise for some decades, and sea level for many centuries beyond that time (S.R. 2.7, 2.8);
- (h) The projected changes in climate change will result in significant, often adverse impacts on many ecological systems and socio-economic sectors, including food supply and water resources, and on human health. In some cases, the impacts are potentially irreversible (S.R. 3.2, 3.3);
- (i) Developing countries and small island countries are typically more vulnerable to climate change (S.R. 3.3);
- (j) Significant reductions in net greenhouse gas emissions are technically possible and economically feasible (S.R. 5.2); *add by utilizing extensive array of tech. & measures that facilitate tech. diffusion & transfer. (Japan)*
- (k) Significant no regrets opportunities are available in most countries to reduce net greenhouse gas emissions. Furthermore, the risk of aggregate net damage due to climate change, consideration of risk aversion, and the precautionary principle provide rationales for action beyond no regrets (S.R. 8.2);
- (l) A portfolio of existing cost effective technologies, policies and measures can be used to markedly reduce the net emissions of greenhouse gases from all sectors (S.R. 5.5, 5.6, 5.11, 5.12, 8.4);
- (m) Flexible, cost effective policies relying on economic incentives and instruments, as well as coordinated instruments, can considerably reduce mitigation and adaptation costs, or can increase the cost-effectiveness of emission reduction measures (S.R. 8.3);
- (n) Equity considerations are an important aspect of climate change policy and in achieving sustainable development. The intertemporal aspects of climate change policy also raise questions of intergenerational equity (S.R. 6.1, 6.5);
- (o) Uncertainties remain and there is a need for further work to reduce these uncertainties.
19. Other delegations expressed their view that it is very premature for the SBSTA to attempt to highlight specific findings of conclusions contained in the Second Assessment Report. They stated their belief that the list of items identified by certain delegations was highly selective and reflected a very limited, and, therefore, biased view of what were

important findings in the Second Assessment Report. They also pointed out that some of the items listed by others were taken out of context and failed to set forth important qualifications that the IPCC specifically stated.

20. These delegations suggested that a preliminary review of the IPCC's Synthesis Report indicated that other, important IPCC findings included, *inter alia*:

(a) Item 19¹⁸ (c), above, is merely quoted selectively concerning the IPCC's conclusions that the balance of evidence suggests a discernible human influence on global climate. It fails to disclose the key IPCC finding that its ability to quantify the human influence is limited "because there are uncertainties in key factors." It fails to disclose that one of these uncertainties in key factors concerns the magnitude and patterns of long-term natural variability. This information is clearly set forth in the Working Group I Summary for Policymakers, page 4 and in the IPCC Synthesis report, para. 2.4.

(b) Item 19¹⁴ (d), above, fails to disclose that, the estimated temperature increase of 2°C by 2100 is approximately 1/3 lower than the IPCC's "best estimate" in 1990. That information is contained in para. 2.7 of the Synthesis Report and on page 5 of the Working Group I Summary for Policymakers.

(c) Item 19¹⁴ (e), above, fails to disclose the important information that the estimate of sea level rise by 2100 is 25 per cent lower than the IPCC's "best estimate" in 1990. That information is found in para. 2.8 of the Synthesis report and on page 5 of the Working Group I Summary for Policymakers.

(d) Much attention has been paid to the issues of so called extreme events. Unfortunately the items in paragraph 19¹⁸ above, fail to disclose the very important conclusion that "there are inadequate data to determine whether consistent global changes in climate variability or weather extremes have occurred over the 20th century." Such information is located at para. 2.5 of the Synthesis report and on p.3 of the Working Group I Summary for Policymakers.

(e) Certainly, a key finding of the IPCC Synthesis report, found in para. 2.12, is that "many uncertainties and many factors currently limit our ability to project and detect future climate change."

(f) Insofar as item 19¹⁸ (h), above purports to deal with impacts on food supply, it is seriously misleading because it fails to disclose the key information in para. 3.13 of the Synthesis report and Section 3.3 of the IPCC Working Group II Summary for Policymakers that "existing studies show that on the whole, global agricultural production could be maintained relative to baseline production in the face of climate change projected underdoubled equivalent CO₂ equilibrium."

(g) Insofar as the list of items, above, concern response strategies and call for urgent action, it should be recalled that IPCC Working Group III specifically concluded

that "the value of better information about climate change processes and impacts and society's responses to them is likely to be great," and that para.8.4 of the Synthesis report called attention to "large differences in the cost of reducing greenhouse gas emissions, and enhancing sinks, among countries due to their state of economic development, infrastructure choices, and natural resources base."

REPORT OF THE SUBSIDIARY BODY FOR SCIENTIFIC AND
TECHNOLOGICAL ADVICE

Draft report of the Subsidiary Body for Scientific and
Technological Advice on its second session

Addendum

AGENDA ITEM 7: TECHNOLOGY INVENTORY AND ASSESSMENT

Draft conclusions proposed by the Officers of the SBSTA

1. The Subsidiary Body for Scientific and Technological Advice (SBSTA) considered the preparation of a technology inventory and assessment, as mentioned in decision 13/CP.1 of the Conference of the Parties (COP), and based its discussions on the initial report of the secretariat on this subject (FCCC/SBSTA/1996/4). It recalled the division of labour between the SBSTA and the Subsidiary Body for Implementation (SBI) regarding technology issues as indicated in decision 6/CP.1 on the subsidiary bodies established by the Convention. It noted the statements of the Netherlands regarding the Climate Technology Initiative and the statement made by the representative of the United Nations Industrial Development Organization concerning a study of industrial technologies.

2. The SBSTA recognized that the identification of and information on technologies and know-how that could assist the Parties in the preparation of national plans would be particularly useful, and urged all Parties who have not already done so to provide the secretariat information and databases on environmentally sound and economically viable technologies and know-how conducive to mitigating and adapting to climate change, including information from the private sector when possible, and to continue to do so on a routine basis in the future.

3. The SBSTA requested ^{in consultation with other relevant bodies} the secretariat to continue its activities related to the preparation of an inventory and assessment of environmentally sound and economically viable technologies and know-how conducive to mitigating and adapting to climate change, to take into consideration the activities of other United Nations agencies and intergovernmental organizations, and of programmes such as the International Geosphere-Biosphere Programme, and START, and to use all means possible to communicate the information to Parties.

including

*16 pages
revised*

4. ^{new sentence added} The SBSTA requested the secretariat to conduct a survey in order to identify needs of the Parties for information on technologies and know-how to mitigate and adapt to climate change, to prepare a programme of work, and to report on the progress on these for consideration at the third session of the SBSTA. Such a work programme could consider among its elements options for future development of a database and assessment of technology and should be elaborated in cooperation with other relevant United Nations agencies and other organizations and institutions. The SBSTA further requested the secretariat to prepare an initial catalogue of adaptation technologies, and know-how including ^{for most vulnerable sectors of economy} information on their costs, environmental impacts, implementation requirements, ^{possible timeframes for their implementation} and other characteristics for consideration by the SBSTA before the third session of the COP, and, on this matter, coordinate its activities with the Intergovernmental Panel on Climate Change.

5. The SBSTA, in view of decision 13/CP.1, requested the secretariat, ^{in coordination with other relevant bodies} to develop a paper for consideration by the SBSTA on ^{information related to the terms of Tech. that are currently available} the "elaboration of the terms under which transfer of technology and know-how could take place".

6. The SBSTA further requested the secretariat ^{in coordination with other relevant bodies} to periodically inform the SBSTA about new information on technologies and know-how in the research and development stage that may be conducive to mitigating and adapting to climate change and activities aimed at increasing the diffusion and commercialization of such technologies and know-how.

Malaysia
add, after 3rd session -
inter alia setting of info-centres
Survey for resources, prep. of
Seminar, documentation of info. coll.
SBSTA also requested the sec. to take into
consideration, follow on.

ITEM 6

CONCLUSIONS ON AN INITIAL FRAMEWORK FOR REPORTING
ON ACTIVITIES IMPLEMENTED JOINTLY UNDER THE PILOT PHASE

The Subsidiary Body for Scientific and Technological Advice:

Recalling decision 5/CP.1 of the ^{third} Conference of Parties ^{establishing a reporting framework} ~~at its first session~~ and in ^{for AES, <} particular the mandate given to the SBSTA, in coordination with SBI, to establish a ^{setting criteria} reporting framework for activities implemented jointly under the pilot phase (FCCC/CP/1995/7/Add.1, decision 5/CP.1). ^{for it, < inter}
^{also, that new}
^{credit will accrue to}
^{any parties with high}
^{emission reduced or sequest.}

1. Decides

- a) to adopt the initial reporting framework annexed to this decision.

2. Invites

- a) Parties to identify the relevant governmental authority/ministry authorized to accept, approve or endorse activities implemented jointly and to report to the COP through the secretariat.
- b) Parties to submit reports in accordance with the initial reporting framework on activities implemented jointly annexed to this conclusion.
- c) SBSTA and SBI, with the assistance of the secretariat to compile and synthesize information transmitted by the Parties in the form of a report which shall be considered annually by the COP, and based on this information, to develop suggestions for improving the initial reporting framework and for addressing methodological issues, as necessary.

ANNEX

Introduction

The initial framework for reporting must have a simple and transparent structure. It is expected that subsequent sessions of the COP and its subsidiary bodies could elaborate further on the framework for reporting, taking into account the information provided by the initial reports transmitted to the secretariat or comments expressed by Parties.

The nature of the information contained in the initial reports to be provided by Parties involved in AIJ will be relevant information for the evaluation of the ongoing pilot phase.

INITIAL FRAMEWORK FOR REPORTING ACTIVITIES IMPLEMENTED JOINTLY

1. Who reports?

Each national government of Parties involved in activities implemented jointly should report separately to the COP through the secretariat on a project by project basis unless participating Parties agree on a common report on a particular project. Any Party may report on national programmes for activities implemented jointly, for information purposes only.

If the Parties choose not to report jointly, the secretariat will not process information on that project until reports on that project from all Parties concerned, particularly developing country Parties, are transmitted to the secretariat.

2. Frequency

Reports may be transmitted to the secretariat at any time and should be updated, if possible, preferably each year, unless participating Parties decide otherwise.

3. Contents of the reports

- a) description of the project (type of the project, identification of all actors involved, institutional arrangements, actual costs to the extent possible, technical data, long-term viability of the project, location, lifetime, mutually agreed project assessment procedures, etc.)
- b) Governmental acceptance, approval or endorsement.
- c) compatibility with and supportiveness of national economic development and socio-economic and environment priorities and strategies.
- d) benefits derived from the AIJ project.
- e) ~~methods for and calculation of~~ ^{of} the contribution of AIJ projects that bring about real, measurable and long-term environmental benefits related to the mitigation of climate change that would not have occurred in the absence of such activities.

f) additionality to financial obligations of Parties included in Annex-II of the Convention within the framework of the financial mechanism as well as to current official development assistance (ODA) flows.

g) contribution to capacity building, transfer of environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention. In this process, the developed country Parties shall support the development and enhancement of endogenous capacities and technologies of developing country Parties.

h) additional comments if any including any practical experience gained or technical difficulties, effects, impacts or other obstacles encountered.

Reports of the SBI



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NATIONS



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SUBSIDIARY BODY FOR IMPLEMENTATION

Second session

Geneva, 27 February - 4 March 1996

Item 10 of the agenda

REPORT OF THE SUBSIDIARY BODY FOR IMPLEMENTATION

Draft report of the Subsidiary Body for Implementation on its second session

Rapporteur: Eduardo PEREZ DEL SOLAR (Peru)

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Annexes

I. Lists of attendance		
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I. OPENING OF THE SESSION

(Agenda item 1)

1. The second session of the Subsidiary Body for Implementation (hereinafter referred to as "the SBI") was held at Geneva from 27 February to 4 March 1996.
2. The Vice-Chairman of the SBI, Mr. Bert Metz, opened the session at the first meeting, on 27 February 1996.
3. The Executive Secretary, Mr. Michael Zammit Cutajar welcomed all participants to the session. He referred to his statement at the opening of the SBSTA, which was also pertinent to the work of the SBI. He highlighted two points on the agenda of the SBI to which delegations might wish to give thought before they came forward for discussion, namely, the legal arrangements for the relocation of the secretariat to Bonn (item 7 (b) of the provisional agenda) and political aspects of the preparations for the second session of the Conference of the Parties (COP 2).

II. ORGANIZATIONAL MATTERS

(Agenda item 2)

A. Adoption of the agenda

(Agenda item 2 (a))

4. At its first meeting, on 27 February, the SBI adopted the following agenda:
 1. Opening of the session.
 2. Organizational matters:
 - (a) Adoption of the agenda;
 - (b) Organization of work of the session.
 3. National communications:
 - (a) Communications from Parties included in Annex I to the Convention:
 - (i) Progress report on in-depth reviews;
 - (ii) Elements of the second compilation and synthesis report (policy aspects).

- (b) Communications from Parties not included in Annex I to the Convention: issues related to the compilation and consideration of information.
4. Financial and technical cooperation:
 - (a) Matters relating to the financial mechanism;
 - (b) Technical and financial cooperation: progress report;
 5. Transfer of technology.
 6. Matters arising from sessions of other bodies:
 - (a) Conclusions of the Subsidiary Body for Scientific and Technological Advice on a reporting framework for activities implemented jointly under the pilot phase.
 7. Institutional and budgetary matters:
 - (a) Update on implementation of decisions 14/CP.1, 15/CP.1, 17/CP.1 and 18/CP.1 of the Conference of the Parties;
 - (b) Arrangements for relocation of the Convention secretariat to Bonn.
 8. Arrangements for the second session of the Conference of the Parties.
 9. Review of the programme of work, 1996-1997.
 10. Report on the session.

B. Organization of work of the session
(Agenda item 2 (b))

5. At its 1st meeting on 27 February, the Vice-Chairman recalled that there would be services available for formal meetings in the afternoons between 3 p.m. and 6 p.m. In addition, facilities would be available in the mornings between 10 a.m. and 1 p.m. for informal meetings. The Vice-Chairman also referred to the documentation, as mentioned in document FCCC/SBI/1996/1/Add.1, paragraph 3 and annex I.

6. On the subject of applications for accreditation to sessions of the subsidiary bodies of the Convention, the SBI agreed to admit new applicant organizations that had been screened by the secretariat, on the basis of the provisions of Article 7.6 of the Convention, without prejudice to subsequent action by the COP.

7. Further, in accordance with the recommendation of the Bureau of the COP, the SBI agreed to maintain its policy that non-governmental organizations would be admitted to the floor before and after meetings only. In relation to this, the Vice-Chairman indicated his readiness to follow the procedure adopted by the Chairman of the SBSTA and to explore with him the possibilities for flexibility on this policy and expressed his willingness to discuss the matters, as necessary with concerned non-governmental organizations.

C. Attendance

8. The lists of attendance at the second session of the SBI are given in annex I below.

D. Documentation

9. The documents prepared for the SBI at its second session are listed in annex II below.

III. NATIONAL COMMUNICATIONS
(Agenda item 3)

1. Proceedings

A. Communications from Parties included in Annex I to the Convention

10. At its 1st meeting, on 27 February 1996, the SBI addressed the item on national communications from Parties included in Annex I to the Convention. It had before it two documents prepared by the secretariat (FCCC/SB/1996/1 and FCCC/SB/1996/2).

11. Statements were made by the representatives of six Parties including one speaking on behalf of the European Community.

2. Conclusions

12. On the basis of the proposals by the Chairman, the SBI, at its ... meeting on ... March adopted the following conclusions.

(to be completed)

B. Communications from Parties not included in Annex I to the Convention: issues related to the compilation and consideration of information

1. Proceedings

13. At its meeting on ... February, the SBI addressed the item on communications from Parties not included in Annex I to the Convention. It had before it a note prepared by the secretariat (FCCC/SB/1996/3).

14. Statements were made by the representatives of ... Parties [including one speaking on behalf of the European Community and one speaking on behalf of the Group of 77 and China] [and non-parties].

15. The representatives of --- also made statements.

2. Conclusions

16. On the basis of the proposals by the Chairman, the SBI adopted the following conclusions.

[to be completed]

IV. **FINANCIAL AND TECHNICAL MECHANISM**
(Agenda item 4)

A. Matters relating to the financial mechanism

1. Proceedings

17. At its meeting on 28 February, the SBI addressed the item on financial and technical cooperation. It had before it a note prepared by the secretariat (FCCC/SBI/1996/3).

18. Statements were made by the representatives of ... Parties [including one speaking on behalf of the European Community and one speaking on behalf of the Group of 77 and China] [and non-parties].

