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REPORT OF THE THIRD CONFERENCE OF THE PARTIES TO THE UNITED
NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE: 1 - 11
DECEMBER 1997

The Third Conference of the Parties (COP-3) to the United Nations Framework Convention on Climate Change (FCCC) was held from 1 - 11 December 1997 in Kyoto, Japan. Over 10,000 participants, including representatives from governments, intergovernmental organizations, NGOs and the press, attended the Conference, which included a high-level segment featuring statements from over 125 ministers. Following a week and a half of intense formal and informal negotiations, including a session on the final evening that lasted into the following day, Parties to the FCCC adopted the Kyoto Protocol on 11 December.

In the Kyoto Protocol, Parties in Annex I of the FCCC agreed to commitments with a view to reducing their overall emissions of six greenhouse gases (GHGs) by at least 5% below 1990 levels between 2008 and 2012. The protocol also establishes emissions trading, joint implementation between developed countries, and a "clean development mechanism" to encourage joint emissions reduction projects between developed and developing countries.

A BRIEF HISTORY OF THE KYOTO PROTOCOL

The first meeting of the Conference of the Parties to the FCCC (COP-1) took place in Berlin from 28 March - 7 April 1995. In addition to addressing a number of important issues related to the future of the Convention, delegates reached agreement on what many believed to be the central issue before COP-1 – adequacy of commitments, the so-called Berlin Mandate. The result was to establish an open-ended Ad Hoc Group on the Berlin Mandate (AGBM) to begin a process toward appropriate action for the period beyond 2000, including the strengthening of the commitments of Annex I Parties through the adoption of a protocol or another legal instrument.

AD HOC GROUP ON THE BERLIN MANDATE (AGBM): At AGBM-1, held in Geneva from 21-25 August 1995, delegates considered several issues, including an analysis and assessment to identify possible policies and measures for Annex I Parties and requests for inputs to subsequent sessions. They debated the nature, content and duration of the analysis and assessment and its relationship to other aspects of the process. Several developed and developing countries stressed that analysis and assessment should be conducted in parallel and not prior to negotiations of a legal instrument, but a few developing countries insisted that more time was needed, particularly to evaluate economic costs.

At AGBM-2, held in Geneva from 30 October - 3 November 1995, debate over the extent of analysis and assessment continued, but delegates also heard new ideas for the structure and form of a possible protocol. Delegates considered: strengthening of commitments in Article 4.2(a) and (b) regarding policies and measures, as well as establishing quantified emission limitation and reduction objectives (QELROs) within specified time frames, advancing the implementation of Article 4.1, and possible features of a protocol or another legal instrument.

At AGBM-3, held in Geneva from 5-8 March 1996, delegates heard a number of specific proposals on new commitments for Annex I Parties, including a two-phase CO₂ emissions reduction target proposed by Germany. They also discussed how Annex I countries might distribute or share new commitments, and whether those should take the form of an amendment or protocol. Delegates agreed to compile proposals for new commitments for consideration at AGBM-4, and to hold informal roundtable discussions on policies and measures as well as on QELROs.

AGBM-4, held from 8-19 July 1996 during the Second Conference of the Parties (COP-2) in Geneva, completed its in-depth analyses of the likely elements of a protocol or another legal instrument, and appeared ready to move forward to the preparation of a negotiating text. Most of

the discussions dealt with approaches to policies and measures, QELROs, and an assessment of the likely impact of new commitments for Annex I Parties on developing countries. Upon the conclusion of COP-2, delegates noted the "Geneva Declaration," which endorsed the Intergovernmental Panel on Climate Change (IPCC) conclusions and called for legally binding objectives and significant reductions in GHG emissions. COP-2 also saw a significant shift in position by the US, which for the first time supported a legally binding agreement to fulfill the Berlin Mandate. However, even as Parties prepared to strengthen commitments, COP-2 highlighted the sharpest differences between them.

AGBM-5, which met in Geneva from 9-18 December 1996, considered proposals from 14 Parties or groups of Parties regarding strengthening of commitments, advancing the implementation of Article 4.1, and possible elements of a protocol or another legal instrument. Delegates adopted conclusions that requested the Secretariat to produce a "framework compilation" of proposals for further consideration.

AGBM-6 met from 3-7 March 1997 in Bonn. Delegates met in "non-groups" to exchange views and "streamlined" the framework compilation text by merging or eliminating some overlapping provisions within the myriad of proposals. This brought the process one step, albeit a small one, closer to fulfilling its mandate. Much of the discussion centered on a proposal from the EU for a 15% cut in a "basket" of greenhouse gases by the year 2010 compared to 1990 levels. Other proposals emerged in the eleventh hour, signaling that AGBM-6, despite the hopes of many observers, had yet to foster much progress on several fundamental points.

AGBM-7 met from 28 July - 7 August 1997 in Bonn. A total of 145 Parties and Observer States participated in the session, as well as 691 representatives from NGOs and the media. AGBM-7 further streamlined the negotiating text. In the absence of initial formal proposals for emissions reduction targets by the US and Japan, there was a widespread sense that most of the progress achieved at this session was limited to a reduction in the number of proposals.

The final session of the AGBM was held from 22 - 31 October 1997 in Bonn. As AGBM-8 began, US President Bill Clinton included a call for "meaningful participation" by developing countries in the negotiating position he announced in Washington. With those words, the debates that shaped agreement back in 1995 resurfaced, with an insistence on G-77/China involvement once again linked to the level of ambition acceptable by the US. In response, the G-77/China used every opportunity to distance itself from any attempts to draw developing countries into agreeing to anything that could be interpreted as new commitments. Some observers thought the Japanese proposal,

combining an overall reduction target of 5% with scope for differentiation, would likely provide the outline of the eventual compromise. AGBM-8 was suspended until the day before the COP-3 opening in Kyoto to allow time to continue informal consultations on outstanding items, such as the number of GHGs to include, budget period or single-year targets, and sinks.

REPORT OF THE MEETING

After a one-day resumed session of the AGBM on 30 November 1997, COP-3 officially opened on 1 December at the Kyoto International Conference Hall in Kyoto, Japan. During the course of the ten-day meeting that featured round-the-clock negotiating sessions, delegates met both in plenary and in a sessional Committee of the Whole (COW) to consider Agenda Item 5, the adoption of a protocol or another legal instrument, as well as issues related to methodologies to estimate emission sources and sinks. On 8-9 December, the COP held a high-level segment attended by ministers and heads of delegation. Statements were made by over 125 ministers while the COW continued informal deliberations. The final marathon session of the COW began at 1:00 am on Thursday, 11 December, when delegates began an article-by-article review of the text, discussing the provisions related to QELROs, emissions trading and voluntary non-Annex I commitments at length. The final COP-3 Plenary convened at approximately 1:00 pm to adopt the Kyoto Protocol (FCCC/1997/L.7/Add.1).

The following report describes the discussions held in the resumed AGBM-8, the COP-3 Plenary, the High-Level Segment and the COW, and includes an article-by-article description of the Kyoto Protocol.

RESUMED AGBM-8

The resumed eighth session of the Ad Hoc Group on the Berlin Mandate (AGBM-8) met informally on 30 November 1997 to discuss the treatment of GHG sinks, and then in Plenary to conclude discussions on the AGBM report to COP-3. Delegates agreed that informal consultations on sinks would continue through COP-3.

The Secretariat reviewed the documents under consideration:

- *the report of AGBM-8 (FCCC/AGBM/1997/8);

- *the revised text under negotiation (FCCC/CP/1997/2 and Add.1);

- *a technical review of the revised text under negotiation (FCCC/CP/1997/ CRP.1);

- *a note on measures by non-Annex I Parties to reduce the growth of their emissions (FCCC/AGBM/1997/CRP.5);

*a note on information submitted by Parties on possible criteria for differentiation (FCCC/AGBM/1997/Misc.3 and Add.1 and 2);

*responses to a questionnaire on sinks (FCCC/AGBM/1997/Misc.4 and Add.1 and Add.2); and

*a synthesis of information from Annex I national communications on sources and sinks in the land-use change and forestry sector (FCCC/TP/1997/5).

The RUSSIAN FEDERATION presented a proposal on Article 3 (QELROs). The proposal stated that Parties included in Annex I shall ensure that their collective net aggregate anthropogenic carbon dioxide equivalent emissions of the GHGs listed in Annex A, expressed in terms of an emissions budget, as tonnes of carbon dioxide equivalents, inscribed in Attachment I, do not exceed [___] tonnes. The text also stated that each Party included in Annex I shall ensure that its net aggregate anthropogenic carbon dioxide emissions of the GHGs listed in Annex A do not exceed its commitments, expressed in terms of emissions budgets, inscribed in Attachment I. The text proposed that commitments for each Party included in Annex I shall be established using the process set out in Annex B and shall be inscribed in Attachment I.

AGBM Chair Raúl Estrada Oyuela (Argentina) noted that there were many unresolved issues regarding QELROs and delegates must decide at some point the number of gases to be included in the protocol. He proposed that delegates work from the presumption that the protocol would cover six gases: carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆).

The UK asked that the distinction between the three-gas and six-gas approaches be maintained. HUNGARY, the RUSSIAN FEDERATION, POLAND and the G-77/CHINA supported using a three-gas basket, addressing the three additional gases later. The US indicated that it had consistently advocated a comprehensive approach regarding the inclusion of a broad spectrum of GHGs within the scope of the and supported the proposal by the Chair to work on the basis of six GHGs. NORWAY said that methodologies were available to work on the basis of six GHGs and, with SWITZERLAND, supported the Chair's proposal. BRAZIL noted that long-lived gases required the attention of the AGBM and hoped that consensus could be reached.

The Chair of the informal group on sinks, Antonio La Viña, (Philippines) reported that the group had worked on a proposal containing the following four options:

1. QELROs should be calculated on a "net-net" basis, i.e., all sources minus all sinks in both the base year and the target year for the first budget period.

2. There should be a sink category called "land use change and forestry" (LUCF), not to be considered for the establishment of QELROs in the first budget period, but for which the IPCC should improve methodologies geared to their inclusion during the second budget period.

3. The LUCF should be excluded for the establishment of QELROs, with the proviso that they be included at a later stage by the COP serving as the Meeting of the Parties to the Protocol on the basis of new modalities and revised IPCC methods.

4. The establishment of QELROs excluded the LUCF category, but allowed GHG removal by "new activities" to be counted towards compliance if "verifiable." The "new activities" would be defined on the basis of advice from the IPCC and agreed upon by the COP.

La Viña noted that while Parties acknowledged the importance of sinks, there were scientific uncertainties regarding sinks' GHG absorption capacity and methodologies used to calculate this. He noted that options 3 and 4 might serve as the bases for a compromise, considering the marked divergence of views on options 1 and 2.

CHINA drew attention to the fact that budget periods appeared under each option, and recalled the G-77/China's objection to this concept. BRAZIL and ICELAND indicated that the issue of sinks needed to be sorted out before settling targets for QELROs. BRAZIL noted the value of the third option as a basis for compromise. It was agreed that consultations on the matter would continue during COP-3.

Introducing a discussion on budgets, Estrada noted that the G-77/China favored target years and there was a general trend towards acceptance of the possibility of budgets. The G-77/CHINA said the assumption of a consensus on budgeting could be premature. The budget concept does not appear in the Berlin Mandate. CHINA said the budget concept had been introduced along with a string of extraneous issues. A text submitted by the G-77/CHINA, setting out six reasons for rejecting the budget concept, had been suppressed and did not appear in the Chair's revised negotiating text. Estrada said his revised paper included only those items that had actually been discussed at AGBM-8. He said the possibility of using budgets is open.