19. The representatives of --- also made statements.

2. Conclusions

20. On the basis of the proposals by the Chairman, the SBI adopted the following conclusions.

[to be completed]

B. Technical and financial cooperation: progress report

1. Proceedings

21. At its meeting on 28 February, the SBI addressed the item on financial and technical cooperation. It had before it a note prepared by the secretariat (FCCC/SBI/1996/4).

22. Statements were made by the representatives of ... Parties [including one speaking on behalf of the European Community and one speaking on behalf of the Group of 77 and China] [and non-parties].

23. The representatives of --- also made statements.

2. Conclusions

24. On the basis of the proposals by the Chairman, the SBI adopted the following conclusions.

[to be completed]

V. **TRANSFER OF TECHNOLOGY**

(Agenda item 5)

1. Proceedings

25. At its meeting on ... February, the SBI addressed the item on transfer of technology. It had before it a note prepared by the secretariat (FCCC/SBI/1996/5).

26. Statements were made by the representatives of ... Parties [including one speaking on behalf of the European Community and one speaking on behalf of the Group of 77 and China] [and non-parties].

27. The representatives of --- also made statements.

2. Conclusions

28. On the basis of the proposals by the Chairman, the SBI adopted the following conclusions.

[to be completed]

VI. MATTERS ARISING FROM SESSIONS OF OTHER BODIES
(Agenda item 6)

A. Conclusions of the Subsidiary Body for Scientific and Technological Advice on a reporting framework for activities implemented jointly under the pilot phase

1. Proceedings

29. At its ... meeting on ... February, the SBSTA addressed the item on activities implemented jointly under the pilot phase. It had before it a note prepared by the secretariat (FCCC/SBSTA/1996/5).

30. Statements were made by the representatives of ... Parties [including one speaking on behalf of the European Community and one speaking on behalf of the Group of 77 and China] [and non-parties].

31. The representatives of --- also made statements.

2. Conclusions

32. On the basis of the proposals by the Chairman, the SBI adopted the following conclusions.

[to be completed]

VII. INSTITUTIONAL AND BUDGETARY MATTERS
(Agenda item 7)

A. Update on implementation of decisions 14/CP.1, 15/CP.1, 17/CP.1 and 18/CP.1 of the Conference of the Parties

1. Proceedings

33. At its ... meeting on 29 February, the SBI addressed the item on institutional and budgetary matters. It had before it a note prepared by the secretariat (FCCC/SBI/1996/6).

34. No statements were made.

2. Conclusions

35. On the basis of the proposals by the Chairman, the SBI, at its 3rd meeting, on 29 February, adopted the following conclusions.

(a) The SBI took note of the information provided by the Executive Secretary (see FCCC/SBI/1996/6), including, *inter alia*, of the fact that important institutional and budgetary matters are to be considered by the General Assembly at its fifty-first, fifty-second and fifty-fourth sessions, and by the Advisory Committee on Administrative and Budgetary Questions.

(b) The SBI strongly encouraged Parties to pay promptly and in full their contributions to the core administrative budget, which were due on 1 January 1996, and invited Parties to make generous contributions to the other voluntary funds to meet needs for 1996.

B. Arrangements for relocation of the Convention secretariat to Bonn

1. Proceedings

36. At its meeting on 29 February, the SBI addressed the item on institutional and budgetary matters. It had before it a note prepared by the secretariat (FCCC/SBI/1996/7).

37. Statements were made by the representatives of five Parties including one speaking on behalf of the European Community.

2. Conclusions

38. On the basis of the proposals by the Chairman, the SBI adopted the following conclusions.

[to be completed]

VIII. ARRANGEMENTS FOR THE SECOND SESSION OF THE CONFERENCE OF THE PARTIES

(Agenda item 8)

1. Proceedings

39. At its meeting on 29 February, the SBI addressed the item on arrangements for the second session of the Conference of the Parties. It had before it a note prepared by the secretariat (FCCC/SBI/1996/8).

40. Statements were made by the representatives of 10 Parties including one speaking on behalf of the European Community. A statement was also by the representative of an observer State.

2. Conclusions

41. On the basis of the proposals by the Chairman, the SBI at its third meeting on 27 February, adopted the following conclusions.

(a) The SBI took note with appreciation of the interest expressed by the African Group to provide a candidate for the Presidency of the Conference of the Parties at its second session (COP 2);

(b) The SBI urged States that have not taken action to become Parties to the Convention to deposit their instruments of ratification or accession by 9 April 1996, so as to be able to participate as Parties in COP 2 from the opening day;

(c) The SBI invited Parties to contribute generously to the trust fund for participation in the Convention process and expresses the hope that sufficient contributions will be made to enable the secretariat to fund two delegates from each eligible Party to attend COP 2, at least from those that are least developed countries and small island developing countries;

(d) The SBI welcomed the offer of the Government of Canada to organize a "Climate Change Technology Exhibit" in conjunction with COP 2 and noted that this will be done in consultation with the Convention secretariat;

(e) The SBI requested the Executive Secretary to proceed with the organizational preparations for COP 2 on the basis of the proposals contained in document FCCC/SBI/1996/8 concerning, *inter alia*, the provisional agenda, the schedule of meetings and the admission of organizations as observers.

[to be completed]

IX. REVIEW OF THE PROGRAMME OF WORK, 1996-1997
(Agenda item 9)

1. Proceedings

42. At its ... meeting on ... February, the SBI addressed the item on the review of the programme of work, 1996-1997. It had before it a note prepared by the secretariat (FCCC/SBI/1996/2).

43. Statements were made by the representatives of ... Parties [including one speaking on behalf of the European Community and one speaking on behalf of the Group of 77 and China] [and non-parties].

44. The representatives of --- also made statements.

2. Conclusions

45. On the basis of the proposals by the Chairman, the SBI adopted the following conclusions.

[to be completed]

X. REPORT ON THE SESSION
(Agenda item 10)

46. At its ... meeting, on ... March, the Rapporteur presented the first part of the draft report of the session (FCCC/SBI/1996/L.1). The SBI considered and adopted the first part of the draft report. It also requested the Rapporteur, under the guidance of the Chairman and with the assistance of the secretariat, to complete the report of the session taking into account the discussions during the session and the need for editorial adjustments.

47. The Chairman, after thanking all participants for their constructive cooperation, declared the second session of the SBI closed.



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Item 10 of the agenda

REPORT OF THE SUBSIDIARY BODY FOR IMPLEMENTATION

Draft report of the Subsidiary Body for Implementation on its second session

Addendum

NATIONAL COMMUNICATIONS

**Agenda item 3 (a): Communications from Parties included in
Annex I to the Convention**

Draft conclusions submitted by the Chairman

1. The SBI took note of the progress report on in-depth reviews (FCCC/SB/1996/2) and of the in-depth review reports issued so far (FCCC/IDR.1/CZE, FCCC/IDR.1/SWE, FCCC/IDR.1/AUS, FCCC/IDR.1/USA, FCCC/IDR.1/CAN, FCCC/IDR.1/CHE). It expressed its appreciation to the Parties which have hosted in-depth review visits, to the Parties and intergovernmental organizations which have nominated experts and to the secretariat for the coordination of these reviews.
2. The SBI concluded that the progress report on in-depth reviews provides useful information on the implementation of the Convention. It also urged the Parties included in Annex I to the Convention that have not yet submitted national communications to do so in time for the second session of the Conference of the Parties (COP 2).

3. The SBI envisages that policy aspects of the available in-depth review reports are to be fully considered as a separate agenda item at its third session in order to draw relevant conclusions to the attention of the Ad Hoc Group on the Berlin Mandate at its fourth session and to the COP at its second session.
4. The SBI invited the SBSTA to consider ways of enhancing transparency, comparability and consistency through more specific reporting guidelines, including standard formats and tables, *inter alia*, for the description of policies and measures. In doing so, these Parties are invited to describe, to the extent possible, the specific effects expected from individual mitigation measures.
5. The SBI invited the SBSTA to analyse from a technical point of view reporting options on such issues as temperature adjustments, electricity trade, bunker fuels, use of global warming potentials and land use change and forestry to resolve inconsistencies in the reporting of inventories with the aim of enhancing comparability. It also invited the SBSTA to make relevant recommendations to the SBI.
6. The SBI endorsed the outline and approaches proposed for the second compilation and synthesis of first national communications, as described in document FCCC/SB/1996/1, and suggested that the presentation of policies and measures should highlight those that are innovative, successful and/or potentially replicable.
7. The SBI took note of preliminary data presented in document FCCC/SB/1996/1/Add.1 on projections of emissions of greenhouse gases for the year 2000 which indicate that many Annex I Parties will have to make additional efforts beyond those included in projections in order to return their greenhouse gas emissions not controlled by the Montreal Protocol to base year levels by 2000.
8. The SBI concluded that mechanisms should be explored to facilitate the exchange of experiences in carrying out national programmes to implement the Convention. In that context, the SBI requested the secretariat to convene an informal workshop, preferably in conjunction with the fourth session of the SBI, focusing the discussion on the implementation aspects of specific policies and measures taken by these Parties. This workshop could also present an opportunity to assess the results of the first cycle of in-depth reviews.



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REPORT OF THE SUBSIDIARY BODY FOR IMPLEMENTATION

Draft report of the Subsidiary Body for Implementation on its second session

Addendum

FINANCIAL AND TECHNICAL COOPERATION

Agenda item 4 (a): Matters relating to the financial mechanism

Agenda item 4 (b): Technical and financial cooperation: progress report

Draft conclusions submitted by the Chairman of the SBI

Agenda item 4 (a): Matters relating to the financial mechanism

1. The SBI considered document FCCC/SBI/1996/3 and took note of the information contained therein on relevant action taken by the Council of the Global Environment Facility (GEF), including the adoption by the Council of the GEF of its operational strategy.

2. The SBI concluded that:

(a) The GEF, as the interim operating entity of the financial mechanism of the United Nations Framework Convention on Climate Change and its implementing agencies should provide expeditious and timely support under Articles 4.3 and 12.5 for the preparation of national communications by developing country Parties in accordance with Article 12.1;

(b) The GEF, as the interim operating entity of the financial mechanism of the United Nations Framework Convention on Climate Change, in that connection, should consider country-specific needs but could also consider approaches which may be used for several countries with similar needs upon request, and take into account that the preparation of national communications is a continuing process. In this regard, the guidelines to be adopted by the Conference of the Parties (COP) on the preparation of the national communications of non-Annex I Parties should be taken fully into account;

(c) The GEF, as the interim operating entity of the financial mechanism of the United Nations Framework Convention on Climate Change, in this initial period, should implement enabling activities consistent with the guidance provided to it by the COP and expedite the disbursement of resources to meet the agreed full costs of such activities in accordance with Article 4.3, in particular the initial and subsequent preparation of national communications of Parties not included in Annex I to the Convention.

Agenda item 4 (b): Technical and financial cooperation: progress report

1. The SBI considered document FCCC/SBI/1996/4 and took note of the information contained therein on secretariat activities in the area of technical and financial cooperation, in particular its efforts on CC:INFO, CC:FORUM and CC:TRAIN.

2. The SBI concluded that:

(a) Services provided by the secretariat in this area should be recognized, in particular those promoting the exchange of information through CC:INFO and those aiming at the coordination of activities and the effective utilization of resources for support to the preparation of national communications through CC:FORUM.

(b) The secretariat should prepare a report for the next session of the SBI on possibilities for strengthening and expanding these activities in support of the preparation of the national communications of Parties not included in Annex I to the Convention.



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REPORT OF THE SUBSIDIARY BODY FOR IMPLEMENTATION

Draft report of the Subsidiary Body for Implementation on its second session

Addendum

REVIEW OF THE PROGRAMME OF WORK, 1996-1997

Draft conclusion submitted by the Chairman of the SBI

Agenda item 9: Review of the programme of work, 1996-1997

The Subsidiary Body for Implementation (SBI) took note of the secretariat document on the programme of work, 1996-1997 (FCCC/SBI/1996/2) and in accordance with its decision 1/SBI.1 (FCCC/SBI/1995/5) decided to review the programme of work at the session immediately prior to the second session of the Conference of the Parties.

TRANSFER OF TECHNOLOGY

Draft conclusions on agenda item 5 proposed by the Officers of the Subsidiary Body for Implementation

1. The Subsidiary Body for Implementation (SBI) considered the initial progress report of the secretariat on concrete measures taken by Annex II Parties to the Convention with respect to their commitments to transfer technology and know-how, as mentioned in decision 13/CP.1 of the Conference of the Parties (COP), and based its discussion on the note by the secretariat on this subject (FCCC/SBI/1996/5).
2. The SBI took note of the conclusions of the SBSTA (FCCC/SBSTA2/CRP.3) concerning the preparation of a paper on information regarding the terms of transfer of technology and know-how, and stressed the need to give greater clarity and content in the preparation of this paper to the terms and mechanisms of technology transfer. It also urged the secretariat to give greater consideration to its activities related to the "assessment" and evaluation of technologies and options.
3. The SBI recognized the need to improve the comprehensiveness, comparability, and detail of information provided by Annex II Parties on the transfer of technology and know-how necessary to mitigate and facilitate adequate adaptation to climate change. It also noted that decision 13/CP.1 urges other Parties to include in their communications, where possible, information on measures taken for the transfer of technology.
4. The SBI recognized the complementarity of the roles of the public and private sectors with regard to technology transfer. The SBI urged ~~all Parties, in particular~~ Annex II Parties, to continue to take concrete steps to promote technology transfer, to improve especially the enabling environment for private sector participation in particular, and to support and promote the development of endogenous capacities and appropriate technology relevant to the objectives of the Convention, pursuant to the relevant articles of the Convention and decision 13/CP.1. The SBI agreed to provide continuous advice to improve the operational modalities for effective transfer of technology.
5. The SBI requested the SBSTA to prepare recommendations on the guidelines for national communications by Annex I Parties for consideration at the third session of the SBI. The SBI recommended that the modifications should aim to improve the comprehensiveness, comparability and detail of information provided in national communications and should reflect option 3 given in the secretariat document FCCC/SBI/1996/5 while noting the need for flexibility in reporting private sector activities.
6. The SBI further requested the secretariat to prepare a report, after consultations with relevant United Nations agencies and other organizations and institutions, on technology transfer cooperation by the private sector for consideration by the SBI, preferably at COP 3, but no later than COP 4.
7. The SBI invited Parties to submit comments on these subjects to the secretariat by 1 April, 1996 and requested the secretariat to prepare a compilation of views submitted by the Parties.

REPORT OF THE SUBSIDIARY BODY FOR IMPLEMENTATION

Draft report of the Subsidiary Body for Implementation on its second session

Addendum

**ARRANGEMENTS FOR THE SECOND SESSION OF
THE CONFERENCE OF PARTIES**

Agenda item 8: Arrangements for the second session of the Conference of the Parties

Draft conclusions submitted by the Chairman

Document FCCC/SBI/1996/L.1

1. Proceedings

.....

.....

2. Conclusions

Replace paragraph 41 (a) with the following text:

The SBI applauded the designation of the Minister of Environment and Tourism of Zimbabwe by the African Group for the Presidency of the Conference of the Parties at its second session (COP 2). It took note with satisfaction the statement by the delegate of Zimbabwe accepting this nomination.

Insert as paragraph 41 (a) bis the following:

(a) The SBI welcomed the large support given to holding a ministerial segment of COP 2 and concluded that a ministerial segment should be held on 17 and 18 July. It requested the Executive Secretary to organize the Conference accordingly.

Insert as paragraph 41 (a) ter the following:

1. The SBI received the following candidatures for officers of the Bureau of the second session of the Conference of the Parties, other than the President :

(a) From the Group of African States: the Chairman of the SBI, Mr. Mohamed M. Ould El Ghaouth (Mauritania) (in addition to the President).

(b) From the Group of Asian States: At that stage, the Group was not able to present any candidature.

(c) From the Group of Eastern European States: one Vice-President (Russian Federation) and the Chairman of SBSTA, Mr. Tibor Farago (Hungary).

(d) From the Group of Latin American and Caribbean States: Antigua and Barbuda as Vice-President and Costa Rica as Vice-President, on the understanding that the Chairmanship of the AGBM would be distinct from the COP Bureau.

(e) From the Group of Western European and other States: At that stage, the Group was not able to present any candidature.

(f) From the Alliance of Small Islands States (AOSIS): one Vice-President (Samoa).