He called for compromise on policies and measures (P&Ms), noting that some delegations are seeking a mandatory approach while others want none. The EU said it had made considerable concessions in Bonn by simplifying proposals for mandatory P&Ms. EGYPT invited the Chair to present a balanced proposal. The RUSSIAN FEDERATION proposed national measures. He said the question of P&Ms is linked to other issues including the basket of gases to be adopted and the

level of flexibility to be accorded to countries with economies in transition. The EU tabled a new proposal, stating that any signatory or Party not included in Annex I nor acting under Article 10 may notify the depository that it has opted to adopt and implement some or all of the policies and measures and/or to participate in the coordination process referred to elsewhere in the protocol. The G-77/CHINA objected to the inclusion of a reference to non-Annex I Parties.

Upon adjourning, the Chair said that the rapporteur should summarize the day's session for COP-3, noting that he had planned to add conclusions to the AGBM report but no conclusions had been reached.

PLENARY DELIBERATIONS

On 1 December, COP-2 President Chen Chimutengwende (Zimbabwe) opened COP-3 and stated that delegates faced a political dilemma of apportioning responsibility for the historical burden that humanity has placed on itself. He called for acknowledgement of developing country efforts already underway and said it would not be possible for these countries to take on new commitments under the new instrument. He said delegates must agree on: a fair system of apportionment of emission limits; a globally agreed reduction pathway; and a projected sustainable and equitable future emission level. He called for reliable and predictable financial provisions to facilitate the acquisition of clean technologies in developing countries.

Hiroshi Ohki (Japan) was then elected President of COP-3. He said COP-3's most important task was to establish a more concrete international framework for protecting the global climate. He stressed the need to discuss steps to be taken after Kyoto to implement the protocol and said not all climate change problems could be solved in Kyoto.

Delegates were also welcomed by: Keizo Obuchi, Minister of Foreign Affairs of Japan; Teiichi Aramaki, Governor of the Prefecture of Kyoto; and Yorikane Masumoto, Mayor of Kyoto.

FCCC Executive Secretary Michael Zammit Cutajar noted that, at an estimated 10,000 attendants, COP-3 surpassed all records for participation in a meeting on climate change. He stressed that the focus of the Conference should be its end product. He noted that in a recent exchange of views with a group of business people, one of them had suggested that there should be "no fudge" in the Kyoto agreement.

The goals and the rules for the agreement should be clearly defined. He contrasted this approach with the propaganda from certain industrial sectors that "unashamedly plays games with the science and statistics of climate change." He said that "in the present constellation of economic and political power, it is those who have already built their strength – often through unsustainable economic growth –

who must lead the way towards a sustainable future," and called for a clear, binding and verifiable commitment by industrialized countries to reduce their emissions below 1990 levels early in the next century.

TANZANIA, on behalf of the G-77/CHINA, noted that developing countries are the most vulnerable to climate change and the least able to adapt. He also said that they are committed to modify trends in human-induced emissions through the principle of common but differentiated responsibilities. The delay between production of emissions and their effects requires Annex I countries to take the first steps. Developed countries should be blamed if Kyoto fails. He objected to the proposed "post-Kyoto evolutionary process" and to threats to aid unless developing countries accept it.

LUXEMBOURG, on behalf of the EU, reiterated its position favoring: a 15% cut in emissions by developed countries, jointly or individually, by 2010; specific P&Ms; and consideration of new commitments for developing countries under FCCC Article 7.1(a) in the future. The RUSSIAN FEDERATION reiterated its proposal that each Annex I country consolidate its emissions into aggregate "carbon dioxide equivalents" with the obligations of each Annex I country set out in an attachment and determined according to an annex.

The US favored a target based on all GHGs, sources and sinks, flexibility, and meaningful participation of key developing countries. She offered flexibility on limited, carefully bounded differentiation and proposed a working group to examine differentiation, including the Russian proposal. She noted concerns regarding the EU proposal for restrictions on emissions trading, the EU's target in light of its economic advantage under their bubble proposal, the breadth of differentiation implied, and EU Member State accountability. She favored different targets for developing countries, such as emissions growth targets. Developing countries that assume voluntary commitments under the proposed Article 10 could gain new resources and technology through emissions trading.

The President noted that the ratification status report (FCCC/CP/1997/INF.2), indicating that 167 States and the EU had become Parties, showed nearly universal recognition of the importance of climate change issues. On adoption of rules of procedure (FCCC/CP/1997/5), he noted a draft decision suggesting that the COP adopt all rules except rule 22, paragraph 1, on election of the Bureau, and rule 42, paragraph 1, on voting in the absence of consensus, applying those rules until agreement is reached.

VENEZUELA, SAUDI ARABIA and KUWAIT objected to adopting incomplete rules. ARGENTINA and the Alliance of Small Island States (AOSIS) supported the draft decision. The EU supported the draft decision but suggested that rule 22 was

already agreed. The President called for consultations and said the COP would continue to apply the draft rules except rule 42.

The provisional agenda (FCCC/CP/1997/1), annotations on the organization of work (FCCC/CP/1997/1/Add.1), the list of documents (FCCC/CP/1997/1/Add.2), and a document on the High-Level Segment (FCCC/CP/1997/L.1) were adopted. On election of officers other than the President, delegates elected Bakary Kante (Senegal) Chair of the Subsidiary Body for Implementation (SBI), George Manful (Ghana), T. Gzirishvili (Georgia), Anthony Clarke (Canada), Cornelia Quennet-Thielen (Germany), Sergio Selaya Bonilla (Honduras), Luis Herrera (Venezuela), Kok Kee Chow (Malaysia) and Espen Ronneberg (Marshall Islands), Vice Presidents, and Maciej Sadowski (Poland) Rapporteur.

On Agenda Item 2, organizational matters, a Committee of the Whole (COW) was established to take decisions on the Berlin Mandate, with Raúl Estrada Oyuela elected as Chair.

Reports of the Subsidiary Bodies

Delegates next considered reports from the FCCC subsidiary bodies. Tibor Faragó (Hungary) introduced the report and draft decisions of the Subsidiary Body on Scientific and Technological Advice (SBSTA) (FCCC/SBSTA/1997/14). Delegates noted the report of SBSTA and adopted its draft decisions on cooperation with the Intergovernmental Panel on Climate Change (IPCC) and the development of observational networks. Joint SBSTA/SBI draft decisions were adopted on the development and transfer of technology and activities implemented jointly (AIJ).

Mohamed Ould El Ghaouth (Mauritania) introduced the SBI report (FCCC/SBI/1997/21), which was noted by the COP. Delegates adopted a joint SBI/SBSTA draft decision on the division of labor between SBI and SBSTA. Other adopted decisions addressed: the volume of documentation; Annex I Party communications; review of the financial mechanism; the Annex to the Memorandum of Understanding with the GEF; the financial performance of the Convention in the biennium 1996-1997; and arrangements for administrative support to the Convention Secretariat.

Patrick Széll (UK) introduced the report of the Ad Hoc Group on Article 13 (AG13), which considered the establishment of a multilateral consultative process (MCP). He noted that the group reached two conclusions: the MCP should be advisory rather than supervisory in nature and AG13 should not complete its work until after COP-3. He said there were still questions remaining: whether Article 13 requires a "process" or "committee;" who may trigger the regime; and whether the MCP should provide assistance to developing countries or "consultative" advice to all countries. COP-3 noted the report of AG13 and adopted a draft decision that enabled the AG13 to continue its work.

AGBM Chair Raúl Estrada Oyuela reported to COP-3 on the work of the AGBM. He indicated that the results of the work of the AGBM on a protocol or another legal instrument were contained in the revised text under negotiation (FCCC/CP/1997/2). An addendum to this document contained a draft proposal to amend the Convention. The Chair drew attention to a number of issues that were not fully addressed in the AGBM, such as: methodologies to estimate emissions by sources and removals by sinks; the treatment of sinks under the new instrument; a proposal made by Brazil; and the issue of future development of commitments for all Parties, referred to by some as "evolution."

He indicated that the draft negotiating text contained numerous brackets and alternatives. He urged delegations to produce an agreement that Parties could comply with. He said the efforts of key developing country Parties to mitigate climate change are frequently overlooked and called attention to reasons given by different developed countries to refuse or delay the strengthening of their commitments. While there are indications that some countries are not willing to fulfill FCCC objectives, the vast majority of Parties are willing to adopt a set of legally binding rules to strengthen commitments.

Report of the Global Environment Facility

On 3 December, GEF Chair Mohamed El-Ashry introduced the GEF report (FCCC/CP/1997/30), which updates previous information on efforts to implement the guidance provided by previous COP meetings and includes a complete listing of GEF-financed climate change projects. He recalled that some Parties had said the GEF procedures were not "user-friendly," and noted the adoption of further streamlined procedures for the preparation of projects for enabling activities. GEF has provided support to 85 climate change projects addressing the needs of 114 countries at a cost of US\$63 million. He highlighted Annex A of the report, describing problems encountered in applying the concept of agreed full incremental costs. He also noted consensus among donors on a replenishment target of US\$2.75 billion.

The EU expressed disappointment that delegates had not agreed to establish GEF as the permanent financial mechanism this year. He commended the agreed level of financial support for climate change activities. CHINA noted that efforts to advance existing commitments are handicapped by a lack of resources and called for a substantial increase in the GEF replenishment. He called for an expeditious approval process for funding and noted that developing countries face enormous difficulties in undertaking GHG inventories.

URUGUAY indicated that it had been able to submit its first national communication on GHG sources and sinks because of GEF financing. The CENTRAL AFRICAN REPUBLIC said that the

report should be more detailed and include difficulties encountered by Parties in obtaining GEF resources to prepare national communications.

SWITZERLAND, supported by the US, said that GEF should be established as the permanent FCCC financial mechanism. The G-77/CHINA referred to the provision of financial resources and the transfer of technology as fundamental to implementation of the Convention by non-Annex I Parties. He pointed out that both were developed countries' obligations under the Convention and should not be used to push developing countries to accept new commitments or to accept a market-based approach under the protocol. The PHILIPPINES mentioned problems experienced with implementing agencies and said that they should be more aware of decisions taken by the GEF Council. INDIA, BHUTAN, BANGLADESH and KIRIBATI highlighted the importance of obtaining GEF financing for national communications. The US said GEF had made an effort to meet the needs of FCCC Parties and expressed disappointment that the review of the financial mechanism had not concluded. He also pointed to the need for finding innovative sources of financing involving the private sector. The GEF's report was noted.

Technology Transfer

On 3 December, the COP President introduced a discussion on the development and transfer of technologies. CHINA, supported by INDIA and IRAN, observed two tendencies: developed countries are only interested in transfer of technical information, while developing countries deem technology transfer on non-commercial and preferential terms most important; and some countries emphasize market mechanisms. She called for action from developed countries consistent with Agenda 21, the FCCC and previous COP resolutions, and recommended that that the issue be taken up as a separate item at COP-4. SOUTH AFRICA said access to technology and transfer of technical know-how would play a crucial role in meeting the energy implications of moving towards sustainable development. JAPAN outlined the Kyoto Initiative to strengthen assistance for developing countries in their efforts to combat global warming, to be operated through the national Official Development Assistance programme. The programme will offer concessional loans to promote training, cooperation on energy-saving technology, new and renewable energy sources, forest conservation and afforestation, and will establish information networks and workshops. INDIA, supported by IRAN, called for the operationalization of FCCC provisions relating to state-of-the-art environmentally sound technologies (EST), in the new legal instrument.