2. The SBI took note that no nominations had been received for the post of Rapporteur, which is subject to geographical rotation. It invited the President of the COP to conduct further consultations on the election of Officers of the Bureau, possibly in conjunction with the fourth session of the CSD, New York, 18 April to 3 May 1996.

3. The SBI invited those Regional Groups that had not submitted nominations to the election of Officers to convey them to the Executive Secretary before 18 April 1996, to enable him forward them to the President of the COP.



SUBSIDIARY BODY FOR IMPLEMENTATION

Second session

Geneva, 27 February - 4 March 1996

Item 8 of the provisional agenda

ARRANGEMENTS FOR THE SECOND SESSION OF THE CONFERENCE OF THE PARTIES INCLUDING ELEMENTS FOR A PROVISIONAL AGENDA

Note by the secretariat

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I. INTRODUCTION

A. Mandate

1. Article 8.2 of the Convention provides that the functions of the secretariat shall be, *inter alia*, "to make arrangements for sessions of the Conference of the Parties and its subsidiary bodies established under the Convention and to provide them with services as required."

2. At its meeting held on 31 October 1995, the Bureau of the Conference of the Parties (COP) decided that the second session of the Conference of the Parties (COP 2) would be held within the period of 8 to 19 July 1996, at the Palais des Nations, Geneva. In this connection, it will be recalled that all subsidiary bodies are also scheduled to meet within that sessional period. The Bureau further decided that the secretariat would prepare, in consultation with the Bureau, a paper on all aspects of COP 2 that would be considered at the second session of the Subsidiary Body for Implementation (SBI), in February 1996, in the context of an agenda item on arrangements for COP 2.

B. Scope of the note

3. Accordingly, the secretariat has consulted the Bureau before submitting the present note to the SBI. This note contains information on organizational matters for COP 2, and it provides a list of possible elements for a provisional agenda for the session.

C. Possible action by the Subsidiary Body for Implementation

4. Guidance is invited from the SBI on the matters raised in this note, in particular on: (a) the provisional agenda for COP 2; (b) consultations on the composition of the Bureau for COP 2; and (c) the organization of the work of COP 2, including the possibility of holding a high-level or ministerial segment and providing for a general discussion as part of that segment.

II. NOTES ON ORGANIZATIONAL MATTERS

A. Participation

Notification and attendance

5. Rule 5 of the draft rules of procedure of the COP and its subsidiary bodies provides that "the secretariat shall notify all Parties of the dates and venue of a session at least two months before the session is held" (see A/AC.237/L.22/Rev.2 and FCCC/CP/1995/2). Formal notification of the second session will be communicated in due course to all Parties through the Permanent Missions in Geneva, or the Permanent Missions in New York of Parties not represented in Geneva, or the Ministries of Foreign Affairs of Parties not represented in Geneva or New York, as well as to States not parties to the Convention.

The notification will request that the representatives of Parties be provided by their Governments with full powers to participate in the session, including the possibilities to vote and to serve as officers of the second session and of any sessional bodies, and as officers of the subsidiary bodies established by the Convention.

6. As regards attendance, since all subsidiary bodies will also meet during the sessional period, it is recommended that Parties include in their delegations, whenever possible, representatives with expertise in the various economic, social, scientific and environmental fields that are relevant to the objective of the Convention.

7. It should be noted that, in accordance with Article 23, States that wish to participate in COP 2 as Parties, from the opening day (8 July 1996), should deposit their instruments of ratification or accession by 9 April 1996 at the latest. Such instruments should be received by that date by the Secretary-General of the United Nations as Depository of the Convention (Treaty Section, Room S-3200A, Office of Legal Affairs, United Nations Headquarters, New York).

Financial support for participation

8. At recent sessions of Convention bodies, the resources available to the special voluntary fund for participation established under General Assembly resolution 45/212 generally permitted the secretariat to offer funding to one delegate each from all eligible Parties, giving priority to those that are least developed or small island developing States selected as eligible for funding. In accordance with decision 15/CP.1, * a new trust fund for facilitating the participation of Parties in the work of the Convention has been established by the Secretary-General of the United Nations. It is to be hoped that contributions to this trust fund will be forthcoming in the next few months so as to allow the secretariat to fund two delegates from each eligible Party to attend COP 2, especially in view of the heavy workload of the sessional period. Should that prove not to be possible, an effort would still be made to fund two delegates each from least developed countries and eligible small island developing States, and one delegate each from all other eligible Parties.

Credentials

9. In accordance with rule 19 of the draft rules of procedure, the credentials of representatives of Parties, as well as the names of alternate representatives and advisers, shall be submitted to the secretariat not later than twenty-four hours after the opening of the session. Any later change in the composition of the delegation shall also be submitted to the secretariat. The credentials shall be issued either by the Head of State or Government or by the Minister of Foreign Affairs or, in the case of a regional economic integration organization, by the competent authority of that organization. The Bureau of COP 1 shall

* For decisions adopted by the Conference of the Parties at its first session, see document FCCC/CP/1995/7/Add.1.

examine the credentials and submit its report to the Conference (see rule 20 of the draft rules of procedure). It should also be noted that representatives shall be entitled to participate provisionally in the session, pending a decision by the COP to accept their credentials (see rule 21 of the draft rules of procedure).

B. Rules of procedure

10. As the Conference of the Parties did not adopt its rules of procedure at its first session, it decided at that session: (a) to request the President to conduct consultations on the subject with the various geographical groups and interested parties, and report back to it; and (b) to apply the draft rules of procedure to its work, pending the results of the President's consultations on the draft rules. The President of the first session of the COP will report to the second session on the results of her consultations.

C. Agenda

11. Rule 9 of the draft rules of procedure provides that, "in agreement with the President, the secretariat shall draft the provisional agenda of each session." In this connection, the Bureau, at its meeting on 31 October 1995, decided that the secretariat should proceed with the preparation of a draft provisional agenda for COP 2 that would be kept under review by the Bureau and included in the document on arrangements for COP 2 to be submitted to the SBI. The Bureau further decided that a thematic approach should guide the preparation of the provisional agenda.

12. In accordance with this decision, a list of possible elements for a provisional agenda is contained in annex I to this document. In order to facilitate the work of COP 2, the secretariat has attempted to organize the elements in such a way as to reflect an agenda that distinguishes between: (a) political stock-taking (including a review of the work of the Ad Hoc Group on the Berlin Mandate (AGBM)); (b) substantive decisions needed to advance the Convention process; (c) progress reports from the other subsidiary bodies on matters not requiring specific decisions and guidance to these bodies on their work programmes and priorities; (d) administrative and financial matters; and (e) organizational and procedural matters. The SBI may wish to express its views on this approach to a provisional agenda.

D. Officers

13. It will be recalled that rule 22 of the draft rules of procedure provides that "at the commencement of the first meeting of each ordinary session, a President, seven Vice-Presidents, the Chairmen of the subsidiary bodies established by Articles 9 and 10 of the Convention, and a Rapporteur shall be elected from among the representatives of the Parties present at the session. They will serve as the Bureau of the session. Each of the five regional groups shall be represented by two Bureau members and one Bureau member shall represent the small island developing States. The offices of President and Rapporteur shall normally be subject to rotation among the five regional groups." Rule 22 further states that "no officer may serve on the Bureau for more than two consecutive terms of one year."

14. The President of the first session of the COP will open and preside over the second session until it has elected a President for the session (see rules 23 and 26 of the draft rules of procedure). In keeping with the principle of rotation among the five regional groups, it would be the turn of the Group of African States to provide a representative for the presidency of the second session. Preliminary consultations indicate a readiness by the Group of African States to accept that responsibility. Further consultations will be required to determine the composition of the Bureau of COP 2, as well as the officers of the subsidiary bodies as appropriate.

15. The elected President of the second session will invite the Conference to elect the remainder of its officers and the Chairmen of the subsidiary bodies established by Articles 9 and 10 of the Convention. Rule 27 of the draft rules of procedure provides that "each subsidiary body shall elect its own Vice-Chairman and Rapporteur." It is proposed that, if there is agreement on the nominations for these officers of subsidiary bodies, the precedent of the first session be followed and the provisions of rule 27 be waived to allow these officers to be elected directly by the Conference in plenary session.

E. Admission of organizations as observers

16. The admission of intergovernmental and non-governmental organizations as observers is governed by Article 7.6 of the Convention, which provides, *inter alia*, that "any body or agency, whether national or international, governmental or non-governmental, which is qualified in matters covered by the Convention, and which has informed the secretariat of its wish to be represented at a session of the Conference of the Parties as an observer, may be so admitted unless at least one third of the Parties present object."

17. At its first session, the COP agreed (FCCC/CP/1995/7, para. 22), on the proposal of the President, that the secretariat should invite to the future sessions of the Conference and of its subsidiary bodies all intergovernmental and non-governmental organizations admitted at that session and at future sessions, unless an objection was raised to any particular organization in accordance with the Convention and the rules of procedure. Consequently, all the organizations admitted to the first session will be invited to attend the second session, and the procedure for admission to the Conference of the Parties will apply to new applicants only.

18. Following the precedent of COP 1, the secretariat will prepare a list of intergovernmental and non-governmental organizations that have expressed a wish to be invited to COP 2 for consideration by the Conference at the start of the session. In drawing up the list, the secretariat will take due account of the provisions of Article 7.6 and of the established practice whereby non-governmental organizations are required to furnish proof of their non-profit (tax-exempt) status in a State Member of the United Nations or of a specialized agency or of the International Atomic Energy Agency. The list will include all organizations that have requested and been accorded provisional admission to the work of the subsidiary bodies since COP 1.

19. As organizations will learn of the status of their application only after the second session has opened, and since many such organizations will have to make their travel plans to Geneva in advance, the following procedure is proposed in order to ease that process for applicants. The SBI may request the COP Bureau to consider the list of applicants prior to the second session with a view to establishing that the organizations contained in the list do meet all requirements, and to authorize the secretariat to advise those applicants of their "pre-admittance status", on the understanding that the final authority for the admission of observers rests with the COP.

F. Organization of work

Allocation of tasks

20. Considering that the four subsidiary bodies have had their respective mandates spelled out by the COP and are required to report to it on the implementation of those mandates, it would seem appropriate for the second session of the COP to address the various items on its agenda on the basis of the work done by the subsidiary bodies. This would preclude the need for creating a sessional committee of the whole, which was needed at the first session but which would place additional pressure on an already overburdened schedule at the second session. At its meeting on 31 October 1995, the Bureau of the COP recommended that, in order to make it possible for the four subsidiary bodies to meet within the sessional period of 8 to 19 July, as previously decided, it would be necessary for COP 2 to open on 8 July and then suspend its plenary meetings until the middle of the following week (17 July).

21. The SBI may wish to suggest to COP 2 that it consider the items on its agenda, in plenary session, on the basis of either draft decisions submitted to it by the subsidiary bodies, or progress reports from the same bodies that clearly indicate where further action by, or mandates from, the COP would be needed. Should further work prove necessary on any given item after the subsidiary bodies have adjourned their sessions, the COP may wish to delegate such work, as appropriate, to contact groups.

22. Guidance is also sought from the SBI on the question of whether it would be useful for COP 2, in view of its agenda and programme of work, to have a high-level or ministerial segment. The SBI may wish to request its Chairman to consult the coordinators of the various regional groups and members of the COP Bureau on this issue and report back to it in the course of the current session. The secretariat will need timely guidance on this matter in order to organize COP 2 in consequence.

Schedule of meetings

23. The Chairman of the Ad Hoc Group on Article 13 informed the Bureau on 31 October that the Group had decided to forgo holding its second session within the period of 26 February to 8 March 1996 to allow more time for preparation. The Group expressed the wish to hold its second session in the July 1996 sessional period and to have three days available to it at that time.

24. Having taken into account the points outlined above, the secretariat has drawn up a tentative schedule of meetings for the sessional period (see annex II to this note). The COP would open in plenary session on 8 July, and then turn to the subsidiary bodies, and finally revert to its plenary on 17 July for action to be taken on draft decisions and progress reports submitted to it by the subsidiary bodies. In order to accommodate all four subsidiary bodies and the needs emanating from their respective programmes of work, as well as the plenary meetings of the COP, it will be necessary to return to the practice of holding parallel meetings. Nevertheless, the number of meetings taking place simultaneously would be limited to two.

G. Statements

25. At the opening plenary meeting on 8 July, statements will be made by the outgoing President of the first session of the Conference, the newly-elected President of the second session, the executive heads of partner organizations invited to do so, and the Executive Secretary.

26. Items 5 and 6 of the proposed list of possible elements for a provisional agenda, taken together, would provide an opportunity for general statements in plenary should it be decided to hold a general discussion. The question of holding a general discussion is linked to that of a high-level or ministerial segment, since participants in such a segment often expect an opportunity to make a general policy statement. The SBI may wish to give its advice on this question.

27. As has been the practice in previous sessions of Convention bodies, representatives of States not Parties to the Convention, and of intergovernmental and non-governmental organizations would be given the opportunity to address the plenary of the COP under agenda item 3 (b) entitled "Other statements". This could be done at the second plenary meeting on 8 July.

H. Special events

28. As was the case at COP 1, it is expected that a number of special events, held in parallel to the COP, will be organized by Parties, as well as by observers. In this connection, the Government of Canada has offered to organize a Climate Change Technology Exhibit with participation open to private sector organizations from all countries that are Parties to the Convention, although exhibitors would be expected not to engage in commercial transactions. The proposal draws on the experience gained from Canada's support of similar exhibits at the first two sessions of the Conference of the Parties to the Convention on Biological Diversity. The exhibit would be implemented by a consultant working under contract for the Government of Canada and reporting to a government interdepartmental working group. The secretariat of the United Nations Framework Convention on Climate Change would be consulted on all aspects regarding the implementation and promotion of the exhibit.

Annex I

SECOND SESSION ¹ OF THE CONFERENCE OF THE PARTIES:
POSSIBLE ELEMENTS FOR A PROVISIONAL AGENDA

1. Opening of the Conference.
2. Election of the President.
3. Statements:
 - (a) Statements at the opening of the session;
 - (b) Other statements.
4. Organizational matters:
 - (a) Status of ratification of the Convention, including declarations made under Article 4.2 (g);
 - (b) Adoption of the rules of procedure;
 - (c) Adoption of the agenda;
 - (d) Election of officers other than the President;
 - (e) Admission of organizations as observers;
 - (f) Organization of work;²
 - (g) Calendar of meetings of Convention bodies 1996-1997;
 - (h) Date and venue of the third session of the Conference of the Parties;
 - (i) Adoption of the report on credentials.

¹ The second session of the Conference of the Parties (COP 2) is scheduled to open in plenary session, on Monday, 8 July 1996; the plenary will then be suspended until Wednesday, 17 July to allow for the sessions of the four subsidiary bodies to take place during that interval. The subsidiary bodies will provide inputs, including draft decisions, for the various items on the COP 2 agenda. The plenary will deal with these inputs, conclude negotiations and adopt conclusions and decisions in the period of 17 to 19 July.

² The present list of possible elements for a provisional agenda does not prejudice a decision on organizing COP 2 on the basis of segments, including a high-level or ministerial segment, as at COP 1, nor on holding a general discussion during that segment.

5. Implementation of the commitments in Article 4 of the Convention and of the related decisions of the first session of the Conference of the Parties, ³ including:
 - (a) The development and the transfer of technologies (Article 4.1(c) and 4.5). ⁴
6. The Berlin Mandate process: taking stock and intensifying efforts. ⁵
7. Decisions to advance the Convention process:
 - (a) Communications by Parties:
 - (i) Methodological questions;
 - (ii) Communications from Annex I Parties: guidelines and process for consideration;
 - (iii) Communications from the Parties not included in Annex I: guidelines, facilitation and process for consideration;
 - (b) Activities implemented jointly under the pilot phase;
 - (c) Inventory and assessment of technologies: further work;
 - (d) Intergovernmental technical advisory panel(s);
 - (e) Cooperation with the Intergovernmental Panel on Climate Change;
 - (f) Financial mechanism:
 - (i) Report by the Council of the Global Environment Facility;
 - (ii) Memorandum of Understanding between the Conference of the Parties and the Council of the Global Environment Facility.

³ The second compilation and synthesis of first national communications by Annex I Parties will be one of the main documents informing the discussions under this item.

⁴ See decision 13/CP.1, paragraph 4 (a).

⁵ The report of the AGBM would be considered under this item and guidance given on its work programme and priorities.