AUSTRALIA said the bulk of ESTs are privately developed and owned. Governments can create enabling conditions for technology development and recipient countries must have appropriate policies for successful transfers. The REPUBLIC OF KOREA said his country was in consultation with UNEP,

UNDP and the Commission on Sustainable Development with a view to scheduling an expert group meeting on technology transfer in Seoul in February 1998. ZIMBABWE outlined her country's difficulties with basic economic development and the financial impact of El Niño. She said technology transfer had become a critical issue.

IRAN identified obstacles facing developing countries seeking transfers of technology at their own expense due to restrictions imposed by developed countries. He said shifting responsibility for transfers to the private sector contradicts the spirit of Agenda 21.

Second review OF THE ADEQUACY OF ARTICLE 4.2(a) AND (b)

The first review of the adequacy of Article 4.2(a) and (b) was undertaken at COP-1. After judging these commitments inadequate, COP-1 undertook the Berlin Mandate process. Article 4.2(d) calls for a second review before 1999. SBI-6 requested the Secretariat to make preparations for COP-3 to include the review in the agenda for COP-4.

On 3 December, AOSIS, CHINA and ZIMBABWE stated that deliberation of this item was premature given that it was unclear what the actions taken under the Berlin Mandate process would accomplish. AOSIS predicted that the visible effects of climate change will have to become devastating before the Annex I countries pushing mediocre proposals take real action.

CHINA said the lack of national communications also makes it premature to review adequacy of commitments. The US pointed out that the review must take account of the Kyoto outcome and asked that the nature of the review be clarified. CHINA disagreed, saying that the review is independent of the outcome in Kyoto, and noted the Article 4.2(d) deadline of December 1998. Delegates decided that necessary preparations should be made to place the review of Articles 4.2(a) and (b) on the COP-4 agenda.

Review Of Information

On 3 December, delegates discussed the review of information and possible decisions under Article 4.2(f)(FCCC/CP/1997/L.3). They agreed to the proposal that the Czech Republic and Slovakia replace Czechoslovakia in Annex I and that Croatia be added. Delegates debated at length a proposal by Azerbaijan and Pakistan to delete Turkey from Annex I and Annex II. IRAN, TURKEY and KUWAIT supported the proposal. The EU and AUSTRALIA maintained that Turkey should indicate willingness to undertake Protocol obligations under Article 10 before its deletion from the Annexes. The US suggested continuing consideration of this proposal and other OECD members' relationship to Annex I at COP-4. TURKEY noted that questions remain unanswered on the Protocol's proposed Article 10 and requested that ministers discuss the matter on 10 December.

The Chair proposed that Luis Herrera (Venezuela) conduct consultations on these amendments. The issue was not resolved and will be discussed at COP-4.

Proposed Amendments to the FCCC

On 3 December, delegates considered proposed amendments to the Convention and its Annexes (FCCC/SBI/1997/15). The EU presented a proposal to amend Article 17 to state that Parties shall make every effort to agree on any proposed protocol by consensus and, if no agreement is reached, the protocol shall be adopted by a 3/4 majority. This amendment would be applied provisionally, pending its entry into force in accordance with Article 15. The EU said objections to the protocol might remain at the end of COP-3 and a decision-making procedure would be needed. The RUSSIAN FEDERATION emphasized that voting was not the way to adopt an important international instrument. VENEZUELA said the amendment and its provisional application must be considered separately.

Under Kuwait's proposed amendment, Parties would provide financial resources, including the transfer of technology, to the extent that the COP decides they are needed by the developing country Parties. KUWAIT said the developing countries can only lower emissions through technology, but resources made available to date have been inadequate. The EU, supported by the US and JAPAN, said donors should not place their resources in the hands of the COP. SAUDI ARABIA said the amendment came in reaction to the EU proposal, which upsets the Convention's "delicate balance." Sergio Selaya Bonilla (Honduras) conducted consultations on the EU's proposal and Bakary Kante (Senegal) on Kuwait's proposal throughout the week. The EU proposal was later withdrawn. The Kuwait proposal was not accepted.

Following a proposal by CROATIA, delegates discussed the status of Yugoslavia in relation to the Convention. The Executive Secretary reported on the results of his request for information on Yugoslavia's status within the UN and the FCCC. The President asked Yugoslavia to refrain from participation in the meeting.

Other Actions

The COP took several other actions during the week. Several documents were noted: activities related to technical and financial support (FCCC/CP/1997/INF.3); a report on the second meeting of AGBM-8 (FCCC/AGBM/1997/8/Add.1); and administrative and financial matters (FCCC/CP/1997/INF.1), including the 1998-99 biennial programme budget.

Parties agreed that Brazil's proposal to relate Parties' emissions targets to their contributions to climate change (FCCC/AGBM/1997/MISC.1/Add.3) be given to SBSTA to review scientific and methodological aspects, and to advise COP-4

on future activities. BRAZIL noted the proposal's political element: that future objectives be established in terms of global mean surface temperature change, as a mechanism for apportioning the burden.

On 5 December, delegates accepted an offer by ARGENTINA to host COP-4 and subsidiary body meetings, from 2-13 November 1998, in Buenos Aires.

HIGH-LEVEL SEGMENT

The High-Level Segment for Ministers and Other Heads of Delegation was held during morning, afternoon and evening sessions from 8-9 December 1997. Following the opening addresses, ministers and other heads of delegations engaged in a general debate.

Ryutaro Hashimoto, Prime Minister of Japan, urged developed countries to agree on meaningful, realistic and equitable emissions reduction targets that are legally binding. He called on all Parties, including developing countries, to voluntarily enhance their measures. He noted that regulation could trigger innovation, promote capital investment and give rise to new industry.

José María Figueres Olsen, President of Costa Rica, said the Kyoto agreement must include significant cuts in emissions by industrialized countries, a financial mechanism bridging developed and developing countries, and active voluntary participation by the developing nations. He noted that Costa Rica has developed a marketable instrument to value emissions reductions. He called on developing countries to do their part.

Kinza Clodumar, President of Nauru, called the willful destruction of small island States with foreknowledge an "unspeakable crime against humanity." He said solving the problem requires more than stabilization of GHGs. He noted US President Clinton's pledge for significant future reductions and called for an announcement on this from Vice President Gore.

US Vice President Albert Gore Jr. reiterated the US commitment to reduce emissions by 30% of projected levels by 2010 and key elements of the US proposal. He announced increased US flexibility for working towards a commitment with realistic targets and time tables, market mechanisms, and participation of key developing countries.

Maurice Strong, Under-Secretary-General and Executive Coordinator for UN Reform, delivered a statement for UN Secretary-General Kofi Annan. He said many would be disappointed that the Kyoto agreement would be a modest step.

GENERAL DEBATE

COP President Hiroshi Ohki (Japan) reported substantial progress at the intensive discussions in Kyoto and expressed confidence about a breakthrough for final agreement.

FCCC Executive Secretary Michael Zammit Cutajar commented on the remarkable nature of the Conference given the media interest and the scale of the UN Internet broadcast, which have focused world attention on Kyoto. He said the Zen practice of breaking through mental boundaries provided a good theme for the days ahead when negotiators would have to break through the tendency to consider the short-term costs while neglecting the long-term economic opportunities.

On behalf of the G-77 and China, Bakari Mbonde (Tanzania) said decisive action would be needed to strengthen developed country obligations. He underlined the Berlin Mandate to achieve QELROs and advance implementation of commitments under Article 4.1 without new commitments for developing country Parties. Developing countries had undertaken their own measures and the success of these was predicated on Annex I country fulfillment of their commitments including transfer of technology. He rejected offshore extra-territorial implementation of targets and welcomed the Clean Development Fund initiative.

Dr. Johny Lahure (Luxembourg), on behalf of the EU, rejected differentiation that makes targets weaker. Instead, it must guarantee comparable commitments for major economies at least. Flexibility resulting in environmentally detrimental loopholes is unacceptable. He supported: the "three plus three" gas proposal; trading along with strong targets and domestic action, monitoring, sanctions and market safeguards; and JI with rules and safeguards. He said mandatory, internationally coordinated P&Ms are indispensable. Suggestions that developing countries should take up new commitments are not helpful to the negotiations and contrary to the Berlin Mandate. Mobilizing new and additional resources through the financial mechanism could foster voluntary limitation of developing country GHG emissions.

Many speakers focused on elements necessary for a Kyoto agreement. SAMOA, on behalf of AOSIS, and supported by NIUE, stated that a Kyoto agreement must contain strong, short- and medium-term targets for Annex I Parties and a mechanism for early review of their adequacy. NORWAY said developed countries must agree on an overall reduction target for the emission of all GHGs of 10 to 15% by 2010. A flat rate approach fails in fairness and effectiveness, and renders an ambitious agreement impossible. SOUTH AFRICA supported the EU-proposed targets.

Developing countries rejected the concept of voluntary commitments as they linked the output of emissions with development and progress, which they said was their highest

priority. They stressed that the Berlin Mandate had not called on developing countries to take responsibility for what was essentially the result of industrialized countries' action. They stressed that developed countries should take the lead and follow the principle of "common but differentiated responsibilities." AOSIS called for the strongest emissions cuts as they spoke of certain disaster in the face of political paralysis. Oil-producing countries called for establishment of a compensation mechanism should full implementation be carried out.

Developed countries expressed varied approaches. Members of the EU stressed their group position and detailed their individual commitments and efforts. Others partially agreed to this but said that developing countries needed to make voluntary commitments and at least begin the "sequencing of obligations." A process through which a review of commitments by all Parties could be carried out was also raised.

From both developed and developing countries, there was a call for binding and realistic targets as well as the need for funds to assist technology transfer and the integration of sustainable development within developing countries. However, the ways by which this could be carried out heard various suggestions from the floor, including joint implementation (JI) and the clean development fund -- the latter frequently linked to a compliance mechanism. The loopholes in these approaches were also addressed, with developing and developed countries cautioning against or rejecting JI as a possible means of circumventing reduction objectives.

Also controversial were the issues of emissions trading, the use of sinks/sources and banking credits. Those who questioned the wisdom of such mechanisms recalled the Convention's goal of emission reductions and voiced the fear that such measures would exacerbate the gap between the countries.

COMMITTEE OF THE WHOLE

The first meeting of the COW convened on 1 December. The COW established three negotiating groups on: institutions and mechanisms; advancing the implementation of FCCC Article 4.1 and the financial mechanism; and P&Ms. COW Chair Raúl Estrada Oyuela conducted negotiations on QELROs. In addition, a number of informal groups considered other issues.

Delegates met in a "stock-taking" COP Plenary on Friday, 5 December. Estrada reported that delegates had met eight times, but needed more time. Negotiations in the COW continued over the weekend so that only a few key issues would remain for the consideration by the ministers during the High-Level Segment.

The final meeting of the COW began on Wednesday, 10 December, at approximately 7:00 pm. The meeting was suspended to allow for distribution of the Chair's final draft (FCCC/CP/1997/CRP.6) and further informal consultations. At 1:00 am, delegates began an article-by-article review of the text, discussing the provisions related to QELROs, emissions trading and voluntary non-Annex I commitments at length.

Throughout the night delegates worked to adopt all of the articles in the text. At times it appeared as though the negotiations would break down, but, finally at 10:15 am, the COW completed its work and agreed unanimously to submit the text of the protocol to the COP Plenary for formal adoption. The final COP-3 Plenary convened at approximately 1:00 pm on Thursday, 11 December to adopt the Kyoto Protocol (FCCC/1997/L.7/Add.1).

KYOTO PROTOCOL TO THE UN FRAMEWORK CONVENTION ON CLIMATE CHANGE

The Kyoto Protocol to the UN Framework Convention on Climate Change contains a preamble, 28 articles and two annexes. The following is a summary of the Kyoto Protocol, highlighting the issues that were resolved during COP-3.

PREAMBLE AND ARTICLE 1 (Definitions): Under the Preamble, the Parties agree to the provisions in the Protocol. The Preamble also notes FCCC Articles 2 and 3, and the Berlin Mandate. Article 1 recalls the definitions of the FCCC for use by the Protocol.

ARTICLE 2 (Policies and Measures): The negotiating group on Article 2 discussed a revised draft text prepared by Chair Mohamed Ould El Ghaouth (Mauritania). There was some agreement on the kind of policies and measures to be considered and on their inclusion in the protocol. There were differences over whether policies and measures should apply to non-Annex I Parties and whether their application should be adjusted according to national circumstances. A related discussion concerned the issue of "comparability." The options for coordination were also discussed.

On 5 December in the COW "stocking-taking" Plenary, El-Ghaouth reported that the negotiating group on P&Ms had produced a draft document, although divergence of views persisted on whether P&Ms should be compulsory or not.

In the final Plenary of the COW, KUWAIT proposed deleting subparagraphs on reduction and phasing out of market imperfections and subsidies and on controlling transport sector emissions. The Chair said there was no consensus for the deletions and the article was adopted.

Article 2, as adopted, describes policies and measures that each Annex I Party shall implement or elaborate in achieving its QELROs, in accordance with national

circumstances. A subparagraph lists measures "such as:" energy efficiency; protection and enhancement of sinks; sustainable agriculture; new and renewable forms of energy, carbon sequestration and advanced technology; phasing out of subsidies and incentives that run counter to the FCCC objective; sectoral reform; GHG emission limitation and reduction; and methane recovery and use. Parties shall cooperate to enhance the effectiveness of P&Ms. Annex I Parties shall pursue limitation of emissions from aviation and marine bunker fuels, working through the International Civil Aviation Organization and the International Maritime Organization. Parties shall strive to minimize the adverse effects on other Parties, especially developing country Parties and those identified by FCCC Articles 4.8 and 4.9. The COP shall consider ways to elaborate coordination, if it decides coordination would be beneficial.

ARTICLE 3 (QELROs and Sinks): The article on quantitative emission limitation and reduction objectives (QELROs) was discussed in a negotiating group chaired by COW Chair Estrada throughout the first week, as well as during COW sessions on 4, 5, 6, 9 and 10 December, the last session concluding on 11 December.

Discussions of sinks were held in a contact group chaired by Antonio La Viña (Philippines) during the first week. Luis Gylvan Meira Filho (Brazil) led informal negotiations on language to describe commitment periods, originally termed "budget periods." Contact groups were formed to discuss differentiation and the number of gases to be covered by the legal instrument.

Canada submitted a proposal on QELROs consisting of a 3% reduction of GHGs below 1990 levels by the year 2010. It also provided for an additional reduction of 5% by 2015, and indicated that the years 2010 and 2015 refer to the mid-point years of budget periods. It included sinks, six greenhouse gases and maximum flexibility in its implementation. Canada said joint implementation with credit offers the best combination of technology and financial transfer to developing countries and expressed the hope that developing countries would see its potential value.

Commitment Periods: On 2 December, the Article 3 negotiating group focused on emission budgets. Meira Filho reported to the COW on 5 December on the consultations on "multi-year targets," formerly known as "budgets." He stated that problems arose from confusion between the terms "emission budgets" and "budget periods." These were replaced with "total emissions" and "commitment periods," respectively. He said there was increasing agreement that the range for "commitment periods" should be five years.

On 6 December in the COW Plenary, Meira Filho introduced a revised draft text. The text added a definition to Article 1, stating that a "defined amount" means the amount of net

aggregate emissions a Party may not exceed in a given commitment period to meet its QELROs. The revised text also contained three alternatives for the first paragraph of Article 3.

The G-77/CHINA objected to the definition of "defined amount" and supported Alternative C, which called for QELROs within time frames such as 2005, 2010 and 2020. CHINA objected to the omission of crucial elements of targets and timetables.

Differentiation: The QELROs negotiating group discussed possible parameters for differentiation on 2 December, on the basis of the US offer to be flexible on differentiation. Delegates discussed approaches to and concerns over differentiation. The group later considered a proposal by JAPAN establishing three categories of Annex I countries.

Further discussion of differentiation occurred in informal consultations, both in intense bilaterals and under the guidance of Estrada. By the end of the first week, Estrada had reportedly produced a set of differentiated target numbers for Annex I countries.

On 9 December, Estrada introduced a new draft text (FCCC/CP/1997/CRP.4) at an evening session of the COW. He indicated that the proposed text on Article 3 would be treated as a take it or leave it offer. The proposal was the "big bubble," as suggested at various moments during the negotiations, in particular by Russia. The Chair's text contained a global reduction of 5% in emissions of CO₂, CH₄, NO₂ from 1990 levels, for the commitment period between 2006 and 2010, with the possibility that Parties fulfill the commitment individually or jointly. He said the global reduction commitment had been distributed in a differentiated way, with some countries possibly increasing emissions, others keeping their current levels, and most reducing.

At the COW session at 3:20 am on 10 December, Estrada said intense negotiations and consultations had been conducted within and between groups since the introduction of the draft protocol. He said the text needed refinement to indicate that each Party would be responsible for its respective number in an annex.

Delegates indicated that a number of major issues were still in play after the adjournment of the COW. Several delegations suggested they were not yet ready to accept the quantified emission limitation and reduction commitment in the Chair's draft, which put the EU at -8%, the US, Russia, Canada and Ukraine at -5%, Japan at -4.5%, New Zealand at 0, Australia and Norway at +5% and Iceland at +10%, compared to 1990 levels.

Coverage: The negotiating group on 3 December discussed a

"three-plus-three" gas coverage proposal, which would divide six gases into two baskets. The first basket (CO₂, CH₄ and N₂O) would be subject to QELROs immediately, while proposals for formulating QELROs for the second basket (HFCs, PFCs and SF₆) would be debated at COP-4. At a 4 December COW meeting, Estrada said that an option listing gases separately was still open. In the COP Plenary on 5 December, two alternatives regarding coverage were under consideration: immediate regulation of six gases or the three-plus-three approach.

The Chair's draft presented in the 9 December COW covered emissions of CO₂, CH₄, NO₂ from 1990 levels, for the commitment period between 2006 and 2010. COP-4 was to adopt an annex to the Protocol establishing reduction commitments covering HFCs, PFCs, and SF₆ with a linkage between the two baskets.

In the resumed COW meeting early on 10 December, Estrada noted a possibility to reach agreement covering six gases from the beginning, rather than the three-plus-three coverage included earlier that night. Different base years would be needed for each group of gases: 1990 for CO₂, CH₄, NO₂; and 1995 in some cases for other gases. He said this required careful drafting to provide the necessary transparency.

Sinks: On 2 December, a contact group chaired by Antonio La Viña discussed a Chair's draft on sinks. The draft would set QELROs on gross emissions and measure compliance with net emissions. It referred to "verifiable changes ... resulting from direct human induced land-use change and forestry activities since 1990" to achieve compliance. The sinks would be limited to a verifiable change in stocks covered in the land-use change and forestry sector of the IPCC guidelines.

At the COW session on 4 December, La Viña introduced a draft document containing three bracketed paragraphs. The first paragraph stated that Annex I Parties shall ensure that their [gross] aggregate anthropogenic carbon dioxide equivalent emissions do not exceed their commitments. The second bracketed paragraph discussed net [changes in] GHG emissions from sources and removals by sinks resulting from direct human-induced land-use change and forestry activities and listed three options. Option A referred to variable changes in stocks. Option B referred to verifiable changes in stocks [up to xx per cent] of the QELROs. Option C was limited to afforestation, reforestation, deforestation, and harvesting since 1990 measured as verifiable changes in stocks used to meet QELROs. A third paragraph stated that the Meeting of the Parties (MOP) shall determine how and which human-induced activities related to GHG emissions and removals in the land-use change and forestry activities category shall contribute to meeting QELROs commitments.

AUSTRALIA proposed another option for a fully comprehensive net approach and suggested that the other options would introduce inequities between countries, along with uncertainty. The Australian text stated that the verifiable net GHG emissions from sources and removals by sinks in terms of carbon dioxide equivalents resulting from direct human-induced activities shall be used to meet the QELROs commitments of each Party in Annex I. It provided for reporting in a transparent and verifiable manner.

NEW ZEALAND described Option C as very limited and noted his support for including all verifiable categories. A number of countries including JAPAN, BARBADOS, BRAZIL and COSTA RICA supported Option C. The US preferred the Australian option, but said "forest management and forest conservation" should be added to the limited Option C. ICELAND, URUGUAY, CANADA, MEXICO, COSTA RICA and NEW ZEALAND supported the US's concern that Option C refers to only a limited number of activities that can contribute to sinks. A number of delegations proposed adding language on forest management. ICELAND called for including restoration of degraded land. GRENADA suggested giving a negative credit to countries when sinks are destroyed.

The Chair suggested that Option C appeared ready to attract consensus, and that it represented a text to limit or set parameters for sinks. He felt the COW was ready to accept Option C, with the inclusion of "forest management and forest conservation." However, after further debate, the Chair noted clear reaction against "forest management and forest conservation." He asked whether the US could support only "management." The US said the choice regarding sinks would have an enormous impact on a QELROs target number. The EU said the paragraph should remain bracketed for ministers. NORWAY said limiting a comprehensive use of sinks limits a comprehensive policy approach and creates uncertainties for countries willing to undertake ambitious commitments.

BRAZIL said the question is: what are man-made activities for which credits should be given to increase emissions? He compared the 6 gigatonnes (Gt) of carbon emitted from fossil fuels and 1 Gt from land-use change to natural uptake of 2 Gt by oceans and 2 Gt on continental surfaces. Given deep economic limitations and the inclusion of all countries, if all forests were considered managed this would grant a license for 30 percent more emissions. Because the FCCC includes an obligation to conserve and maintain sinks and reservoirs, he suggested a separate article to restate the obligation on all Parties to sustainably manage their sinks.

At the 5 October COP Plenary, Estrada noted that agreements on sinks and coverage were necessary before QELROs could be defined. During the 6 October COW, the RUSSIAN FEDERATION said the nature of the issue's resolution would determine his view of the protocol. The US said the text might not be

resolved until calculations regarding targets had been completed.

Also during the 6 October COW, Contact Group Chair La Viña introduced a revised non-paper on sinks, containing only text relating to Option C, accounting for limited sink activities to offset emissions. JAPAN, BARBADOS, RUSSIA, the US, CANADA, CUBA and JAMAICA supported the text. NEW ZEALAND, supported by AUSTRALIA, the US and NORWAY, called for an earlier text to be kept as an option for ministers. The US proposed adding "for the first commitment period" to a paragraph on when sink activities would be allowed. The EU put the whole paragraph in brackets.