8. Subsidiary bodies: progress reports and guidance on work programmes and priorities: ⁶
 - (a) Report of the Subsidiary Body for Scientific and Technological Advice;
 - (b) Report of the Subsidiary Body for Implementation;
 - (c) Report of the Ad Hoc Working Group on Article 13.
9. Administrative and financial matters:
 - (a) Establishment of the permanent secretariat and arrangements for its functioning;
 - (b) Other voluntary funding for the biennium 1996-1997;
 - (c) Convention budget for the biennium 1996-1997 – income and budget performance, and resource deployment for 1997.
10. Other matters.
11. Conclusion of the session:
 - (a) Adoption of the report of the Conference of the Parties on its second session;
 - (b) Closure of the session.

⁶ See footnote 5 to item 6.

Annex II

SECOND SESSION OF THE CONFERENCE OF THE PARTIES
8 TO 19 JULY 1996

TENTATIVE SCHEDULE OF MEETINGS

WEEK 1:

	8/7	9/7	10/7	11/7	12/7
A.M.	COP Plenary	SBSTA AG13	SBSTA AG13	SBSTA AG13	AGBM SBI
P.M.	COP Plenary AG13	SBSTA AG13	SBSTA AG13	SBSTA AGBM	AGBM SBI

WEEK 2:

	15/7	16/7	17/7	18/7	19/7
A.M.	AGBM SBI	AGBM SBI	COP Plenary *	COP Plenary *	COP Plenary *
P.M.	AGBM SBI	AGBM SBI	COP Plenary *	COP Plenary *	COP Plenary *

* Possibility for informal consultations and COP contact groups, as appropriate.

Reports of the SB



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**SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE
SUBSIDIARY BODY FOR IMPLEMENTATION**
Second sessions
Geneva, 27 February - 4 March 1996

**EXTRACTS FROM THE PROVISIONAL REPORTS OF THE SUBSIDIARY
BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE AND THE
SUBSIDIARY BODY FOR IMPLEMENTATION**

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VIII. ESTABLISHMENT OF INTERGOVERNMENTAL TECHNICAL
 ADVISORY PANEL(S)

IX. FINANCIAL AND TECHNICAL COOPERATION

I. INTRODUCTION

1. Extracts from the provisional reports of the Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI), at their second sessions held in Geneva from 27 February to 4 March 1996, are reproduced in the present document, in sections III-IX. The provisional reports are subject to review by the responsible officers of the subsidiary bodies and to editorial changes. It has not been possible to reproduce the conclusions from all agenda items of the SBI as a number of these are still being finalised. The document has been prepared for the convenience of delegates and will be superseded by the sessional reports in due course. With the aim of providing a clear indication of action taken on each topic, the conclusions have been regrouped by topic, rather than being presented by agenda item of the two subsidiary bodies.
2. In their conclusions, the SBSTA and the SBI, at their second sessions, requested the secretariat to prepare a number of documents that would take into account the views submitted by Parties to be received after the second sessions. These requests for submissions have been summarized in section II below. Some other items on which Parties are invited to take action have also been summarized.
3. In addition to those submissions that Parties have specifically been invited to provide by the SBSTA and the SBI, the secretariat would also welcome the submission of views on any other matters that are under consideration by these bodies. These latter submissions, however, will not be reproduced and distributed as a miscellaneous document, but will remain for secretariat use only.
4. To facilitate the work of the secretariat, it would be very much appreciated if all submissions would identify explicitly and clearly the request from which they emanate. In view of the short time available to the secretariat to prepare the requested documentation, it would be helpful if inputs were made available even before the deadlines indicated. Fax or electronic mail would be a suitable medium for advance submissions.
5. Governments wishing that their submission(s) be incorporated in compilations should clearly so request and are invited to provide a single-spaced original text suitable for reproduction. Fax or electronic mail is not a suitable medium for this purpose.
6. Compilations will be issued in the original languages of submissions. Any Government which feels that a translation of its submission would help its wider dissemination is invited to provide such a translation to the secretariat for inclusion in the compilation.

II. ACTION REQUIRED BY PARTIES

Scientific Assessments: Consideration of the Second Assessment Report of the Intergovernmental Panel on Climate Change (agenda item 4 (a) of SBSTA 2)

7. The SBSTA invited Parties to submit their views on the Second Assessment Report to facilitate a full consideration of the Report, to be transmitted to the secretariat by 30 April 1996.
8. The SBSTA invited, *inter alia*, Parties to make the findings and projections of the second assessment report available in a suitable form to different audiences with special attention being given to the impacts and circumstances at the national and regional level.
9. The SBSTA requested the secretariat to prepare a summary report on research and observation issues, in close collaboration on with Parties, amongst other entities. The secretariat would welcome suggestions from Parties on this topic, preferably before 15 April 1996.

Communications from Parties included in Annex I to the Convention (agenda item 5 (a) of SBSTA 2)

10. The SBSTA recalled decision 3/CP.1 requesting Annex I Parties to submit to the secretariat national inventory data for the period 1990-1993 and, where available, for 1994 by 15 April 1996, and encouraged these Parties to submit these data, recognizing that Annex I Parties with economies in transition may exercise a certain degree of flexibility based on Article 4.6 of the Convention regarding these submissions.
11. The SBSTA invited Annex I Parties to forward to the secretariat their suggestions related to presentation of inventory data on the land use change and forestry sector for years subsequent to 1990 and on projections in this sector, as well as on aggregating data on greenhouse gases sources and sinks from this and other sectors, by 1 April 1996.
12. The SBSTA invited Parties to submit views on possible revisions to the Guidelines as suggested in document FCCC/SBSTA/1996/3 by 1 April 1996 (see also paragraph 16 on transfer of technology below).
13. The SBSTA urged Parties included in Annex I to the Convention that have not yet submitted national communications to do so in time for the second session of the Conference of the Parties (COP 2).

Communications from Parties not included in Annex I to the Convention
(agenda item 3 (b) of SBI 2)

14. The SBI invited Parties not included in Annex I to nominate national focal points for facilitating assistance for the preparation of the initial communications.

Technology inventory and assessment
(agenda item 7 of SBSTA 2)

15. The SBSTA urged all Parties who have not already done so to provide the secretariat information and databases on environmentally sound and economically viable technologies and know-how conducive to mitigating and adapting to climate change, including information from the private sector when possible, and to continue to do so on a routine basis in the future.

Transfer of technology
(agenda item 5 of SBI 2)

16. The SBI invited Parties to submit comments on the subjects identified in the conclusions on this agenda item to the secretariat by 15 April 1996 (see paragraphs 69-75 below).

Activities implemented jointly
(agenda item 6 of SBSTA 2 and agenda item 6 of SBI 2)

17. The SBSTA invited Parties to submit reports in accordance with the initial reporting framework on activities implemented jointly (see section VII below). If the Parties choose not to report jointly, the secretariat will not be in a position to process information on that project until reports on that project from all Parties concerned, particularly developing country Parties, are transmitted to the secretariat.

18. The SBSTA invited Parties to identify the relevant governmental authority/ministry authorized to accept, approve or endorse activities implemented jointly and to report to the COP through the secretariat.

19. The SBI invited Parties to submit information to the secretariat by 1 April 1996 in accordance with the SBSTA decision for inclusion in a progress report on activities implemented jointly (see paragraphs section VII below).

Establishment of intergovernmental technical advisory panel(s)
(agenda item 3 of SBSTA 2)

20. The SBSTA requested the Parties to submit comments on the concept of a roster of experts to assist the Convention process in the conduct of its work, including the disciplines that such a roster might cover, by 1 April 1996.

III. SCIENTIFIC ASSESSMENTS

A. Extract from the provisional report of the SBSTA

Consideration of the Second Assessment Report of the Intergovernmental Panel on Climate Change (agenda item 4 (a) of SBSTA 2)

1. Proceedings

21. Some delegations drew attention to a number of important findings in the Second Assessment Report which they felt should be communicated to all bodies of the Convention and particularly to the AGBM, for consideration. These delegations highlighted that these findings underlined the necessity for urgent action to address adverse effects of climate change, including mitigation and adaptation;.

(a) Atmospheric concentrations of greenhouse gases and aerosols are increasing largely because of human activities (IPCC Synthesis Report, Section 2.2, 2.3);

(b) Climate has changed over the past century (S.R. 2.4);

(c) The balance of evidence suggests a discernible human influence on global climate (S.R. 2.4);

(d) Without specific policies to mitigate climate change, the global mean surface air temperature relative to 1990 is projected to increase by about 2 degrees Celsius (between 1.0 and 3.5 degrees Celsius) by 2100. This is probably greater than any observed during the last 10,000 years (S.R. 2.8);

(e) Average sea level is projected to rise by about 50 centimetres (between 15 and 95 centimetres) above present levels by 2100 (S.R. 2.8);

(f) Stabilization of atmospheric concentrations at twice pre-industrial levels will eventually require global emissions to be less than 50 percent of current levels (S.R. 4.10);

(g) Even if the concentrations of greenhouse gases were stabilized at 2100, global mean surface air temperature would continue to rise for some decades, and sea level for many centuries beyond that time (S.R. 2.7, 2.8);

(h) The projected changes in climate change will result in significant, often adverse impacts on many ecological systems and socio-economic sectors, including food supply and water resources, and on human health. In some cases, the impacts are potentially irreversible (S.R. 3.2, 3.3);

(i) Developing countries and small island countries are typically more vulnerable to climate change (S.R. 3.3);

(j) Significant reductions in net greenhouse gas emissions are technically possible and economically feasible by utilizing an extensive array of technology and policy measures that accelerate technology development, diffusion and transfer (S.R. 5.2);

(k) Significant no regrets opportunities are available in most countries to reduce net greenhouse gas emissions. Furthermore, the risk of aggregate net damage due to climate change, consideration of risk aversion, and the precautionary principle provide rationales for action beyond no regrets (S.R. 8.2);

(l) A portfolio of existing cost effective technologies, policies and measures can be used to markedly reduce the net emissions of greenhouse gases from all sectors (S.R. 5.5, 5.6, 5.11, 5.12, 8.4);

(m) Flexible, cost effective policies relying on economic incentives and instruments, as well as coordinated instruments, can considerably reduce mitigation and adaptation costs, or can increase the cost-effectiveness of emission reduction measures (S.R. 8.3);

(n) Equity considerations are an important aspect of climate change policy and in achieving sustainable development. The intertemporal aspects of climate change policy also raise questions of intergenerational equity (S.R. 6.1, 6.5);

(o) Uncertainties remain and there is a need for further work to reduce these uncertainties.

22. Other delegations expressed their view that it is very premature for the SBSTA to attempt to highlight specific findings or conclusions contained in the Second Assessment Report. They stated their belief that the list of items identified by certain delegations was highly selective and reflected a very limited, and, therefore, biased view of what were important findings in the Second Assessment Report. They also pointed out that some of the items listed by others were taken out of context and failed to set forth important qualifications that the IPCC specifically stated.

23. These delegations suggested that a preliminary review of the IPCC's Synthesis Report indicated that other, important IPCC findings included, *inter alia*:

(a) Item 21 (c), above, is merely quoted selectively concerning the IPCC's conclusions that the balance of evidence suggests a discernible human influence on global climate. It fails to disclose the key IPCC finding that its ability to quantify the human influence is limited "because there are uncertainties in key factors." It fails to disclose that

one of these uncertainties in key factors concerns the magnitude and patterns of long-term natural variability. This information is clearly set forth in the Working Group I Summary for Policymakers, page 4 and in the IPCC Synthesis report, para. 2.4.

(b) Item 21 (d), above, fails to disclose that, the estimated temperature increase of 2°C by 2100 is approximately 1/3 lower than the IPCC's "best estimate" in 1990. That information is contained in para. 2.7 of the Synthesis Report and on page 5 of the Working Group I Summary for Policymakers.

(c) Item 21 (e), above, fails to disclose the important information that the estimate of sea level rise by 2100 is 25 per cent lower than the IPCC's "best estimate" in 1990. That information is found in para. 2.8 of the Synthesis report and on page 5 of the Working Group I Summary for Policymakers.

(d) Much attention has been paid to the issues of so called extreme events. Unfortunately the items in paragraph 21 above, fail to disclose the very important conclusion that "there are inadequate data to determine whether consistent global changes in climate variability or weather extremes have occurred over the 20th century." Such information is located at para. 2.5 of the Synthesis report and on p.3 of the Working Group I Summary for Policymakers.

(e) Certainly, a key finding of the IPCC Synthesis report, found in para. 2.12, is that "many uncertainties and many factors currently limit our ability to project and detect future climate change."

(f) Insofar as item 21 (h), above purports to deal with impacts on food supply, it is seriously misleading because it fails to disclose the key information in para. 3.13 of the Synthesis report and Section 3.3 of the IPCC Working Group II Summary for Policymakers that "existing studies show that on the whole, global agricultural production could be maintained relative to baseline production in the face of climate change projected underdoubled equivalent CO₂ equilibrium."

(g) Insofar as the list of items, above, concern response strategies and call for urgent action, it should be recalled that IPCC Working Group III specifically concluded that "the value of better information about climate change processes and impacts and society's responses to them is likely to be great," and that para.8.4 of the Synthesis report called attention to "large differences in the cost of reducing greenhouse gas emissions, and enhancing sinks, among countries due to their state of economic development, infrastructure choices, and natural resources base."

2. Conclusions

24. The Subsidiary Body for Scientific and Technological Advice (SBSTA) expressed its appreciation to the Intergovernmental Panel on Climate Change (IPCC) and to the Chairman of the IPCC for the excellent work carried out in drawing up the Second Assessment Report and for the Chairman's presentation to the SBSTA on 27 February of the key points from the report. It considered the Second Assessment Report to be the most comprehensive assessment of available scientific and technical information related to climate change.

25. The SBSTA held an initial exchange of views on the Second Assessment Report during its meetings. It commended the entire Second Assessment Report to all bodies of the Convention and particularly to the Ad Hoc Group on the Berlin Mandate (AGBM). The SBSTA invited Parties to send their views on the Report to facilitate a full consideration of the Report, at the third session, in keeping with its mandate as contained in paragraph 1 of Annex I and paragraph 1 of Annex II of COP decision 6/CP.1. The views of the Parties should be transmitted to the secretariat by 30 April 1996.

26. The SBSTA decided to include in its future work programme the key questions, deriving from Article 2 of the Convention, namely the level of atmospheric greenhouse gases concentrations that would prevent dangerous anthropogenic interference with the climate system and the paths to stabilization at that level, taking into account the common but differentiated responsibilities of Parties. In this context, the IPCC Second Assessment synthesis of scientific-technical information relevant to interpreting Article 2 of the Convention was considered as an important scientifically-based, comprehensive analysis. It also recognized that the IPCC would have to provide further technical inputs that would enable the SBSTA and the Conference of the Parties (COP) to address the ultimate objective of the Convention.

27. The SBSTA also agreed that the findings and projections of the Second Assessment Report should be made available in a suitable form to different audiences with special attention being given to the impacts and circumstances at national and regional level. It invited Parties, organizations and institutions to give appropriate attention to this need.

28. The SBSTA took note of the information provided by the World Meteorological Organization (WMO), and by a number of Parties, relevant to the implementation of Article 5 of the Convention, on Research and Systematic Observation. It requested the secretariat to prepare a summary report on research and observation issues, with attention to Article 5, and particularly to Article 5 (c), of the Convention, in close collaboration with Parties and concerned international organizations, and taking into account the recommendations of the Second Assessment Report, for consideration by the third session of the SBSTA and subsequently by the COP.

Scientific assessments: Cooperation with the Intergovernmental Panel on Climate Change
(agenda item 4 (b) of SBSTA 2)

Conclusions

29. The SBSTA noted with appreciation the decisions taken by the IPCC at its eleventh session in Rome (December 1995), on its future work programme, and particularly that it intends to prepare a Third Assessment Report by about 2000 and continue to work on methodologies for greenhouse gas inventory.
30. The SBSTA considered the conclusions of the meetings of the Joint Working Group of officers of the UNFCCC and the IPCC. Taking into account also the statements made during the session, it requested the IPCC to undertake the proposed activities in support of the SBSTA contained in the annex to this document, and advise the SBSTA accordingly.
31. The SBSTA requested the secretariat to take these proposed activities as the basis for proposing a financial contribution to the IPCC in 1996, as provided in the Convention budget and to report thereon to the third session of the Subsidiary Body for Implementation (SBI) and the second session of the COP.
32. The SBSTA appreciated that, in addition to the proposed activities in the annex to this document, the IPCC was providing enhanced scientific and technical information to the evolving needs of the AGBM.
33. The SBSTA noted that, for several issues identified in the annex to this document FCCC/SBSTA/1995/3, some information is available in the IPCC Special Report 1994, the Second Assessment Report, and would be expected to be included in the Third Assessment Report. These issues are:
- Developing and / or assessing: a) methodologies for projecting national, regional and global emissions, b) methodologies for evaluating the effects of measures, and c) the application of global warming potentials;
 - Information on sources and sinks;
 - Reducing uncertainties related to particulate matter and tropospheric ozone.
34. The SBSTA noted further that, in addition to its sponsoring bodies WMO and UNEP, the IPCC was cooperating with other relevant competent international organizations in responding to the need for objective scientific and technical advice, and emphasized the importance of such cooperation.