The text introduced at the 9 December COW meeting included afforestation, reforestation and deforestation as sinks, with provision for further analysis.

Other Issues: On 3 December, the negotiating group on QELROs briefly discussed text on economies in transition. On 4 December in the COW's "Stock-Taking" Plenary, Estrada reported agreement on text on commitments for countries with economies in transition. A paragraph on emissions borrowing was eliminated. In the 9 December COW, BURKINA FASO, supported by BANGLADESH and UGANDA, called for a reference to an FCCC provision on taking full account of the situations of the least developed countries.

Final COW Discussion: At 6:30 pm on 10 December, Estrada informed the COW of the results of informal discussions. The collective emissions reduction target for Annex I countries had been increased from 5% to 6%, but these deeper commitments were conditional on the adoption of criteria in other areas yet to be finalized, which included: emissions trading; voluntary commitments; Annex I country commitments; JI; advancing implementation of developing country commitments; the financial mechanism; the Clean Development Mechanism; compliance; entry into force; and Annex B on the distribution of commitments for Annex I countries. He predicted that if agreement were reached, 10 December 1997 might be remembered as the "day of the atmosphere," and suspended the meeting again.

The COW was reconvened at 1:15 am on Thursday, 11 December. The Chair introduced FCCC/CP/1997/CRP.6, the final draft of the Protocol. Discussion began with Article 3. On aggregating emissions of Annex I Parties (paragraph 1), RUSSIA noted that its previously introduced quantitative indicators for limitation of GHG emissions were omitted from Annex B and stated that the Russian target should say 100% of the 1990 base level. UKRAINE also specified 100% for itself.

UGANDA proposed returning to the previously proposed first commitment period of 2006 to 2010. The Chair stated that delaying the period until 2008 to 2012 was a necessary compromise and introduced a new paragraph 2 exhorting

Parties to show demonstrable progress by 2005.

On a paragraph on deciding the modalities, rules, and guidelines for estimating changes in carbon stocks (paragraph 4), JAPAN proposed adding a sentence specifying that decisions should apply in the second and subsequent commitment periods "unless otherwise decided by the COP serving as the MOP." After some debate the Chair ruled that the amendment was not supported and that the paragraph would stand as presented. The paragraph was later reopened by AUSTRALIA, supported by the PHILIPPINES, who proposed adding "A Party may choose to apply such a decision on categories its first commitment period, provided that these activities are since 1990." Although the MARSHALL ISLANDS queried the types of activities to be included, the addition was approved.

On calculations of QELROs for each Annex I Party (paragraph 7), AUSTRALIA noted a previously submitted amendment that "Parties in Annex B for whom land use change and forestry constituted a net source of GHG emissions in 1990 shall include in their 1990 emissions base the aggregate anthropogenic CO₂ equivalent emissions minus removals in 1990 from land use change" in calculating their assigned amount. This was agreed.

Delegates spent a considerable portion of the final debate on Article 3 debating newly inserted paragraphs in the Chair's text related to emissions trading. Delegates agreed to place the text to a separate article (see Article 16 bis) of the protocol and including a reference to future work on trading in a COP decision.

Estrada asked delegates to adopt the revised Annex B, reflected in document FCCC/CP/1997/L.7/Add.1, in light of the text agreed for the Protocol. Annex B presents each Annex I country's commitment target. Combined, these equal a global 5.2% reduction of six GHGs. Estrada pointed out that on a graph it could be seen that a 5% reduction from 1990 emission levels would equal a 10% reduction in emissions of six gases from projected 2000 levels and was 30% below business-as-usual projections for 2010.

The EU asked for a footnote that the European Community and its Member States will implement their respective commitments in accordance with the provisions of Article 4, on the European "bubble." ICELAND stated that actions taken before 1990 make its 110% target unattainable.

TUVALU indicated a mathematical inconsistency between Article 3.1, stating an aggregate 6% reduction, and the sum of the figures in Annex B, which represents only a 5.2% reduction. He noted that negotiations had been undertaken on the basis of the text in Article 3.1 of the draft Protocol. The Chair pointed out his earlier statement that 6% was only an estimate based on the options under discussion, and that the selection of particular options

would affect the numbers. The figure was corrected in the final version of Article 3.1.

Article 3, as adopted by COP-3, contains 14 paragraphs on QELROs and refers to Annexes A and B. Annex A lists six greenhouse gases (CO₂, CH₄, N₂O, HFCs, PFCs and SF₆) to which reduction or limitation targets should apply and includes GHG source categories and sectors such as fuel combustion, industrial processes, solvent and other product use, agriculture and waste. Annex B lists quantified emission limitation or reduction commitments for Annex I Parties, which range from an 8% decrease to a 10% increase of GHG emissions from 1990 levels to be reached in a period between 2008 and 2012. The EU countries are to reduce GHG emissions from 1990 levels by 8%, the US by 7%, Japan by 6%, while countries like Australia and Iceland are allowed increases by 8% and 10%, respectively. The Russian Federation is to maintain its emissions at 1990 levels. The overall reduction target of Annex B amounts to 5.2%.

Paragraph 1 states that Parties included in Annex I shall, individually or jointly, ensure that their aggregate anthropogenic carbon dioxide equivalent emissions of GHGs listed in Annex A do not exceed their assigned amounts, calculated pursuant to their emission limitation and reduction commitments inscribed in Annex B, with a view to reducing their overall emissions of such gases by at least 5% below 1990 levels in the commitment period between 2008 and 2012. In paragraph 2, Annex I Parties are urged to make demonstrable progress in meeting their commitments under the protocol by 2005.

Paragraph 3 determines that net changes in GHG emissions from sources and removals by sinks shall be used by Annex I Parties to meet their QELROs commitments. It defines removals by sinks as those "resulting from direct human-induced land use change and forestry activities, limited to afforestation, reforestation and deforestation since 1990." It also defines net changes as "verifiable changes in stocks in each commitment period."

Paragraph 4 states that, prior to the first Meeting of the Parties, each Annex I Party shall provide SBSTA with data to establish its level of carbon stocks in 1990, to enable an estimate to be made of its changes in carbon stocks in subsequent periods. It determines that the Meeting of the Parties at its first session, or as soon as practicable thereafter, "shall decide upon modalities, rules and guidelines as to how and which human-induced activities related to changes in GHG emissions and removals in the agricultural soil and land use change and forestry categories, shall be added to or subtracted from assigned amounts for Annex I Parties." A decision on these issues shall take into account uncertainties, transparency in reporting, verifiability, the methodological work of the IPCC and advice provided by SBSTA. The paragraph also states that such a decision shall apply from the second

commitment period onwards, unless a Party chooses to apply the decision to its first commitment period.

Provisions on QELROs commitments and baselines for Annex I Parties undergoing the process of transition to a market economy appear under paragraphs 5 and 6.

Paragraph 7 states that for the first commitment period (from 2008 to 2012), QELROs for Annex I Parties shall be equal to the percentage of their 1990 or chosen base year emissions inscribed in Annex B, multiplied by 5. It determines that Parties shall include in their 1990 emissions base year or period, GHG emissions minus removals in 1990 from land use change for the purposes of calculating their assigned amount, if land use change and forestry constituted a net source of GHGs in 1990.

Paragraph 8 establishes that Annex I Parties may use 1995 as their base year for HFCs, PFCs and SF₆, for the purposes of calculating their reduction or limitation targets in accordance to paragraph 7. Paragraph 9 determines that reduction or limitation targets for subsequent commitment periods shall be established through amendments to Annex B in accordance with procedures set out in the protocol to that effect (Article 20, paragraph 7).

Paragraphs 10 and 11 refer to how reduction units acquired or transferred among Annex I Parties can be applied by such Parties to reach their reduction or limitation targets. Paragraph 12 refers to acquisition of certified emissions reductions among Parties as a means of meeting QELROs by Annex I Parties. Paragraph 13 allows Annex I Parties to "credit" GHG emissions reduction, below assigned amounts, from one commitment period to the next. Paragraph 14 indicates that Annex I Parties shall strive to implement their commitments under paragraph 1, in such a way as to minimize the adverse social, environmental and economic impacts on developing country Parties, particularly those identified in Article 4, paragraphs 8 and 9 of the Convention. It also establishes that the Meeting of the Parties at its first meeting, shall consider what actions are necessary to minimize the adverse effects of climate change and/or the impact of response measures on developing country Parties. Funding, insurance and transfer of technology are among the issues to be considered for this purpose.

ARTICLE 4 (Joint Action/the "EU Bubble"): On 4 December, Harald Dovaland (Norway) reported on informal consultations conducted on Article 4 concerning joint action through a regional economic integration organization, or the EU "bubble." He said that further clarifications were needed on the meaning of terms within the article and that the EU was trying to find ways to accommodate delegations' concerns. Estrada urged the group to continue its consultations in order to report on progress to the COP as soon as possible.

On 6 December in the COP, Dovaland summarized the draft on Article 4. He noted an impasse on two alternatives, one from the EU and one from other contact group members. The second alternative emphasizes that allocation of emissions under the "bubble" would be legally binding. Another section would cap rearrangements of allocations, and text is included to take account of changes in or enlargement of regional economic integration organizations.

Following adoption of Article 4 by the COW, SAMOA noted that "hot air" trading, the possibility that Parties whose emissions were already below 1990 levels could trade them as new reductions, was not sufficiently dealt with, and that this could permit evasion at large scale. He said he accepted the article in the belief that only the EU would take advantage of the arrangements.

Article 4, as adopted by COP-3, contains 6 paragraphs setting out the rules for Annex I Parties who have agreed to jointly fulfill their commitments under Article 3. Paragraph 1 states that Annex I Parties shall be deemed to have met their commitments provided that their total combined aggregate anthropogenic carbon dioxide equivalent emissions of GHGs listed in Annex A, do not exceed their assigned amounts calculated pursuant to their QELROs in Annex B. The respective emission level allocated to each of the Parties shall be spelled out in an agreement.

Paragraph 2 determines that the terms of the agreement shall be notified to the Secretariat on the date of deposit of the concerned Parties' instruments of ratification, acceptance, approval or accession. The Secretariat shall, in turn, inform the Parties and signatories to the Convention of the terms of the agreement.

Paragraph 3 indicates that the agreement shall remain in operation for the duration of the commitment period specified in Article 3.

Paragraph 4 states that if Parties acting jointly do so in the framework of and together with a regional economic integration organization, any alteration in the composition of the organization, after the adoption of the Protocol, shall not affect existing commitments under the Protocol.

Paragraphs 5 and 6 indicate that in the event of failure by the Parties to reach such an agreement to achieve their combined level of emissions reductions, each Party to such an agreement shall be responsible for its own level of emissions.

ARTICLE 5 (Methodologies): Article 5 refers to the obligation by Annex I countries to have in place, no later than one year prior to the start of the first commitment period, a national system for the estimation of emissions by sources and removals by sinks of all GHGs not controlled

by the Montreal Protocol. Guidelines for such national systems shall incorporate methodologies accepted by the IPCC and shall be decided upon by the COP acting as the MOP at its first session.

Methodologies for estimating anthropogenic emissions by sources and removals by sinks of all GHGs not controlled by the Montreal Protocol shall be accepted by the IPCC and agreed upon by COP-3. Where methodologies are not used, appropriate adjustments shall be applied according to methodologies agreed upon by the COP acting as the MOP.