35. Finally, the SBSTA requested its Chairman to continue the series of meetings of the Joint Working Group of Officers of the UNFCCC and the IPCC, as and when appropriate, and to report on these meetings to future sessions of the SBSTA.

IV. NATIONAL COMMUNICATIONS

A. Extract from the provisional report of the SBSTA

Communications from Parties included in Annex I to the Convention (agenda item 5 (a) of SBSTA 2)

Conclusions

36. The Subsidiary Body for Scientific and Technological Advice (SBSTA) took note of the progress report on in-depth reviews (FCCC/SB/1996/2) and of the in-depth review reports issued so far (FCCC/IDR.1/CZE, FCCC/IDR.1/SWE, FCCC/IDR.1/AUS, FCCC/IDR.1/USA, FCCC/IDR.1/CAN, FCCC/IDR.1/CHE). The SBSTA endorsed the format, scope and approaches of the in-depth review reports and emphasized the importance of monitoring the overall implementation of the Convention. The SBSTA took note with regret that the time schedule for these reviews as set by the first session of the Conference of the Parties (COP 1) could not be met owing to resource limitations and/or scheduling problems. It stressed the importance of completing the first cycle of in-depth reviews by the end of 1996 and of issuing as many reports as possible before the next sessions of subsidiary bodies, with a view to holding a substantive discussion at those sessions.

37. The SBSTA endorsed the proposed outline and approaches to be taken during the second compilation and synthesis of first national communications, as suggested by the secretariat in its document FCCC/SB/1996/1. The SBSTA requested the secretariat to explore ways to use tables in the compilation of policies and measures and to describe national circumstances, *inter alia*, national policy targets.

38. The SBSTA took note of preliminary data presented in document FCCC/SB/1996/1/Add.1 on projections of emissions of greenhouse gases for the year 2000 which indicate that many Annex I Parties will have to make additional efforts beyond those included in projections in order to return greenhouse gas emissions to base year levels by 2000, and stressed the need for more transparency in the assumptions made in these projections.

39. The SBSTA recalled decision 3/CP.1 (FCCC/CP/1995/7/Add.1) requesting Annex I Parties to submit to the secretariat national inventory data for the period 1990-1993 and, where available, for 1994 by 15 April 1996, and encouraged these Parties to submit these data at an earlier date to facilitate preparation of the second compilation and synthesis report. It recognized that Annex I Parties with economies in transition may exercise a certain degree of flexibility based on Article 4.6 of the Convention regarding these submissions.

40. The SBSTA invited Annex I Parties to forward to the secretariat their suggestions related to presentation of inventory data on the land use change and forestry sector for years subsequent to 1990 and on projections in this sector, as well as on aggregating data on greenhouse gases sources and sinks from this and other sectors, by 1 April 1996.
41. The SBSTA will consider technical aspects of available in-depth review reports and of the second compilation and synthesis report at its third session in order to draw relevant conclusions to the attention of the Subsidiary Body for Implementation and the Ad Hoc Group on the Berlin Mandate at its fourth session and to the COP at its second session.
42. The SBSTA took note of document FCCC/SBSTA/1996/3 and endorsed the proposals regarding the revisions to the Guidelines to ensure consistency with COP decisions. The SBSTA requested that revised guidelines contain more specific guidance on the description of policies and measures and their effects, projections and underlying assumptions and technological cooperation and transfer using, where feasible, standardized formats and tables. The revised guidelines should also take into account the issues referred to by the SBI in its conclusions on the transfer of technology. The SBSTA invited Parties to submit views on possible revisions to the Guidelines as suggested in document FCCC/SBSTA/1996/3 by 1 April 1996.
43. The SBSTA requested the secretariat to prepare a report suggesting possible revisions to the Guidelines, taking into account the submissions by Parties and the experience from the review process, for consideration at its third session, aiming at adopting revised guidelines at COP 2 in time for the preparation of second national communications by Annex I Parties.
44. The SBSTA, with a view to overcoming inconsistencies in the presentation of data on inventories, requested the secretariat to address issues such as temperature adjustments, electricity trade, bunker fuels, use of global warming potentials, land use change, and forestry in the documentation to be prepared for consideration by the SBSTA at its third session.

B. Extract from the provisional report of SBI

Communications from Parties included in Annex I to the Convention
(agenda item 3 (a) of SBI 2)

Conclusions

45. The SBI took note of the progress report on in-depth reviews (FCCC/SB/1996/2) and of the in-depth review reports issued so far (FCCC/IDR.1/CZE, FCCC/IDR.1/SWE, FCCC/IDR.1/AUS, FCCC/IDR.1/USA, FCCC/IDR.1/CAN, FCCC/IDR.1/CHE). It expressed its appreciation to the Parties which have hosted in-depth review visits, to the Parties and intergovernmental organizations which have nominated experts and to the secretariat for the coordination of these reviews.

46. The SBI concluded that the progress report on in-depth reviews provides useful information on the implementation of the Convention. It also urged the Parties included in Annex I to the Convention that have not yet submitted national communications to do so in time for the second session of the Conference of the Parties (COP 2).

47. The SBI envisages that policy aspects of the available in-depth review reports are to be fully considered as a separate agenda item at its third session in order to draw relevant conclusions to the attention of the Ad Hoc Group on the Berlin Mandate at its fourth session and to the COP at its second session.

48. The SBI invited the SBSTA to consider ways of enhancing transparency, comparability and consistency through more specific reporting guidelines, including standard formats and tables, *inter alia*, for the description of policies and measures. In doing so, these Parties are invited to describe, to the extent possible, the specific effects expected from individual mitigation measures.

49. The SBI invited the SBSTA to analyse from a technical point of view reporting options on such issues as temperature adjustments, electricity trade, bunker fuels, use of global warming potentials and land use change and forestry to resolve inconsistencies in the reporting of inventories with the aim of enhancing comparability. It also invited the SBSTA to make relevant recommendations to the SBI.

50. The SBI endorsed the outline and approaches proposed for the second compilation and synthesis of first national communications, as described in document FCCC/SB/1996/1, and suggested that the presentation of policies and measures should highlight those that are innovative, successful and/or potentially replicable.

51. The SBI took note of preliminary data presented in document FCCC/SB/1996/1/Add.1 on projections of emissions of greenhouse gases for the year 2000 which indicate that many Annex I Parties will have to make additional efforts beyond those included in projections in order to return their greenhouse gas emissions not controlled by the Montreal Protocol to base year levels by 2000.

52. The SBI concluded that mechanisms should be explored to facilitate the exchange of experiences in carrying out national programmes to implement the Convention. In that context, the SBI requested the secretariat to convene an informal workshop, preferably in conjunction with the fourth session of the SBI, focusing the discussion on the implementation aspects of specific policies and measures taken by these Parties. This workshop could also present an opportunity to assess the results of the first cycle of in-depth reviews.

C. Extract from the provisional report of the SBSTA

Communications from Parties not included in Annex I to the Convention
(agenda item 5 (b) of SBSTA 2)

Conclusions

53. The Subsidiary Body for Scientific and Technological Advice (SBSTA) recalled decisions 8/CP.1.

54. The SBSTA took note of document FCCC/SB/1996/3. It also noted with appreciation document FCCC/SB/1996/MISC.1/Add.1 containing the Position Paper of the Group of 77 and China on recommendations on guidelines and format for preparation of initial communications from non-Annex I Parties, which was developed on the basis of the workshop held on 26 February 1996.

55. The SBSTA considered document FCCC/SB/MISC.1/Add.1 the principal basis for the adoption of guidelines and format for preparation of initial communications from Parties not included in Annex I. The SBSTA should continue consideration of the item in the subsequent session.

D. Extract from the provisional report of the SBI

Communications from Parties not included in Annex I to the Convention
(agenda item 3 (b) of SBI 2)

Conclusions

56. The Subsidiary Body for Implementation (SBI) recalled decisions 8/CP.1.

57. The SBI took note of document FCCC/SB/1996/3. It also noted with appreciation document FCCC/SB/1996/MISC.1/Add.1 containing the Position Paper of the Group of 77 and China on recommendations on guidelines and format for preparation of initial communications from non-Annex I Parties, which was developed on the basis of the workshop held on 26 February 1996.

58. The SBI considered document FCCC/SB/1996/MISC.1/Add.1 as the principal basis for the decision to adopt and implement guidelines and format for preparation of initial communications from Parties not included in Annex I. It also noted that the SBSTA would continue consideration of the item in the subsequent session.

59. The SBI noted the intention of non Annex I Parties to conduct a workshop, as a follow up to the earlier one, to address issues relating to implementation, and requested the secretariat to facilitate assistance in this regard, in accordance with Article 8.2.

60. The SBI recalled its conclusions on agenda item 4 (a).
61. The SBI invited Parties not included in Annex I to nominate national focal points for facilitating assistance for the preparation of the initial communications.
62. The SBI requested the secretariat to continue to facilitate assistance to Parties not included in Annex I, in accordance with Article 8.2, through organizing fora for the exchange of experiences and providing relevant information, including exchanges between Parties, on the preparation of initial communications, using the resources of the supplementary fund.

V. TECHNOLOGY INVENTORY AND ASSESSMENT

A. Extract from the provisional report of the SBSTA

Technology inventory and assessment (agenda item 7 of SBSTA 2)

Conclusions

63. The Subsidiary Body for Scientific and Technological Advice (SBSTA) considered the preparation of a technology inventory and assessment, as mentioned in decision 13/CP.1 of the Conference of the Parties (COP), and based its discussions on the initial report of the secretariat on this subject (FCCC/SBSTA/1996/4). It recalled the division of labour between the SBSTA and the Subsidiary Body for Implementation (SBI) regarding technology issues as indicated in decision 6/CP.1 on the subsidiary bodies established by the Convention. It noted the statements of the Netherlands regarding the Climate Technology Initiative and the statement made by the representative of the United Nations Industrial Development Organization concerning a study of industrial technologies.
64. The SBSTA recognized that the identification of and information on technologies and know-how that could assist the Parties in the preparation of national plans would be particularly useful, and urged all Parties who have not already done so to provide the secretariat information and databases on environmentally sound and economically viable technologies and know-how conducive to mitigating and adapting to climate change, including information from the private sector when possible, and to continue to do so on a routine basis in the future.
65. The SBSTA requested the secretariat to continue its activities, in cooperation with other relevant organizations, related to the preparation of an inventory and assessment of environmentally sound and economically viable technologies and know-how conducive to mitigating and adapting to climate change, to take into consideration the activities of other United Nations agencies and intergovernmental organizations, and other relevant programmes and to use all means possible to communicate the information to Parties.

66. The SBSTA requested the secretariat to identify existing sources of, as well as gaps in, information concerning technology information centres, with a view to developing a plan for setting up specialized technology information centres that could include, *inter alia*, sources of financing, preparation of comprehensive catalogues, dissemination of information and assessment of suitable technology. The SBSTA requested the secretariat to conduct a survey in order to identify needs of the Parties for information on technologies and know-how to mitigate and adapt to climate change, to prepare a programme of work, and to report on the progress on these for consideration at the third session of the SBSTA. Such a work programme could consider among its elements options for future development of a database and assessment of technology and should be elaborated in cooperation with other relevant United Nations agencies and other organizations and institutions. The SBSTA further requested the secretariat to prepare an initial catalogue of adaptation technologies and know-how including information on their costs, environmental impacts, implementation requirements, probable time frames for their introduction and utilization, and other characteristics for consideration by the SBSTA before the third session of the COP, and, on this matter, coordinate its activities with the Intergovernmental Panel on Climate Change.

67. The SBSTA, in view of decision 13/CP.1, requested the secretariat to develop a paper for consideration by the SBSTA on information related to the terms of transfer of technology and know-how currently available.

68. The SBSTA further requested the secretariat to periodically inform the SBSTA about new information on technologies and know-how in the research and development stage that may be conducive to mitigating and adapting to climate change and activities aimed at increasing the diffusion and commercialization of such technologies and know-how.

VI. TRANSFER OF TECHNOLOGY

A. Extract from the provisional report of the SBI

Transfer of technology (agenda item 5 of SBI 2)

Conclusions

69. The Subsidiary Body for Implementation (SBI) considered the initial progress report of the secretariat on concrete measures taken by Annex II Parties to the Convention with respect to their commitments to transfer technology and know-how, as mentioned in decision 13/CP.1 of the Conference of the Parties (COP), and based its discussion on the note by the secretariat on this subject (FCCC/SBI/1996/5).

70. The SBI took note of the conclusions of the SBSTA (see paragraphs 67-68 above) concerning the preparation of a paper on information regarding the terms of transfer of technology and know-how, and stressed the need to give greater clarity and content in the preparation of this paper to the terms and mechanisms of technology transfer. It also urged the secretariat to give greater consideration to its activities related to the assessment and evaluation of technologies and options.

71. The SBI recognized the need to improve the comprehensiveness, comparability, and detail of information provided by Annex II Parties on the transfer of technology and know-how necessary to mitigate and facilitate adequate adaptation to climate change. It also noted that decision 13/CP.1 urges other Parties to include in their communications, where possible, information on measures taken for the transfer of technology.

72. The SBI recognized the complementarity of the roles of the public and private sectors with regard to technology transfer. The SBI urged Annex II Parties to continue to take concrete steps to promote technology transfer. The SBI urged all Parties, in particular Annex II Parties, to improve the enabling environment for private sector participation in particular, and to support and promote the development of endogenous capacities and appropriate technology relevant to the objectives of the Convention, pursuant to the relevant articles of the Convention and decision 13/CP.1. The SBI agreed to provide continuous advice to improve the operational modalities for effective transfer of technology.

73. The SBI requested the SBSTA to prepare recommendations on the guidelines for national communications by Annex I Parties for consideration at the third session of the SBI. The SBI recommended that the modifications should aim to improve the comprehensiveness, comparability and detail of information provided in national communications and should reflect option 3 given in the secretariat document FCCC/SBI/1996/5 while noting the need for flexibility in reporting private sector activities.

74. The SBI further requested the secretariat to prepare a report, after consultations with relevant United Nations agencies and other organizations and institutions, on technology transfer cooperation by the private sector for consideration by the SBI, preferably in time for COP 3, but no later than COP 4.

75. The SBI invited Parties to submit comments on these subjects to the secretariat by 15 April, 1996 and requested the secretariat to prepare a compilation of views submitted by the Parties.

VII. ACTIVITIES IMPLEMENTED JOINTLY UNDER THE PILOT PHASE

A. Extract from the provisional report of the SBSTA

Activities implemented jointly under the pilot phase (agenda item 6 of SBSTA 2)

Conclusions

The Subsidiary Body for Scientific and Technological Advice:

76. Recalling decision 5/CP.1 of the Conference of Parties at its first session, establishing a pilot phase for activities implemented jointly and setting criteria for it, inter alia, that no credits shall accrue to any Party as a result of greenhouse gas emissions reduced or sequestered during the pilot phase from activities implemented jointly, and in particular the mandate given to the SBSTA, in coordination with SBI, to establish a reporting framework for activities implemented jointly under the pilot phase (FCCC/CP/1995/7/Add.1, decision 5/CP.1).

(a) Decides

(i) To adopt the initial reporting framework annexed to this decision.

(b) Invites

(i) Parties to identify the relevant governmental authority/ministry authorized to accept, approve or endorse activities implemented jointly and to report to the COP through the secretariat.

(ii) Parties to submit reports in accordance with the initial reporting framework on activities implemented jointly annexed to this conclusion.

(iii) SBSTA and SBI, with the assistance of the secretariat to compile and synthesize information transmitted by the Parties in the form of a report which shall be considered annually by the COP, and based on this information, to develop suggestions for improving the initial reporting framework and for addressing methodological issues, as necessary.

Annex to conclusions on activities implemented jointly under the pilot phase

Introduction

The initial framework for reporting must have a simple and transparent structure. It is expected that subsequent sessions of the COP and its subsidiary bodies could elaborate further on the framework for reporting, taking into account the information provided by the initial reports transmitted to the secretariat or comments expressed by Parties.

The nature of the information contained in the initial reports to be provided by Parties involved in AIJ will be relevant information for the evaluation of the ongoing pilot phase.

INITIAL FRAMEWORK FOR REPORTING ACTIVITIES IMPLEMENTED
JOINTLY

1. Who reports?

Each national government of Parties involved in activities implemented jointly should report separately to the COP through the secretariat on a project by project basis unless participating Parties agree on a common report on a particular project. Any Party may report on national programmes for activities implemented jointly, for information purposes only.

If the Parties choose not to report jointly, the secretariat will not process information on that project until reports on that project from all Parties concerned, particularly developing country Parties, are transmitted to the secretariat.

2. Frequency

Reports may be transmitted to the secretariat at any time and should be updated, if possible, preferably each year, unless participating Parties decide otherwise.

3. Contents of the reports

(a) Description of the project (type of the project, identification of all actors involved, institutional arrangements, actual costs to the extent possible, technical data, long-term viability of the project, location, lifetime, mutually agreed project assessment procedures, etc.);

(b) Governmental acceptance, approval or endorsement;

(c) Compatibility with and supportiveness of national economic development and socio-economic and environment priorities and strategies;

- (d) Benefits derived from the AIJ project;
- (e) Calculation of the contribution of AIJ projects that bring about real, measurable and long-term environmental benefits related to the mitigation of climate change that would not have occurred in the absence of such activities;
- (f) Additionality to financial obligations of Parties included in Annex-II of the Convention within the framework of the financial mechanism as well as to current official development assistance (ODA) flows;
- (g) Contribution to capacity building, transfer of environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention. In this process, the developed country Parties shall support the development and enhancement of endogenous capacities and technologies of developing country Parties;
- (h) Additional comments if any including any practical experience gained or technical difficulties, effects, impacts or other obstacles encountered.

B. Extract from the provisional report of the SBI

Conclusions of the SBSTA on a reporting framework for activities implemented jointly under the pilot phase
(agenda item 6 (a) of SBI 2)

Conclusions

- 77. On the basis of the proposals by the Chairman, the SBI adopted the following conclusions.
- 78. The SBI took note of the decision of the SBSTA to adopt the initial reporting framework for activities implemented jointly under the pilot phase.
- 79. The SBI also requested the secretariat to prepare a progress report on activities implemented jointly for its next session to be held immediately prior to the second session of the Conference of the Parties. Delegations were invited to submit information to the secretariat in accordance with the SBSTA decision for inclusion in the report by 1 April 1996.
- 80. The SBI noted that it will consider this issue again at its next session.

VIII. ESTABLISHMENT OF INTERGOVERNMENTAL TECHNICAL ADVISORY PANEL(S)

A. Extract from the provisional report of the SBSTA

Establishment of intergovernmental technical advisory panel(s) (agenda item 3 of SBSTA 2)

Conclusions

81. The SBSTA recognized that ITAPs had the potential to make an important contribution to the processes under the Convention and to the implementation of the Convention by Parties, in particular by providing an opportunity to draw upon the broad range of expertise available in Parties. However, at this stage the SBSTA could not agree on the modalities for such a panel, or panels, and decided to request guidance from the next session of the COP on this issue; in this context it requested its Chairman to report to the COP.

82. The SBSTA also recognized that it may be beneficial to develop a roster of experts to assist the Convention process in the conduct of its work. It requested the Parties to submit comments on the concept of a roster, including the disciplines that such a roster might cover by 1 April 1996. It requested the secretariat to compile the comments and to prepare a paper on this subject.

IX. FINANCIAL AND TECHNICAL COOPERATION

A. Extract from the provisional report of the SBI

Matters relating to the financial mechanism (agenda item 4 (a) of SBI 2)

Conclusions

83. On the basis of the proposals by the Chairman, the SBI adopted the following conclusions.

84. The SBI considered document FCCC/SBI/1996/3 and took note of the information contained therein on relevant action taken by the Council of the Global Environment Facility (GEF), including the adoption by the Council of the GEF of its operational strategy.

85. The SBI concluded that:

(a) The GEF, as the interim operating entity of the financial mechanism of the United Nations Framework Convention on Climate Change and its implementing agencies should provide expeditious and timely support under Articles 4.3 and 12.5 for the

preparation of national communications by developing country Parties in accordance with Article 12.1;

(b) The GEF, as the interim operating entity of the financial mechanism of the United Nations Framework Convention on Climate Change, in that connection, should consider country-specific needs but could also consider approaches which may be used for several countries with similar needs upon request, and take into account that the preparation of national communications is a continuing process. In this regard, the guidelines to be adopted by the Conference of the Parties (COP) on the preparation of the national communications of non-Annex I Parties should be taken fully into account;

(c) The GEF, as the interim operating entity of the financial mechanism of the United Nations Framework Convention on Climate Change, in this initial period, should implement enabling activities consistent with the guidance provided to it by the COP and expedite the disbursement of resources to meet the agreed full costs of such activities in accordance with Article 4.3, in particular the initial and subsequent preparation of national communications of Parties not included in Annex I to the Convention.

Technical and financial cooperation: progress report
(agenda item 4 (b) of SBI 2)

Conclusions

86. On the basis of the proposals by the Chairman, the SBI adopted the following conclusions.

87. The SBI considered document FCCC/SBI/1996/4 and took note of the information contained therein on secretariat activities in the area of technical and financial cooperation, in particular its efforts on CC:INFO, CC:FORUM and CC:TRAIN.

88. The SBI concluded that:

(a) Services provided by the secretariat in this area should be recognized, in particular those promoting the exchange of information through CC:INFO and those aiming at the coordination of activities and the effective utilization of resources for support to the preparation of national communications through CC:FORUM.

(b) The secretariat should prepare a report for the next session of the SBI on possibilities for strengthening and expanding these activities in support of the preparation of the national communications of Parties not included in Annex I to the Convention.

Annex

INITIAL LIST OF ITEMS ON WHICH THE IPCC COULD PROVIDE INPUT TO THE SBSTA

All available research results in the open literature relevant to all SBSTA items have been addressed in either the Second Assessment Report or the IPCC Special Report on Radiative Forcing (IPCC 1994). All SBSTA items will be covered in the Third Assessment Report. Particular emphasis would be placed on the technical papers and on regional scenarios of climate change, regional impacts of climate change and response measures, methodological and technological aspects of technology transfer, and adaptation measures.

SBSTA Issue	Description of Activity	IPCC Product	Remarks
Regional scenarios of climate change	Recommendations on scenario development in 1996/1997 for application in impacts assessments	Workshop and Special Report*	Workshop in 2nd half 1996; Special Report to be determined by IPCC-XII
Regional impacts of climate change	a) Integration of sectoral impact assessments in Second Assessment Report, with focus on vulnerabilities, regional aspects, and critical zones, with consideration of issues related to Article 4.8, 4.9, 4.10 b) Development of vulnerability indicators	a) Technical Paper** b) Special Report*	a) Late 1996/early 1997 b) To be determined by IPCC-XII
Scientific assessments***	A full assessment of the science, impacts, adaptation, mitigation, economic and social aspects of climate change	Third Assessment Report	Third Assessment Report (2000)
Evolution of climate science	Research on this topic to be monitored and assessed by IPCC	Special Report*	To be determined by IPCC-XII
GHG inventories and methodologies****	IPCC will continue preparation of information for Phase II Guidelines, in cooperation with, <i>inter alia</i> , the Organisation for Economic Co-operation and Development, particularly revisions for CH ₄	Revised IPCC Guidelines on GHG inventories****	Three workshops planned in 1st/2nd quarters 1996; Adoption**** at IPCC-XII

Initiation of all Special Reports is subject to approval by the IPCC at its XIIth session. Special Reports will follow the full IPCC review and approval procedures and require approximately 18 months for preparation and approval.

Technical papers will require approximately 6-9 months for preparation, review, and release by the Bureau of the IPCC.

* Already included in the IPCC programme of work for 1996-1997

** Using previous IPCC peer review process.

SBSTA Issue	Description of Activity	IPCC Product	Remarks
Methodological and technological aspects of technology transfer	Synthesis of information in Second Assessment Report, to assess experience on such issues as (i) types of transfer, technology evaluation, and options; (ii) sectors targeted; (iii) role of participants (e.g., Governments, private sector, IGOs, NGOs); (iv) approaches to promoting cooperation; (v) issues related to capacity building	Technical Paper**	Early 1997
Evaluation of technologies	Assessment of major constraints to innovative, state-of-the-art, technologies and promising approaches for overcoming them	Technical Paper** Special Report*	Early 1997 To be determined by IPCC-XII
Modelling of stabilization scenarios towards addressing Article 2	a) Scenarios and pathways for global stabilization of greenhouse gas concentrations to meet a range of possible targets for rates of temperature and sealevel change and absolute temperature and sealevel change, and economic considerations	Technical Paper**	Early 1997
Implications of emission limitations	a) Assess the economic impacts on all Parties, including non-Annex I Parties, of any proposed new commitments to be undertaken by Annex I Parties b) Assess the implications of different emissions limitation proposals including any proposed new commitments to be undertaken by Annex I Parties on projected temperature increases, sealevel rise and other changes in climate	Technical Paper** Special Report*	Early 1997 To be determined by IPCC- XII
Adaptation measures	Adaptation options, enhancing resilience of systems, and costs of adaptation	Workshop (1997), Special Report*	To be determined by IPCC-XII
Integrated assessment modeling	Integrated assessment modeling including land-use considerations, with a focus on meeting the needs of and building capacity in developing countries	Workshop(s) Special Report*	1996/1997 To be determined by IPCC-XII
Simple climate models	Status of simple climate models	Technical Paper**	1996/1997
Impacts of response measures	Identification of technical, socio-economic, and environmental aspects of Article 4.8, 4.9 and 4.10	Special Report*	To be determined by IPCC-XII

1 March 1996

ENGLISH ONLY

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

Subsidiary Body for Scientific and Technological Advice
Subsidiary Body for Implementation
Second sessions
Geneva, 27 February - 4 March 1996

Ad Hoc Group on the Berlin Mandate
Third session
Geneva, 5-8 March 1996

NATIONAL COMMUNICATIONS

Approach paper by the Group of 77 and China on recommendations on guidelines and format for preparation of initial communications from non-Annex I Parties

Note by the secretariat

The Subsidiary Body for Scientific and Technological Advice, at its second session, took note of the paper presented by the Group of 77 and China on recommendations on guidelines and format for preparation of initial communications from non-Annex I Parties. The attached document is circulated at the request of the Chairman of the Group of 77 and China.

In accordance with the procedure for miscellaneous documents, this contribution is reproduced in the language in which it was received and without formal editing.

FCCC/SB/1996/MISC.1/Add.1

GE.96-60786

POSITION PAPER OF GROUP 77 AND CHINA

Recommendations on guidelines and format for preparation of initial communications from non-Annex I Parties

Basis for Commitment

1. Article 12.1, 12.5 and 12.7, read with relevant portions of Article 4.1, of the FCCC are the basis of the commitment for submission of initial communications by all Parties to the Convention. These Articles should guide the non-Annex I Parties for recommendations regarding guidelines and for developing a format for initial communications.

2. Article 4.1 clearly provides that commitments under that Article would be undertaken "taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances".

General obligations

Keeping Article 4.3 in mind, it is important that the in-depth reviews of the communications of the Annex I Parties clearly reflect the fulfilment of the commitments of the developed country Parties especially towards developing countries.

Considerations for non-Annex I Parties

(a) Other obligations of developed country Parties

Articles 4.7, 4.4 and 4.5 are relevant in this connection.

(b) Specific national circumstances

Articles 4.8 and 4.9 are relevant.

(c) Vulnerability

Article 4.10 and 4.4 are relevant. Keeping in view the various provisions in the Convention for developing country Parties and the clear recognition of the common but differentiated responsibilities and priorities, objectives and circumstance of each Party, there is a need to take into full consideration the circumstances and vulnerabilities of developing country Parties. Further, the Convention makes the implementation of the Convention by Annex I Parties a precondition for the fulfilment of the obligations of developing country Parties/non-Annex I Parties.

(d) Timing of submission of initial communication

1. The timing for submission of initial communication for non-Annex I Parties is, in accordance with Article 12.5, to be submitted within three years of entry into force for

that Party or/of the availability of financial resources in accordance with Article 4.3. The timing of submission of initial communications should not, therefore, be fixed arbitrarily but follow the above provisions of the Convention.

Scope

(a) Inventory

1. Article 12.1 (a) provides that the initial communication could include information relating to a national inventory of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, to the extent it capacities permit.

2. We should recognize that in order to prepare information relating to a national inventory, the capacity of developing countries vary widely in relation to their technical, financial as well as institutional capacities. In this connection, there is a clear need for adequate and additional financial resources, technical support and technology transfer to supplement the effort towards capacity building and preparation of a national inventory.

3. In view of above, the nature of methodology used should be flexible.

4. The base for inventories should be the year 1994. However, countries which have prepared the inventory for the year 1990 may present the data in their initial communication.

(d) General description of steps

The general description of steps set out within the context of sustainable development efforts of non-Annex Parties may include one or more of the following:

- Measures relating to adaption
- Information on emissions by sources and removal by sinks
- Financial resources and technical support given and required
- Capacity building and training needs
- Requirements for technology transfer

(c) Any other information

The non-Annex I Parties may include any other relevant information including projects for financing, material relevant for calculation of global emission trends, constraints and obstacles etc.

Format for initial communications from non Annex I Parties

A format for initial communications from non Annex I Parties has been developed by the experts of non Annex I Parties and is given in the annexure to this document. This would be the basis for further work on initial communications from non Annex I Parties.

Observations and policy guidance

While finalising the recommendation for guidelines and format for initial communications as well as the process for further consideration, the COP must take fully into account the views expressed in this position paper. Towards this end, it is a matter of disappointment that the Annex I Parties and other developed country Parties have not been able to fulfil their commitments regarding provision of financial resources and transfer of technology as stipulated under the Convention. This position paper should serve as policy guidance to the interim operating entity of the financial mechanism in meeting the agreed full costs incurred by the developing country Parties.

Future consideration

1. It is clearly recognised that the process of consideration of the information communicated by the non Annex I Parties under Article 10 (2) (a) is different from the process envisaged for Annex I Parties under Article 10 (2) (b). There should not be any individual country reviews for non Annex I Parties but only the overall aggregate effect should be assessed for all Parties to the Convention.
2. In accordance with Art. 12.7 and Art. 8.2(c), Group of 77 and China shall request the necessary assistance be provided to developing country Parties in the compilation and communication of information of non Annex I parties, including for the holding of any future workshops that may be found necessary. In this connection, Group of 77 and China express their intention to hold a workshop as a follow up to the present one in conjunction with the next meeting meetings of SBSTA and SBI.

.....

Format for initial national communications from non-Annex I Parties

1. This format is intended to provide a common set of guidelines for the presentation of the initial national communications by non-Annex I Parties to the UNFCCC, under its Article 12.1.

2. The Guidelines for the National Greenhouse Gas Inventories and Technical Guidelines for Assessing Climate Change Impacts and Adaptations or the simplified default methodologies adopted by the Intergovernmental Panel on Climate Change may be used by non-Annex I Parties, as appropriate and to the extent possible, in the fulfillment of their commitments under the Convention.

3. The year 1994 should be the base year for inventories. However, countries which have prepared their inventory for the year 1990 may present this data in their initial communication, with a view to including the best available data.

4. It was recognized that the preparation of the initial communication will depend on the provision of financial resources and transfer of technology in accordance with Article 4.7.

5. National Circumstances

5 (a). General Circumstances

Criteria	1994
Population	
Relevant areas (square kilometers)	
GDP (1994 US\$)	
GDP per capita (1994 US\$)	
Estimated share of the informal sector in the economy in GDP (percentage)	
Share of industry in GDP (percentage)	
Share of services in GDP (percentage)	
Share of agriculture in GDP (percentage)	
Land area used for agricultural purposes (square kilometers)	
Urban population as percent of total population	
Livestock population (disaggregate as appropriate)	
Forest area (square kilometers, define as appropriate)	
Population in absolute poverty	
Life expectancy at birth (years)	
Literacy rate	

Notes:

(1) In addition to the above information which can be conveniently presented in a table, non-Annex I Parties may present basic geographical and climatic information, as well as other factors relevant to climate change of any nature such as, for example, peculiarities of its economy which may affect its ability to deal with climate change.