One of the paragraphs determines that the Meeting of the Parties shall regularly review and, as appropriate, revise such methodologies and adjustments, based on the work of the IPCC and SBSTA. Any revision to methodologies or adjustments shall be used only for the purposes of ascertaining compliance with commitments under Article 3 in respect of any commitment period adopted subsequent to that revision.

Another paragraph states that global warming potentials (GWPs) used to calculate the CO₂ equivalence of anthropogenic emissions by sources and removals by sinks of GHGs listed in Annex A shall be those accepted by the IPCC and agreed upon by COP 3. It also states that the COP acting as the MOP, shall regularly review the global warming potentials of each gas, taking into account advice provided by the IPCC and SBSTA. Any revision of GWPs shall apply to those commitments under Article 3 in respect of any commitment period adopted subsequent to that revision.

Under the draft decision, the COP would reaffirm that Parties should use the Revised 1996 IPCC guidelines for GHG inventories. In a bracketed paragraph, the COP would also reaffirm that global warming potentials (GWPs) used by Parties should be those provided by the IPCC based on the effects of the GHGs over a 100-year time horizon. For information only, Parties may use another time horizon. CHINA proposed that GWP should take into account the inherent and complicated uncertainties involved in GWP estimation.

SWITZERLAND, supported by HUNGARY, urged SBSTA to further elaborate on the inclusion of bunker fuel emissions in overall GHG inventories. JAPAN, opposed by the UK, said there were "actual" and "potential" methods of estimating emissions and proposed a new paragraph under which the COP would affirm the "actual" method for including HFC, PFC and SF₆ emissions in QELROs. The US, supported by NORWAY, called for using actual methodology where data is available.

In the final Plenary, delegates adopted a draft decision on methodological issues related to the protocol (FCCC/CP/1997/L.5). It reaffirms that:

*Parties should use the revised IPCC guidelines for inventories of GHGs;

*data for HFCs, PFCs and SF6, when available, should be included when reporting on emissions;

*global warming potentials used by Parties should be those provided by the IPCC in its Second Assessment Report (SAR);

*emissions based on fuel sold to ships or aircraft engaged in international transport should not be included in national totals, but reported separately; and

*emissions resulting from multilateral operations pursuant to the UN Charter shall be reported separately.

ARTICLE 6 (Joint Implementation): Article 6 covers some of the material from Article 7 of the AGBM-8 negotiating text, on transfer and acquisition of emission reduction units (ERUs) between Annex I countries that result from projects aimed at reducing anthropogenic emissions by sources or enhancing anthropogenic removals by sinks of GHGs. Criteria include that the project:

*is approved by the Parties involved;

*provides reduction in emissions or enhancement of removals that is additional to any otherwise occurring;

*does not acquire ERUs if it is not in compliance with its obligations under Articles 5 and 7; and

* is supplemental to domestic actions for meeting commitments under Article 3.

It allows for:

*further elaboration of guidelines for its implementation, including for verification and reporting;

*authorization of legal entities under a Party's responsibility to participate in generation, transfer, or acquisition of ERUs; and

*continuing transfers and acquisitions of ERUs while questions of implementation are resolved, should they arise, provided that units are not used by a Party to meet commitments under Article 3 until any issue of compliance is resolved.

ARTICLE 7 (Submissions by Parties): Article 7 calls on each Annex I Party to incorporate supplementary information in its annual inventory of anthropogenic emissions by sources and removals by sinks of GHGs not controlled by the Montreal Protocol in order to ensure compliance with Article 3, and incorporate in its national communication

the supplementary information necessary to demonstrate compliance with its commitments. It is to submit its emissions inventory annually and its national communication as frequently as determined by the MOP. The MOP is to adopt at its first session, and review periodically, guidelines for the preparation of the information. It shall also decide upon modalities for the accounting of assigned amounts.

ARTICLE 8 (Expert Review of Implementation): Article 8 calls for review by expert review teams of the information submitted under Article 7 by Annex I Parties, as part of an annual compilation and accounting of emissions inventories and assigned amounts and the review of communications. The review teams shall be coordinated by the Secretariat and composed of experts selected from those nominated by the Parties to the Convention and intergovernmental organizations, as appropriate. The review process shall provide a comprehensive technical assessment of all aspects of implementation of the Protocol, and the teams shall prepare a report for the MOP assessing the implementation and identifying any potential problems in the fulfillment of commitments. The Secretariat shall circulate the reports and list questions of implementation for further consideration by the MOP. The MOP shall: adopt at its first session, and review periodically, guidelines for the review; with the assistance of SBI and, as appropriate, SBSTA, consider the Parties' information, the expert review reports, the questions listed by the Secretariat, and any questions raised by Parties; and take decisions on any matter required for the implementation of the Protocol.

ARTICLE 9 (Review of the Protocol): Under Article 9, the MOP shall periodically review the Protocol in light of the best available scientific information and assessments on climate change and its impacts and relevant technical, social and economic information, and take appropriate action. The first review shall take place at the second session of the MOP, with further reviews at regular intervals in a timely manner.

ARTICLE 10 (Advancing the Commitments in FCCC Article 4.1): Article 10 (Article 12 in the negotiating text) was addressed in a negotiating group co-chaired by John Ashe (Antigua and Barbuda) and Bo Kjellén (Sweden). Industrialized nations favored alternative text under which all Parties would, inter alia, implement national and regional programmes containing measures to mitigate climate change and facilitate adequate adaptation. Developing countries preferred an alternative stating that developed countries shall incorporate QELROs and P&Ms into their national programmes. Developed countries would also specify measures taken to finance technology transfer, provide financial resources and assist in meeting the costs of adaptation. Some delegates expressed concern over who would bear the costs of proposals to, inter alia, formulate programmes to improve protection measures for

infrastructure and deploy adaptation technologies.

On 3 December, the negotiating group on commitments under Article 4.1 met in the afternoon to discuss a Chair's draft text. Delegates agreed not to discuss three reformulated paragraphs in the draft, covering national and regional programmes for GHG inventories and mitigation and adaptation measures, actions to address climate change, and reporting, after a group of countries said it preferred to base discussions on the prior version of those paragraphs.

On 6 December, Kjellén reported that numerous alternative texts remained to be decided. A document was distributed outlining the status of negotiation, including alternative texts and some new proposals. Estrada invited Parties to negotiate on the basis of Kjellén's alternatives.

In the final COW Plenary, the Chair said there was no agreement on the entire article. However, he noted agreement on the article's chapeau and paragraphs on national inventories, technology transfer, scientific cooperation, capacity building, national communications and a reference to FCCC Article 4.8, which were adopted.

The G-77/CHINA said there was no consensus on Alternative A, which contained a list of programmes and measures for mitigation and adaptation, and proposed deleting it and Alternative B, which emphasized technology transfer. Kjellén said his Co-Chair's text might be substituted for the paragraphs on which agreement could not be reached. Estrada asked that the Co-Chair's text be distributed. After extended debate, the text was accepted.

Article 10, as adopted by COP-3, describes activities all Parties shall undertake in reaffirming and advancing implementation of existing commitments in FCCC Article 4.1, taking account their common but differentiated responsibilities and national and regional development priorities, without introducing new commitments for non-Annex I Parties. Where relevant and to the extent possible, Parties shall formulate programmes for preparation of national GHG inventories. They shall formulate, implement, publish and update programmes containing mitigation and adaptation measures. The programmes would, inter alia, concern energy, transport, industry, agriculture, forestry and waste management. Annex I Parties shall submit information on action under the Protocol. Other Parties shall seek to include in their national communications, as appropriate, information on programmes they believe address climate change, including abatement of GHG emissions increases, enhancement of removals by sinks, capacity building and adaptation. Other paragraphs cover cooperation in technology transfer, scientific research and observation, and education and training programmes.

ARTICLE 11 (Financial Resources): This article was discussed in a separate negotiating group chaired by John

Ashe (Antigua and Barbuda). On 6 December, Ashe reported in COW Plenary that there was disagreement over bracketed references to provision of financial resources "through the financial mechanism" and over guidance to the mechanism. The PHILIPPINES, on behalf of the G-77/CHINA, proposed deletion of the text in brackets. Delegates debated whether reference to the financial mechanism should be retained. Later in the same session, Ashe introduced a revised draft text on financial resources.

Article 11 describes financial resources, noting that Parties shall take into account FCCC Articles 4.4-4.9 in implementing Protocol Article 10. It states that Annex II Parties' shall, in accordance with FCCC Articles 4.3 and 11, and through the FCCC financial mechanism: provide new and additional financial resources to meet agreed full costs incurred by developing country Parties in advancing commitments in Protocol paragraph 10(a); and also provide financial resources needed by developing country Parties to meet full incremental costs of activities in Article 10, including technology transfer. Implementation of existing commitments shall take into account the need for adequacy and predictability in the flow of funds. The article also permits provision of financial resources through bilateral, regional and other multilateral channels.

ARTICLE 12 (Clean Development Mechanism): On 4 December in the COW Plenary, Luis Gylvan Meira Filho reported on consultations held on a proposed clean development fund (formerly Article 18) and said that there was verbal consensus to include it in the text of the Protocol, but drafting to that effect was pending.

Much of the negotiations on the CDM took place in informal bilateral and group discussions lead by the US and Brazil. The first public debate took place in the final COW Plenary. Delegates amended references to an executive board "of the CDM."

The PHILIPPINES, supported by the MARSHALL ISLANDS, FRANCE, UGANDA, SAUDI ARABIA, TRINIDAD and TOBAGO, the EU and the NETHERLANDS, proposed deletion of a paragraph stating that certified emissions reductions from 2000 to the beginning of the first commitment period can be used to achieve compliance during that commitment period. FRANCE said COP-4 should consider the paragraph. RUSSIA, COSTA RICA, HUNGARY, the US, CROATIA, JAPAN, PERU and POLAND opposed the deletion, as did CANADA, who said joint implementation with credit was an important notion to retain.

BRAZIL said the paragraph provided an incentive for an early start. He said he felt it would be important to say explicitly that reductions obtained from 2000 to the first commitment period could be used in the first commitment period. Estrada said he saw no consensus to delete the paragraph.

The final text on Article 12 defines the clean development mechanism (CDM). Its purpose is to assist non-Annex I Parties in achieving sustainable development and contributing to the FCCC objective, and to assist Annex I Parties in achieving QELROs. Non-Annex I Parties will benefit from project activities resulting in certified emission reductions, and Annex I Parties may use the certified reductions "to contribute to compliance with part of their" QELROs, as determined by the MOP.

The CDM shall be subject to the authority and guidance of the MOP and supervised by an executive board of the CDM. Each project's emission reductions shall be certified by operational entities designated by the MOP based on: voluntary participation by each Party involved; real, measurable and long-term climate change mitigation benefits; and emission reductions additional to any occurring in the absence of the certified project activity. The CDM shall assist in arranging project funding as necessary.

The first MOP shall elaborate modalities and procedures to ensure transparency, efficiency and accountability through independent project auditing and verification. The MOP shall also assure that a share of proceeds from certified projects is used to cover administrative expenses and to assist meeting adaptation costs of those developing country Parties particularly vulnerable to climate change effects. Participation may involve private and/or public entities, subject to guidance provided by the CDM executive board. Certified emission reductions obtained between 2000 and 2008 can be used to achieve compliance in the first commitment period. The COP serving as the MOP shall, at its fourth session, analyze the implications of the paragraph on reductions between 2000 and 2008.