(2) Non-Annex I Parties may provide a brief description of existing institutional arrangements which are relevant to the preparation of the inventory on a continuing basis, or a list of perceived deficiencies in this area.

5(b). Special Circumstances

Specific needs and concerns arising from the adverse effects of climate change and/or the impact of the implementation of response measures, specially on

- Small Island Countries;
- Countries with low-lying coastal area;
- Countries with arid and semi-arid areas, forested areas and areas liable to forest decay;
- Countries with areas prone to natural disasters;
- Countries with areas liable to drought and desertification;
- Countries with areas of high urban atmospheric pollution;
- Countries with fragile ecosystems, including mountainous ecosystems;
- Countries with economies highly dependent on income generated from the production, processing and export, and/or on consumption of fossil fuels and associated energy-intensive products;
- Land-locked and transit countries; and
- Other special considerations foreseen in paragraph 4.9 (least developed countries) and 4.10 (fossil-fuel dependency), as appropriate.

Note: Wherever applicable non-Annex I Parties should present numerical indicators. For example they might use a classification in terms of percentage of the land area, percentage of the population affected, and/or percentage of GDP, etc.

6. Inventory

6.1 Non-Annex I Parties should strive to present the best available data, to the extent their capacity permits, and try to identify the areas where the data may be further improved in the future communications by national capacity building.

6.2 The methodology for the national inventories of emissions by sources and removals by sinks of greenhouse gases to be used is that developed by the IPCC. Special note is taken of the fact that such methodology will be reviewed during 1996, with three workshops scheduled in the March-April time frame, on land-use changes, rice methane and energy and industry with completion scheduled for September.

6 (a). Inventory of CO₂ emissions by sources and removals by sinks in 1994 (Gigagrams/year)

Energy Fuel Combustion Activities	Energy and Transformation	
	Industry	
	Transport	
	Commercial and institutional	
	Residential	
	Other	
Land Use Change and Forestry	Changes in Forest and other woody Biomass stock	
	Forest and Grassland Conversion	
	Abandonment of Managed Lands	
Others		
Total		

Note: For *conversion factors* for apparent consumption and the *carbon emission factors* state whether the default values of the IPCC have been used or locally available values were used.

6 (b). Inventory of CH₄ emissions by sources in 1994 (Gigagrams/year)

Energy	Biomass burned for energy	
	Other	
Fugitive Fuel Emissions	Oil and natural gas systems	
	Coal mining	
Agriculture	Rice Cultivation ¹	
	Enteric Fermentation	
	Additional Burning of Savannas	
	Others	
Others		
Total		

¹ Including all emissions and removals, taking account of the underlying complex chemical processes

Notes:

- (1) Three-year average figures be given.
- (2) For *conversion factors* for apparent consumption and the *carbon emission factors* state whether the default values of the IPCC have been used or locally available values were used.

6(c). Inventory of N₂O emissions by sources in 1994 (Gigagrams/year)

Energy	
Industrial Processes	
Agriculture	
Total	

Notes:

- (1) Non-Annex I Parties which have difficulties in providing the above data may provide aggregate data.
- (2) For *conversion factors* for apparent consumption and the *carbon emission factors* state whether the default values of the IPCC have been used or locally available values were used.

6(d). Other greenhouse gases

Non-Annex I Parties are encouraged to include in their national inventories the fully-fluorinated compounds, as appropriate. Other greenhouse gases included in the IPCC methodology may be included at the discretion of the Parties.

6(e). Summary

Summary of emissions by sources and removals by sinks for all gases may be provided, including additional information such as, for example, expression of the results in terms of socio-economic-geographical indicators deemed relevant by each country.

According to the IPCC methodology, emissions from bunker fuels (aviation and Marine) should be reported in addition to national emissions.

7. General Description of Steps

A general description of steps taken or envisaged to implement the Convention. This may include:

- (a) Programs related to sustainable development, research and systematic observation, education and public awareness, training, etc.
- (b) Policy options for adequate monitoring systems and response strategies for climate change impacts on terrestrial and marine ecosystems;
- (c) Policy frameworks for implementing adaptation measures and response strategies in the context of coastal zone management, disaster preparedness, agriculture, fisheries, and forestry, with a view to integrating climate change impact information, as appropriate, into national strategic planning processes;
- (d) In the context of undertaking national communications, building of national, regional and/or subregional capacity, as appropriate, to integrate climate change concerns in medium- and long-term planning.

8. Financial and Technological Needs and Constraints

8.1 Non-Annex I Parties may describe the financial and technological needs and constraints associated with the communication of information. In particular, and following the evolving recommendations of the Conference of the Parties through its Subsidiary Bodies, the description may cover the needs and constraints associated with the further improvement of national communications, including the reduction of the margin of uncertainty in emission and removal variables through appropriate institutional and capacity building.

8.2 According to national priorities, a description may include financial and technological needs associated with activities and measures envisaged under the Convention.

8.3 Information on measures to facilitate adequate adaptation to climate change may be added, indicating national technological needs.

8.4 Assessment of national, regional and/or subregional vulnerability to climate change; may be added, including, where appropriate, reliance on related data-gathering systems to measure climate change effects in particularly vulnerable countries or regions and strengthening of such systems as necessary; and identification of a near-term research and development agenda to understand sensitivity to climate change, indicating relevant financial and technological needs.

9. Other Information

9.1 Any other information which non-Annex I Parties may wish to provide including projects for financing, material relevant for calculation of global emission trends, constraints and obstacles etc.

Reports of the AGBM



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AD HOC GROUP ON THE BERLIN MANDATE
Third session
Geneva, 5-8 March 1996
Agenda item 7

REPORT OF THE AD HOC GROUP ON THE BERLIN MANDATE

Draft report of the Ad Hoc Group on the Berlin Mandate
on its third session

[Chairman: Raúl ESTRADA-OYUELA (Argentina)]
[Rapporteur: (.....), Vice-Chairman]

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Annexes

I. OPENING OF THE SESSION

(Agenda item 1)

1. The third session of the Ad Hoc Group on the Berlin Mandate (hereinafter referred to as "the AGBM") was held at Geneva from 5 to 8 March 1996. The session was convened in accordance with the schedule confirmed at the first session (FCCC/AGBM/1995/2, para. 15).

2. The Chairman of the AGBM, Ambassador Raúl Estrada-Oyuela, opened the session at the 1st meeting, on 5 March 1996. He stated that 154 States had ratified the United Nations Framework Convention on Climate Change (UNFCCC) and indicated that this was a clear testimony to the increasing commitment by the international community to the Convention. He further underlined that the third session would benefit from the inputs of the Subsidiary Body for Scientific and Technological Advice (SBSTA), the Subsidiary Body for Implementation (SBI) and the Intergovernmental Panel on Climate Change (IPCC). He added that the AGBM would also benefit from the results of two informal workshops, one on policies and measures and one on quantified emission limitation and reduction objectives (QELROs). He expressed his intention to overcome obstacles, avoid procedural traps and facilitate the way forward to fulfilling the Berlin Mandate.

3. The Executive Secretary welcomed all participants to the session. Referring to the presentation to the SBSTA of the Second Assessment Report of the IPCC, he observed that the future stabilization of global greenhouse gas emissions implied the redistribution of those emissions in response to the need for sustainable development in developing countries. The establishment of QELROs would have to take this into account. He urged delegations to evaluate carefully the utility of any major new document that may be requested, bearing in mind that only two months were available for the secretariat to prepare documents for the fourth session. He added that, as work proceeds on the Berlin Mandate, it is the input of Parties and not that of the secretariat which is increasingly vital.

II. ORGANIZATIONAL MATTERS

(Agenda item 2)

A. Adoption of the agenda

(Agenda item 2 (a))

4. The AGBM, at its 1st meeting, on 5 March, adopted the following agenda:

1. Opening of the session.

2. Organizational matters:

(a) Adoption of the agenda;

- (b) Organization of work of the session;
 - (c) Organization of the work of future sessions.
3. Election of officers other than the Chairman.
 4. Strengthening the commitments in Article 4.2(a) and (b):
 - (a) Inputs from the subsidiary bodies;
 - (b) Policies and measures;
 - (c) Quantified emission limitation and reduction objectives within specified time-frames.
 5. Continuing to advance the implementation of Article 4.1.
 6. Possible features of a protocol or another legal instrument.
 7. Report on the session.

B. Organization of work of the session
(Agenda item 2 (b))

5. At the 1st meeting of the AGBM, on 5 March, the Chairman recalled that there would be services available for one morning and one afternoon meeting with interpretation from 10 a.m. to 1 p.m. and from 3 p.m. to 6 p.m. The AGBM agreed to proceed on the basis of the proposed schedule of work contained in annex II of document FCCC/AGBM/1996/1/Add.1.

6. On the subject of applications for accreditation to sessions of the subsidiary bodies of the Convention, the AGBM agreed to admit new applicant organizations that had been screened by the secretariat, on the basis of the provisions of Article 7.6 of the Convention, without prejudice to subsequent action by the Conference of the Parties (COP).

7. Further, the Chairman recalled that non-governmental organizations would be admitted onto the floor before and after meetings only.

8. The AGBM, at its second session, had decided to convene informal workshops on policies and measures and quantified emission limitation and reduction objectives, in conjunction with the third session (see FCCC/AGBM/1995/7, paras. 29 and 38). The workshop on quantified objectives was held on Wednesday, 28 February 1996 and the workshop on policies and measures on 4 and 5 March 1996.

C. Organization of the work of future sessions

(Agenda item 2 (c))

9. At the 1st meeting of the AGBM, on 5 March, the Chairman reported on the results of the deliberations by the Bureau of the COP on the schedule of meetings of Convention bodies. The subsequent sessions of the AGBM will be as follows:

4th session	during COP 2, 8-19 July 1996	Geneva
5th session	9-13 December 1996	Geneva
6th session	3-7 March 1997	Bonn
7th session	3rd quarter 1997	Bonn
COP 3/8th session	4th quarter 1997	To be determined

The representative of Japan made a statement regarding the current situation of his Government's offer to host the third or a subsequent session of the COP.

[to be completed]

D. Attendance

10. The lists of attendance at the third session of the AGBM are given in annex I.

E. Documentation

11. The documents prepared for the AGBM at its third session are listed in annex II.

III. ELECTION OF OFFICERS OTHER THAN THE CHAIRMAN

(Agenda item 3)

12. At the 1st meeting of the AGBM, on 5 March, the Chairman reported on his consultations with regional groups in respect of nominations for the Bureau of the AGBM. He recalled that he had been authorized by the COP at its first session to undertake such consultations and indicated that the results of his consultations had, until then, been inconclusive. He stated that four of the five regional groups had agreed to the formula he had proposed at the second session. This formula comprised two Vice-Chairmen, with one serving also as Rapporteur, and the Chairmen of the SBSTA and the SBI as ex-officio members. Six "advisers" would be invited by the Chairman to participate in Bureau meetings on an equal footing with the elected and ex-officio members. The Chairman indicated that one regional group was not yet in a position to accept the proposal.

13. The Chairman recalled that there was consensus that one of the Vice-Chairmen should come from the Western European and Others Group and that this group had submitted a nomination some time ago. In view of the general support for the nomination, and without prejudice to the election of the second Vice-Chairman at the earliest opportunity, he proposed that the Group elect Mr. Daniel Reifsnyder (United States of America) as one of its Vice-Chairmen. It was so decided.

14. The Chairman invited a representative group of delegates to assist him as "ad interim advisers", until consultations on the nominations for the second Vice-Chairman and the advisers were concluded.

[to be completed]

IV. STRENGTHENING THE COMMITMENTS IN ARTICLE 4.2(A) and (B) (Agenda item 4)

A. Inputs from the subsidiary bodies (Agenda item 4 (a))

1. Proceedings

15. At its first meeting, on 5 March 1996, the AGBM considered the inputs from the subsidiary bodies. Statements were made by the Chairmen of the SBSTA, the SBI and the IPCC.

16. In his statement, the Chairman of the SBSTA highlighted four items of relevance to the AGBM. First, with regard to the Second Assessment Report of the IPCC, he noted that the SBSTA had commended the report to all Convention bodies. In this context, he noted that some delegations had highlighted a number of the IPCC's conclusions, including that atmospheric concentrations of greenhouse gases and aerosols were increasing largely because of human activities, and that the balance of evidence suggested a discernible human influence on climate while others pointed to areas of uncertainty and opposed selecting particular conclusions (see FCCC/SBSTA/1996/L.1/Add.1). He mentioned that the SBSTA would continue its consideration of the Second Assessment Report, and had also concluded on a list of items on which the IPCC would provide input to the SBSTA. Secondly, based on the SBSTA's conclusions on communications from Annex I Parties, he reiterated that the latter would have to make additional efforts beyond those included in projections in order to fulfil their aim of returning greenhouse gas emissions to 1990 levels by 2000 (FCCC/SBSTA/1996/L.1/Add.2). Further information would be available for the next session of the AGBM in the form of the second compilation and synthesis of information from Annex I Party communications. Thirdly, he noted that the SBSTA would resume consideration of the item on non-Annex I Party communications, at its next session,

considering the position paper of the Group of 77 and China regarding communications from non-Annex I Parties as the principal basis. Finally, he added that while much information on technology exists, further work on technology inventory and assessment would be undertaken.

17. The Chairman of the SBI drew the attention of the AGBM to the conclusions of the SBI contained in document FCCC/SBI/1996/L.1/Add.1 and especially with reference to the need for Annex I Parties to make additional efforts beyond those included in projections in order to return emissions to base year levels by 2000. He added that further discussion in the SBI on communications from non-Annex I Parties would be suspended until the guidelines had been refined and agreed upon.

18. Professor Bert Bolin, the Chairman of the IPCC, referred to his earlier statement to the SBSTA on the Second Assessment Report and offered some supplementary observations. He explained the inputs that contributed to the IPCC's conclusion that there is a discernible human influence on climate. While reiterating the uncertainties in the IPCC report, he noted that it would be proper to take into account in the policy debate the entire range of the uncertainties, from their lower to their upper bounds. In this context, he referred to the SBSTA's request to the IPCC to prepare a technical paper which would examine a large variety of emissions profiles for all greenhouse gases and that this would be ready for the fifth session of the AGBM. He cited the IPCC conclusion that a number of "no-regrets" opportunities were available that could result in a 10 to 30 per cent reduction in emissions at little or no cost and that there was sufficient rationale for action beyond "no regrets". A prudent strategy addressing mitigation, adaptation and research, which could be adjusted over time, was needed. The IPCC could, if requested, provide, by the fifth session, a technical paper on possible policies and measures. Furthermore, he reiterated that the IPCC does not recommend specific measures. He concluded by stating that the economies of all countries could benefit from the implementation of policies and measures to mitigate climate change.

19. Statements were also made by the representatives of 6 Parties, including one speaking on behalf of the European Community and its member States and another speaking on behalf of the Alliance of Small Island States (AOSIS).

2. Conclusions

20. On the basis of a proposal by the Chairman, the AGBM, at its ...th meeting, on ... March, adopted the following conclusions.

[to be completed]

B. Policies and measures
(Agenda item 4 (b))

[to be completed]

C. Quantified emission limitation and reduction objectives within specified time-frames
(Agenda item 4 (c))

[to be completed]

V. CONTINUING TO ADVANCE THE IMPLEMENTATION OF ARTICLE 4.1
(Agenda item 5)

[to be completed]

VI. POSSIBLE FEATURES OF A PROTOCOL OR ANOTHER LEGAL INSTRUMENT
(Agenda item 6)

1. Proceedings

27. The AGBM considered this matter at its 1st and ... meetings on 5 and .. March. It had before it two documents, FCCC/AGBM/1996/4 and FCCC/AGBM/1996/MISC.1.

28. Statements were made by the representatives of ... Parties

[to be completed]

2. Conclusions

29. On the basis of a proposal by the Chairman, the AGBM adopted the following conclusions.

[to be completed]

VII. REPORT ON THE THIRD SESSION

(Agenda item 7)

30. At the ... meeting, on ... March, the [Chairman, in the absence of an elected Rapporteur], presented the first part of the draft report of the session (FCCC/AGBM/1996/L.1). The AGBM considered and adopted the first part of the draft report. It also requested the [Rapporteur] [under the guidance of the] Chairman and with the assistance of the secretariat, to complete the report, taking into account the discussions of the AGBM, the conclusions on agenda items 2, 3, 4, 5 and 6 and the need for editorial adjustments.

31. The Chairman, after thanking all participants for their constructive cooperation, declared the third session of the AGBM closed.