ARTICLE 13 (Meeting of the Parties): After its first meeting on 2 December, a contact group chaired by Patrick Széll (UK) reported progress on this article. Discussion was based on G-77/China proposals tabled at AGBM-8. The contact group discussed the relationship between the MOP and the Conference of the Parties, the way in which the article on the MOP should refer to the review of the adequacy of commitments under the FCCC, and other outstanding issues.

On 5 December in the COW Plenary, the Chair of the negotiating group on institutions and mechanisms (I&Ms), Takao Shibata (Japan), reported progress in discussions on articles on the MOP/COP. He said Parties agreed that the FCCC COP shall serve as the meeting of the Parties (MOP), having agreed to the principle of functional integration but legal distinction between the bodies.

Following further discussion, delegates agreed to Article 13, which states that the COP shall serve as the Protocol's MOP. Parties to the Convention that are not Parties to the

Protocol may participate as observers in the proceedings. Decisions will be taken only by Parties to the Protocol. The COP shall perform the functions assigned to it by the Protocol and shall, inter alia, assess implementation, examine obligations and seek to mobilize additional financial resources.

ARTICLES 14 AND 15: These articles were agreed in the negotiating group on I&Ms. Under 14 (Secretariat) and 15 (Subsidiary Bodies), the FCCC Secretariat and Subsidiary Bodies will also serve the Protocol.

ARTICLE 16 (Multilateral Consultative Process): This article was discussed in the I&Ms negotiating group. The COP shall, as soon as practicable, consider the application of the multilateral consultative process to the Protocol.

ARTICLE 16 bis (Emissions Trading): Article 16 bis was a late addition to the Kyoto Protocol. Originating as part of the US' COP-2 announcement that it was prepared to make a legally binding emissions reduction commitment, the concept of emissions trading was discussed alongside discussions on QELROs. It began COP-3 negotiations as Article 6 of the negotiating text produced by AGBM-8 (FCCC/CP/1997/2), having been bracketed by the G-77/CHINA. This text allowed any Annex I Party or any other Party making a voluntary commitment to transfer to or acquire from any other like Party any of its allowed emissions if the Party was in compliance with its obligations and had in place a national mechanism for the certification and verification of emissions trades. It also set forth criteria for emissions trading.

The text on emissions trading was dealt with in the QELROs negotiating group, in informal negotiations, and eventually as paragraphs of Article 3 in the final COW debate, where the text was deleted and a different version added as Article 16 bis.

On 3 December, the negotiating group on QELROs briefly discussed emissions trading. On 6 December in the COW, Estrada reported that no agreement had been reached on alternative text for this article so it would remain as it appeared in the negotiating document produced by AGBM-8. CANADA introduced an alternative text, stating that commitments under Article 3 would be met in a "cost effective manner" and "in accordance with international rules." A cap on emissions trading was introduced, as was text that reporting on emissions trading should be conducted. Guidelines for the structure and timing of an emissions trading mechanism were also included.

INDIA, on behalf of the G-77/CHINA, and supported by CHINA and INDONESIA, reiterated its objection to the concept of emissions trading, stating that it is extraneous to the Berlin Mandate and would not lead to GHG emissions limitation and reduction.

In the COW on 10-11 December the debate continued. CHINA, supported by INDIA, SAUDI ARABIA, IRAN, TOGO, UGANDA, NIGERIA, VIETNAM and the UNITED ARAB EMIRATES, proposed deleting the paragraph on emissions trading, along with two subsequent paragraphs on including and subtracting emissions reduction units acquired and transferred, respectively, in each Party's assigned amount (paragraphs 3.10, 3.11 and 3.12). INDIA stressed that trading should be based on equitably allocated entitlements.

MEXICO, RUSSIA, ISRAEL, UKRAINE, NAURU, AUSTRALIA, the REPUBLIC OF KOREA, ROMANIA, JAPAN, ARGENTINA, SAMOA, NEW ZEALAND, POLAND and SWITZERLAND favored keeping the three paragraphs as drafted. IRAN suggested that the Secretariat study the concept for future action. UGANDA, supported by NIGERIA, specified that future COPs should examine the merits of trading.

The UK, supported by HUNGARY, TUVALU, GRENADA, SEYCHELLES, ZIMBABWE, the CZECH REPUBLIC, CHILE, URUGUAY, the PHILIPPINES, SLOVENIA, AOSIS, ZAMBIA and COLOMBIA, proposed amending the paragraph to clarify that trading would not be allowed until appropriate rules and guidelines were agreed by the COP. The Chair noted the existence of a draft decision for COP-3 to that effect.

The US stressed its change in position to support for very deep reductions and, with CANADA, ARGENTINA and NEW ZEALAND, proposed that COP-4 define relevant rules and guidelines.

BURKINA FASO proposed deleting language in paragraph 3.10 allowing Parties to engage in emissions trading and on the supplementary nature of such trading as pertains to domestic actions toward meeting commitments, along with the two subsequent paragraphs, and proposed a reference to the decision to be taken by COP-3 to have COP-4 determine the modalities, rules and guidelines for emissions trading. The GAMBIA, MALAWI, KIRIBATI, SAUDI ARABIA, ZAMBIA and IRAN supported deletion of paragraphs 3.11 and 3.12, if COP-4 was to further consider emissions trading.

However, Estrada, noting that certain Annex I countries require flexibility mechanisms to take on significant legally binding commitments, urged delegates to adopt a decision allowing COP-4 to determine modalities and guidelines for emissions trading, in particular for verification, reporting and accountability. This was supported by KENYA and COSTA RICA.

Estrada said that paragraphs 3.11 and 3.12 were not intended to come into being before the rules under 3.10 were decided upon. He noted that there was a clear indication that the room was moving towards adopting a draft decision for further work by COP-4.

NORWAY and ROMANIA supported developing rules and guidelines for consideration at COP-4. SRI LANKA proposed that the COP examine the feasibility of emissions trading and possibly formulate regulations.

CHINA said that rules, guidelines and regulations for emissions trading would have to be studied, as suggested in the draft decision. He also warned that emissions trading may not contribute to actual reductions in emissions but shift reductions overseas. He expressed hope that the issue would not be made a condition for any figures.

Estrada said there was consensus that the COP should study the conditions for "the new animal" before it is allowed to "run wild in different places."

The US agreed there were areas in need of further consideration and supported the UK amendment, but noted that emissions trading had been successful and cost effective in other fora. He said paragraphs 3.11 and 3.12 reflected the understanding Parties had reached.

INDIA also supported the proposals by the UK and Burkina Faso, noting the issue of entitlement. Supported by UGANDA, the PHILIPPINES, SAUDI ARABIA, ZIMBABWE, ZAMBIA, IRAN and COLOMBIA, INDIA suggested further amending paragraph 3.10 to include definition of rules "for equitable allocation of initial entitlements for such emissions trading." ZIMBABWE proposed a reference to a global ceiling for entitlements based on contraction and convergence of emissions, to further address the question of equity. The US strongly objected to the Indian proposal and said it would make the system unworkable, but suggested that the proposals from India and Zimbabwe contained elements that Parties might wish to address in the future. COLOMBIA proposed a further amendment on defining rules for equitable allocation of entitlements for emissions trading.

Estrada suggested separating paragraph 10 from Article 3 and creating a new article on interim arrangements, including a study.

CHINA described equitable rules as a matter of human rights and supported the Chair's suggestion that subsidiary bodies report to the COP on emissions trading.

Estrada then warned that the Parties might be about to "blow up" the whole possibility of having the agreement and invited delegations to reflect on the consequences of their decision they were about to take. It had been understood for some time that emissions trading would be part of the flexibility required for some to participate. It had always been agreed that studies would be necessary. It was necessary to establish a link between the future work of the Conference and the items to be adopted. He observed flexibility on one side of the debate. He recalled that in

his report on the AGBM he had noted that a number of countries were at first against the adoption of the Convention, and later against the adoption of the Berlin Mandate. During the work on the Berlin Mandate these Parties had not helped. MALAYSIA asked that the issue of emissions trading be referred to the subsidiary bodies. Estrada suspended the meeting.

After the break, Estrada proposed removing paragraph 3.10, and inserting a separate Article 16 bis establishing an interim arrangement for emissions trading. He also described a draft decision in which the COP would request the Chairs of SBSTA and SBI to guide the Secretariat on preparatory work needed so that COP-4 could consider methodologies and principles, modalities, rules and guidelines, in particular verification, reporting and accountability for emissions trading. He said the text and draft decision were the only possible consensus. The texts were adopted at the final Plenary.

The final text of Article 16 bis reads: "The COP shall define the relevant principles, modalities, rules and guidelines, in particular for verification, reporting and accountability for emissions trading. The Parties included in Annex B may participate in emissions trading for the purposes of fulfilling their commitments under Article 3 of this protocol. Any such trading shall be supplemental to domestic actions for the purpose of meeting quantified emission limitation and reduction commitments under that Article."

Decision FCCC/CP/1997/L.7 requests the SBSTA and SBI Chairs to give guidance to the Secretariat in preparation for COP-4, and to allocate work to their respective subsidiary bodies, on definition of relevant principles, modalities, rules and guidelines, in particular for verification, reporting and accountability of emissions trading, pursuant to Article 16 bis of the Protocol.

ARTICLE 17 (Non-Compliance): In the COP "stock-taking" Plenary on 6 December, I&Ms negotiating group Chair Shibata said delegates had debated two alternatives on procedures and mechanisms related to non-compliance. Alternative A would apply to Annex I Parties and penalties would operate through a clean development fund. Alternative B would apply to all Parties and any procedures adopted that entailed binding consequences would be adopted by amending the protocol. Estrada proposed continuing informal consultations. The US proposed new text that would, inter alia, require Parties exceeding their emissions budget for a given period to reduce the excess amount from subsequent periods.

Following further discussion, the agreed text for Article 17 states that the MOP shall at its first session approve appropriate and effective procedures and mechanisms to determine and to address cases of non-compliance with the

provisions of this Protocol, including through the development of an indicative list of consequences, taking into account the cause, type, degree and frequency of non-compliance.

ARTICLE 18 (Dispute Resolution): This article was discussed in the I&Ms negotiating group. Under this article, the provisions of the FCCC apply *mutatis mutandis*.

ARTICLE 19 (Amendments to the Protocol): This article was discussed in the I&Ms negotiating group and sets out the process for amending the Protocol, under which amendments will be adopted by consensus. Failing that, they will be subject to a three-fourths vote.

ARTICLE 20 (Annexes to the Protocol): This article was discussed in the I&Ms negotiating group and states that annexes shall be an integral part of the protocol and annexes adopted after the Protocol's entry into force should be limited to lists of a descriptive scientific, technical or procedural character. Amendments to the annexes shall be adopted at an ordinary session of the MOP.

ARTICLE 21 (Voting Rights): This article was discussed in the I&Ms negotiating group and provides that each Party shall have one vote except in the case of regional economic integration organizations, which will exercise their right to vote with a number equal to the number of their member States.

ARTICLE 22 (Depositary): This article was discussed in the I&Ms negotiating group and states that the Secretary-General of the UN shall serve as the depositary of the Protocol.

ARTICLE 23 (Ratification, Acceptance or Approval): This article was discussed in the I&Ms negotiating group and states that the Protocol shall be open for signature at the UN in New York from 16 March 1998 to 15 March 1999.