[to be completed]

Ad Hoc Group on the Berlin Mandate
Third session
Geneva, 5 - 8 March 1996

Unedited text as agreed

CONCLUSIONS

(procedural elements to be added later)

STRENGTHENING THE COMMITMENTS IN ARTICLE 4.2(A) AND (B) (agenda item 4)

4 (a) Inputs from subsidiary bodies

1. The AGBM expressed its appreciation to the Chairmen of the SBSTA and the SBI and to the Chairman of the IPCC for their statements (summarized in FCCC/AGBM/1996/L.1). Many Parties underlined the importance of the Second Assessment Report of the IPCC as a significant input to the AGBM process and drew attention to the key conclusions highlighted by Professor Bolin. Some Parties considered it premature to draw conclusions and pointed to scientific uncertainties. In addition, some specific elements from the conclusions of the subsidiary bodies pertaining to communications from Annex I Parties, and the related emissions projections, as well as to technology inventory were also reiterated.

4 (b) Policies and measures

2. The AGBM continued its analysis and assessment of possible policies and measures as provided for in paragraph 4 of decision 1/CP.1 (the Berlin Mandate). The informal workshop on this matter was considered to be useful. The AGBM expressed its appreciation to the Parties and organizations that had made presentations and to the participants for their contributions to the discussion.

3. The AGBM took note of the progress report from the Annex I Experts Group and looked forward to receiving their first detailed analyses before COP 2. It also took note of the substantive contribution received from the European Community.

4. The Berlin Mandate provides that the AGBM will elaborate policies and measures in the context of its work to strengthen the commitments contained in Article 4.2(a) and (b) through the adoption of a protocol or another legal instrument. In the context of the analysis and assessment, the AGBM considered two general orientations to the elaboration of policies and measures:

(a) Some Parties favoured a "menu approach", according to which the eventual instrument would include an agreed detailed listing (or menu) of possible policies and measures, from which Annex I Parties would be committed to select those that best suited their national circumstances. It could be accompanied by appropriate reporting procedures.

(b) Some Parties favoured an approach that would categorize policies and measures in annexes to a protocol according to the degree to which Annex I Parties would

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be committed to implement and coordinate them. Others suggested focusing on selected categories of, or priority, policies and measures.

5. There were differing views on the need for, and level of, international harmonization. The need to better understand possible methods for categorizing policies and measures, as well as the modalities surrounding possible common measures, was recognized.

6. In this context, a number of Parties made proposals for such policies and measures, with frequent mentions of cross-sectoral economic instruments and the removal of subsidies and market distortions; policies and measures on renewable energy, transportation and energy efficiency; and action on non-CO₂ greenhouse gases such as fluorocarbons and SF₆.

7. A number of Parties referred to the need for a coordination mechanism, as proposed in the AOSIS protocol proposal, or to a mechanism or process to review regularly policies and measures.

8. Many delegations stressed the need for analysis of the socio-economic and environmental impacts of policies and measures on non-Annex I Parties, and expressed the view that policies and measures should conform with provisions of the international trading system and not constitute new barriers to trade.

9. New ideas raised included, inter alia, the concept of specific performance targets for policies and measures and target values to improve energy efficiency.

10. The AGBM looked forward to a more focused discussion on policies and measures at the fourth session and, to this end, welcomed the Chairman's offer to convene informal round tables during that session on specific points related to policies and measures, taking account of the interdependence between such policies and measures and QELROs. All delegates and observers were encouraged strongly to attend and participate in these discussions.

11. The AGBM requested the IPCC to prepare a technical paper on possible policies and measures, taking account of document FCCC/AGBM/1996/2 for consideration at the fifth session of AGBM.

(c) Quantified emission limitation and reduction objectives

12. In considering quantified emission limitation and reduction objectives (QELROs), the AGBM underlined the interdependence between such objectives and the elaboration of policies and measures. Some Parties stressed that the AGBM should focus its efforts on the agreement of QELROs as a first priority. Many Parties pointed to the Second Assessment Report as a key input to the process of setting QELROs, while some considered this to be premature. In this context, there was a proposal by some delegations that levels of atmospheric CO₂ concentrations lower than 550 ppm should guide limitation and reduction efforts.

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13. Other Parties stressed the importance of designing QELROs in the context of a safe emissions corridor based on IPCC assessments with regard to absolute temperature rise, sea level rise and rates of temperature rise.

14. The informal workshop on QELROs was seen as useful. The AGBM expressed its appreciation to the Parties and organizations that had made presentations and to the participants for their contributions to the discussion.

15. The discussion of this item moved the process forward by laying out more clearly the range of QELROs options and variations, including the following:

(a) The AOSIS protocol proposal (a 20 per cent reduction in CO₂ emissions by 2005 with reference to 1990) was supported by several Parties;

(b) Several Parties supported a proposal for a 10 per cent reduction in CO₂ emissions by 2005 and a 15-20 per cent reduction by 2010, both against the base year of 1990;

(c) Some Parties supported a uniform national emission objective; others proposed setting differentiated objectives;

(d) Some Parties expressed opposition to the use of hypothetical future levels of emissions, as opposed to actual observed levels, as a basis for determining objectives;

(e) Some Parties advocated a comprehensive, multi-gas approach; others advocated a gas-by-gas approach;

(f) Other options mentioned included:

(i) The setting of collective objectives for Annex I Parties (for example, for Annex I Parties as a group; for OECD Parties as a group and for non-OECD Parties as a group), while acknowledging distributional complexities;

(ii) A separate agreement for some Parties with economies in transition;

(iii) The concepts of cumulative emissions and emissions budgets, possibly including some mechanism for banking;

(iv) The concept of safe emissions corridors;

(v) Creating incentives for early action; and

(vi) The proposals included in document FCCC/AGBM/1995/4.

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16. With regard to time-frames, it was agreed that those mentioned in the Berlin Mandate (such as 2005, 2010, 2020) were appropriate and relevant for setting objectives, particularly some combinations of years. Some Parties emphasized short and medium term goals (2005 and 2010) to promote early action, while recognizing that a longer term perspective could complement these. Other Parties, while noting the utility of shorter term milestones, were more inclined to a longer time horizon to optimize investment decisions.

17. Concerns were raised about the risk of delaying emission reductions in view of environmental impacts, the time needed to implement technological changes and potentially high costs.

18. There was a range of views on issues related to equity and differentiation among Annex I Parties. Some Parties strongly supported these concepts as a means to ensure economically and environmentally effective new commitments, while respecting national circumstances. They offered suggestions for differentiation criteria and rules, including economic, geographical and demographic factors. Other Parties opposed the concept of differentiation among Annex I Parties, particularly in view of the difficulties in elaborating the details. Still others underlined that equity among all Parties was more important.

19. Economic and cost issues were discussed in considerable detail. The importance of minimizing costs in achieving objectives was agreed. Some Parties pointed to available IPCC conclusions about cost-effective solutions, such as those that make use of efficient replacement investments in the context of the normal capital stock turn over. Some Parties emphasized the possible role of flexibility in terms of when and where reductions would be made. Others expressed concern about this concept pointing out that the concept of flexibility in place, if it extends beyond the territory of Annex I Parties, is inconsistent with the Berlin Mandate. Some Parties argued such costs would be very high, especially for developing countries and called for socio-economic analysis of impacts on them in the context of agreeing on QELROs.

20. Several Parties pointed to the need for monitoring mechanisms in order, periodically, to review effectiveness and make adjustments. There was also a suggestion about the development of performance indicators.

21. The AGBM looked forward to a more focused discussion on QELROs issues at the fourth session and, to this end, welcomed the Chairman's offer to convene informal round tables during that session on specific points related to QELROs. All delegates and observers were encouraged strongly to attend and participate in these discussions.

* * *

22. The secretariat was requested to prepare a compilation of proposals relating to the treatment of QELROs and policies and measures in a protocol or another legal instrument tabled to date or received by the secretariat no later than 15 April 1996, for consideration at the fourth session.

**CONTINUING TO ADVANCE THE IMPLEMENTATION OF ARTICLE 4.1
(agenda item 5)**

23. The Chairman of the Group of 77 and China referred to the position paper on recommendations on guidelines and format for preparation of initial communications from non-Annex I Parties (document FCCC/SB/1996/MISC.1/Add.1), and thanked the experts who participated in the workshop on communications from non-Annex I Parties. There was general support for the organization and usefulness of such workshops.
24. The Chairman of the Group of 77 and China, speaking on behalf of the Group and China, emphasized that the focus of the Berlin Mandate was to strengthen the commitments of the Parties included in Annex I contained in Article 4.2(a) and (b), in accordance with Article 4.2(d). Many Parties stressed that by formally presenting the Group of 77 and China position paper on initial communications from non-Annex I Parties the implementation of their existing commitments in Article 4.1 had been sufficiently advanced, and that the relationship between the commitments of non-Annex I Parties and the provision of financial resources and transfer of technology, in accordance with Article 4.3, 4.5 and 4.7, must be taken into full account.
25. Several Annex I Parties welcomed the steps taken towards the preparation of national communications by non-Annex I Parties, which they considered as an essential basis for advancing the implementation of existing commitments under Article 4.1. Some of these Parties indicated that all Parties should make further efforts to advance the implementation of Article 4.1 and, in particular, to develop strategies for the mitigation of climate change as a key element of sustainable development. These Parties pointed to the mitigation and adaptation options contained in the Second Assessment Report of the IPCC, the ongoing work on technology transfer and cooperation, and the programmes for endogenous capacity building, exchange of information and training as facilitating further actions by non-Annex I Parties under Article 4.1.
26. The AGBM noted the relevant conclusions of the SBSTA and the SBI contained in documents
27. The AGBM noted the intention of non-Annex I Parties to convene a workshop, as a follow up to the earlier one, to address issues relating to implementation of guidelines and format of initial communications from non-Annex I Parties, and requested the secretariat to facilitate assistance in this regard, in accordance with Article 8.2.
28. The secretariat was requested to prepare a compilation of proposals relating to continuing to advance the implementation of Article 4.1, tabled to date or received by the secretariat no later than 15 April 1996, for consideration at the fourth session of the AGBM.

FEATURES OF A PROTOCOL OR ANOTHER LEGAL INSTRUMENT (agenda item 6)

29. The AGBM agreed on the need to avoid the proliferation of new bodies under an amendment or protocol. It stressed the Convention provisions and the importance of institutional economy in this regard. It was preliminarily agreed that most of the existing institutions under the Convention could serve either an amendment or a protocol. For example, the secretariat could serve in either case. It was suggested that the secretariat's report to the fourth session could examine practical ways in which the secretariat and the subsidiary bodies established under the Convention could assume additional duties arising from an amendment or protocol.

30. Several Parties queried the need for the establishment of a separate Conference of the Parties and a separate Bureau to serve a protocol. Many agreed that the decision-making processes under both an amendment and a protocol would need to take into account differing memberships. In this regard, the need for coordination and policy coherence between the Convention and any legal instrument to be adopted was stressed. It was suggested that the report to be prepared for the fourth session should review cases where the adoption of protocols or related legal instruments has not led to the establishment of separate Conferences of the Parties, as well as decision-making mechanisms in agreements having established several regimes.

31. Many Parties stated that only a legally binding instrument would meet the requirements of the Berlin Mandate. It was mentioned that, in addition to an amendment or protocol, other legally binding instruments, such as subsidiary agreements and a completely separate legal instrument, could be explored by the AGBM. Some Parties reminded the Group that the legal instrument should not seek to establish a comprehensive regime but should focus on the strengthening of a specific area of the Convention, namely, Article 4.2(a) and (b). The possibility of concluding decisions, resolutions, declarations and guidelines, in addition to, but not in place of, a legally binding instrument, was also mentioned.

32. Many Parties stated their preference for a protocol. Many others stressed the importance of awaiting further developments on the scope and nature of the commitments to be agreed upon before deciding on the form of the instrument. Some Parties stated that although they had chosen neither an amendment nor a protocol as the definitive option, the adoption and operation of an amendment could prove less complex than a protocol. They also noted that an amendment might be a more viable option considering the lack of consensus on the rules of procedure of the COP. In this regard, the urgency of the COP adopting its rules of procedure at its second session was stressed.

33. One delegation stressed the need for the legal instrument chosen to have the capacity to evolve in light of the future developments of commitments beyond the Berlin Mandate. It also considered that the chosen legal instrument should be able to take into account new scientific evidence, reflect regional approaches on the basis of regional scenarios, progress achieved and other relevant socio-economic data and to reflect such information in evolving commitments.

34. Several delegations stressed the importance of the communication and review of information under an amendment or protocol. Many delegations stated that the multilateral consultative process that is being considered by the Ad Hoc Group on Article 13 should, if established by the COP, be applicable to a protocol. Consideration would need to be given to how the AGBM would ensure that such a process, or a different one, would apply to a protocol.

35. The AGBM looked forward to a continuation of its consideration of these and other issues in light of the secretariat report to be prepared for the Group at its fourth session. The secretariat was further requested to prepare a compilation of proposals relating to possible features of a protocol or another legal instrument tabled to date or received by the secretariat no later than 15 April 1996, for consideration at the fourth session.

CANADIAN DELEGATION LIST

CANADIAN DELEGATION

SUBSIDIARY BODY on SCIENTIFIC and TECHNICAL ADVICE (SBSTA)

27 February - 4 March, 1996

1. **Ann MacKenzie** - Acting Director, Global Air Issues Branch, Environment Canada
2. **Peter Fawcett** - (Co-chair) Deputy Director, Environment Division, Department of Foreign Affairs and International Trade
3. **John Drexhage** - Manager, Climate Change International, Global Air Issues, Environment Canada
4. **Kristi Varangu** - Senior Policy Analyst, Environment Division, Natural Resources Canada
5. **Sushma Gera** - Senior Economist & Policy Advisor, Environment Division, Department of Foreign Affairs and International Trade
6. **Gordon McBean** - Assistant Deputy Minister, Atmospheric Environment Service, Environment Canada
(March 4 only)
7. **David Grimes** - Director General, Policy, Program and International Affairs Directorate, Atmospheric Environment Service, Environment Canada
8. **Joan Masterton** - Senior Policy Analyst, Atmospheric Environment Service, Environment Canada
(March 4 only)
9. **Frank Ruddock** - Counsellor, Permanent Mission of Canada to the United Nations, Geneva
10. **Pierre Guimond** - Manager of Government Relations, Canadian Electrical Association, Ottawa
11. **Louise Comeau** - Climate Change Campaign Coordinator, Sierra Club of Canada, Ottawa

SUBSIDIARY BODY for IMPLEMENTATION (SBI)

27 February - 4 March, 1996

1. **Ann MacKenzie** - Acting Director, Global Air Issues Branch, Environment Canada
2. **Peter Fawcett** - (Co-chair) Deputy Director, Environment Division, Department of Foreign Affairs and International Trade
3. **John Drexhage** - Manager, Climate Change International, Global Air Issues, Environment Canada
4. **Kristi Varangu** - Senior Policy Analyst, Environment Division, Natural Resources Canada
5. **Sushma Gera** - Senior Economist & Policy Advisor, Environment Division, Department of Foreign Affairs and International Trade
6. **Frank Ruddock** - Counsellor, Permanent Mission of Canada to the United Nations, Geneva

7. **Pierre Guimond** - Manager of Government Relations, Canadian Electrical Association, Ottawa
8. **Louise Comeau** - Climate Change Campaign Coordinator, Sierra Club of Canada, Ottawa

AD HOC GROUP on the BERLIN MANDATE (AGBM)
5-8 March, 1996

1. **Doug Russell** - (Co-chair) Acting Director General, Air Pollution Prevention Directorate, Environment Canada
2. **Peter Fawcett** - (Co-chair) Deputy Director, Environment Division, Department of Foreign Affairs and International Trade
3. **John Drexhage** - Manager, Climate Change International, Global Air Issues, Environment Canada
4. **Kristi Varangu** - Senior Policy Analyst, Environment Division, Natural Resources Canada
5. **Sushma Gera** - Senior Economist & Policy Advisor, Environment Division, Department of Foreign Affairs and International Trade
6. **Sylvia Maciunas** - Lawyer, Legal Division, Department of Foreign Affairs and International Trade
7. **Frank Ruddock** - Counsellor, Permanent Mission of Canada to United Nations, Geneva
8. **John Dillon** - Senior Associate and Legal Counsel, Business Council on National Issues, Ottawa
9. **Robert Hornung** - Climate Change Program Director, Pembina Institute for Appropriate Development, Drayton Valley, Alberta

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