ARTICLE 24 (Entry into Force): On 5 December in the COW Plenary, the Chair of the working group on I&Ms, Takao Shibata, reported progress in discussions on entry into force. The article contained two alternatives on entry into force. Alternative A used triggers related to number of ratifications and a percentage of CO2 emissions. Alternative B would require [75] or [50] ratifications and [50%] or [75%] of Annex I Parties.

Estrada proposed specifying 50 Parties and 60% of total emissions. Shibata reported that most Parties preferred Alternative A, but suggested requiring 75% of emissions. Estrada suggested a footnote stating that this percentage gives veto power for entry into force to one particular Party. The G-77/CHINA said any figure in excess of 50% was unacceptable. He could support Alternative B if it required 50 ratifications and 60% of Annex I Parties.

Following further discussions in the COW, delegates agreed that the Protocol shall enter into force on the ninetieth day after the date on which not less than 55 Parties to the Convention, incorporating Parties included in Annex I that account in total for at least 55% of the total carbon dioxide emissions for 1990, have deposited their instrument of ratification, acceptance, approval or accession.

ARTICLE 25 (Reservations) : This article was discussed in the I&Ms negotiating group and states that no reservations may be made to the Protocol.

ARTICLE 26 (Withdrawal) : This article was discussed in the I&Ms negotiating group and states that any time after three years from the date on which the Protocol has entered into force for a Party, that Party may withdraw from this Protocol.

ARTICLE 27 (Original UN language texts): This article was discussed in the I&Ms negotiating group and states that the original of this protocol of which the Arabic, Chinese, English, French, Russian and Spanish text are equally authentic, shall be deposited with the Secretary-General of the UN.

OTHER ISSUES

Compensation Fund: On 4 December in Plenary, the Chair of the negotiating group on the proposed compensation fund (Iran) reported that there were still divergent views on the issue and that further consultations were needed.

On 6 December, IRAN reported on negotiations on minimizing the adverse effects of climate change through P&Ms. He proposed alternative text based on a draft decision by Zimbabwe and Uganda calling for an SBI review of actions to meet developing country needs-related adverse effects. Both contained a bracketed reference to [establishment of measurements of compensation]. The US, the EU, POLAND, AUSTRALIA and CANADA said compensation was unacceptable and the paragraph should be deleted. SAUDI ARABIA, the G-77/CHINA, INDONESIA, UGANDA, URUGUAY, KUWAIT, NIGERIA, the UNITED ARAB EMIRATES, CHINA, VENEZUELA, BAHRAIN and EGYPT supported removing the brackets. ZIMBABWE suggested ministerial consideration of the proposal under FCCC Article 4.8. NEW ZEALAND objected to compensation, but supported Uganda's proposal to replace "compensation" with "impacts." The Chair suggested replacing the existing paragraph with Iran's text, with the entire text bracketed. Delegates did not engage in further discussions on this proposal.

Voluntary Commitments: On 4 December in the COW Plenary, Dámaso Luna (Mexico), reported that further consultations were needed on voluntary commitments for non-Annex I Parties (formerly Article 10). In the final COW Plenary,

SAUDI ARABIA, KUWAIT, VENEZUELA, EGYPT, the UNITED ARAB EMIRATES, SYRIA, MOROCCO, IRAN, BRAZIL, GAMBIA and BANGLADESH called for deletion of this draft article. INDIA said the article would create a new category of Parties not established in the Convention. CHINA said although the commitments were voluntary in name they would determine a level of limitation or reduction of anthropogenic emissions, imposing an obligation that did not apply to developing countries. The article endangers the non-Annex I status of Parties joining its activities and imposes new commitments on developing countries. UGANDA said voluntary commitments would not be voluntary years from now.

SAMOA, on behalf of 35 Parties and AOSIS, said the article's activities were entirely voluntary and imposed no new commitments for developing country Parties. ARGENTINA, supported by the UK, proposed additional text that would prohibit arbitrary measures or discrimination against non-Annex I Parties who do not assume voluntary commitments.

HUNGARY, GRENADA, RUSSIA, JAPAN and MICRONESIAsupported retainingthe article. The US said the article strengthened the protocol by including broader range of countries in partnership, imposed no new mandates and permitted growth targets. He proposed adding that emissions limitations assumed voluntarily should not inhibit economic development and may constitute a growth budget. The REPUBLIC OF KOREA said the article was phrased in a way to permit voluntary assumption of a target without any new commitments. ISRAEL supported the article and the amendments proposed.

The PHILIPPINES said he supported the concept underpinning the article, but only concerns represented in the amendments could be addressed. MEXICO said the article in modified form could avoid pressure on non-Annex I countries. He proposed amending the US amendment on preventing limits to economic growth and development, and additional text that volunteering Parties should have access to all modalities of trading but should not be liable to penalties or fines. He said the idea was to provide access by non-Annex I Parties to market mechanisms. Estrada said there was no consensus on the article, so it should be deleted.

New Zealand Proposal: On 5 December, NEW ZEALAND said Annex I Parties' constituencies needed assurances that developing countries would adopt binding emissions limitation commitments in a third commitment period. He proposed double conditionality: Annex I Parties needed early agreement by non-Annex I countries on future commitments, but non-Annex I Parties would not be held to commitments if Annex I Parties did not fulfil their Kyoto commitments. He called for "progressive engagement" according to relative levels of development, and exemption for least developed countries. Supported by the US, CANADA, POLAND, SLOVENIA, AUSTRALIA, SWITZERLAND and JAPAN, he introduced a draft text that, inter alia: noted Annex I Party commitments

through 2014; considered that future Annex I commitments beyond that date should comprise the widest possible participation in binding action; recognized the dependence of inception of non-Annex I Parties' legally binding emissions limitations commitments on Annex I Parties' implementation, particularly of Kyoto Protocol QELROs; agreed there should be further QELROs for Annex I Parties and "quantified emission limitation objectives" for other Parties, except least developed countries; and established a process to set the commitments, to be concluded by 2002.

The EU reiterated that the Berlin Mandate precluded new commitments for developing countries and underscored that developed countries must lead the way by adopting legally binding commitments in Kyoto. He drew attention to IPCC findings indicating that a significant reduction in emissions would require efforts by both developed and developing countries. However, future commitments would have to take into account the principle of common but differentiated responsibilities. He suggested continuing consultations with a view to reaching a satisfactory result. He said it would be appropriate to start a review process based on FCCC Article 7.2 with a view to establishing further commitments for all Parties.

The G-77/CHINA, supported by THAILAND, SAUDI ARABIA, IRAN, COLOMBIA, MALAYSIA, NICARAGUA, HONDURAS, SYRIA, GHANA, TOGO, LAOS, KUWAIT, GRENADA, BOTSWANA, BAHRAIN, MALI, CHILE, PERU, TRINIDAD AND TOBAGO, NIGERIA, BANGLADESH, KENYA, MOROCCO, ZIMBABWE, INDONESIA, URUGUAY, CENTRAL AFRICAN REPUBLIC, PHILIPPINES, VENEZUELA, COSTA RICA, GAMBIA, ARGENTINA and SOUTH AFRICA, on behalf of Southern African Development Community (SADC), said equity and common but differentiated responsibilities are keys to success. He noted the low per capita emissions of developing countries and their economic and social development priorities. This is not the time to address developing country commitments, but to strengthen developed country commitments. He concluded with one word: "no." INDIA objected to depriving developing countries of equitable environmental room to grow. BRAZIL said one developed country statement had implied "if you don't deliver, we won't deliver," to which he replied "until you deliver, we don't discuss." CHINA recalled the performance of Annex I Parties in meeting existing commitments and warned the EU: "beware of your bubble."

HUNGARY said other Parties could follow countries with economies in transition, who joined Annex I in spite of economic difficulties. The US stated that commitments for all Parties must allow for economic growth while simultaneously protecting the environment. The US wanted developing countries, except the least developed countries, to adopt emissions targets to abate the increase in their emissions. He noted that developing country commitments could be differentiated in light of respective responsibilities and capabilities. While acknowledging

efforts by developing countries to address their emissions, JAPAN pointed to the need for further participation in the future. He proposed initiating a post-Kyoto process to this effect. He said that developing country participation does not mean reduction, but limitation of emissions and indicated that New Zealand's proposal could serve as a basis for discussions. CANADA said that the sequencing of commitments had worked under other agreements.

The G-77/CHINA said the New Zealand proposal should be dropped and that the group would not participate in a contact group as a matter of principle. The President said he would consult the Bureau. The proposal was not discussed further.

CLOSING PLENARY

At approximately 1:00 pm on 11 December, Hiroshi Ohki (Japan) convened the COP-3 closing Plenary to address pending issues in the agenda (FCCC/CP/1997/1), including the adoption of a protocol or legally binding instrument. The adoption of the rules of procedure for the COP (FCCC/CP/1997/2), was deferred to COP-4. Delegates also decided that SBSTA and SBI would elect officers other than Chairs.

COW Chair Estrada said he was happy to submit a Kyoto Protocol that was unanimously recommended by the COW for adoption by COP-3. He stated that the Protocol would reduce overall GHG emissions by 5.2% for Annex I Parties from 1990 levels over a period between 2008 and 2012. He noted that this meant a 30% reduction of projected emissions by the year 2012. He pointed out that it had not been easy for countries to come to an agreement, given the economic and political implications of some of the concessions that had been made, and said that the spirit of compromise was an example to be followed in future negotiations.

He indicated that the Protocol included an annex with targets for each Annex I country. He drew attention to a decision to be taken by COP-3 (FCCC/CP/1997/L.1) adopting the Protocol.

The US pointed out that a paragraph under Article 12 stating that "COP-4, serving as the MOP to the Protocol, shall analyze the implications of certified emissions reductions" should not appear in the Protocol, but in the draft decision that adopts it. NORWAY suggested the inclusion of another sub-paragraph in the decision on the elaboration of modalities and procedures for the effective implementation of an article on a CDM (Article 12). The Chair invited the COP to adopt the decision without any additions, considering that the COW had unanimously recommended it for adoption.

The Kyoto Protocol (FCCC/CP/1997/L.7/Add.1) was unanimously adopted by COP-3 through a decision that opens it for

signature from 16 March 1998 until March 1999 and requests the UN Secretary-General to be its depositary. The decision requests the SBSTA and SBI Chairs to allocate work on a list of matters to their respective subsidiary bodies and to give guidance on these matters to the Secretariat in preparation for COP-4. The list includes the following:

- *Determination of modalities, rules and guidelines as to how and which additional human-induced activities related to changes in GHG emissions and removals in the agricultural soil and land-use change and forestry categories shall be added to, or subtracted from, the assigned amount for Parties included in Annex I, as provided for in the Protocol under an article on sinks related to QELROs (Article 3, paragraph 4).

- *Definition of relevant principles, modalities, rules and guidelines, in particular for verification, reporting and accountability of emissions trading, pursuant to an article in the Protocol on emissions trading (Article 16 bis).

- *Elaboration of guidelines for any Party included in Annex I to transfer to, or acquire from, any other such Party any emission reduction units resulting from projects aimed at reducing anthropogenic emissions by sources or removals by sinks of GHGs in any sector of the economy, as provided for in an article on a form of reduction credits (Article 6).

- *Consideration of and, as appropriate, action on suitable methodologies to address the situation of Parties listed in Annex B of the Protocol for whom single projects would have a significant proportional impact on emissions in the commitment period.

- *Analysis of the implications of an article on certified emission reductions (Article 12, paragraph 10).

- *The decision also invites the SBI and SBSTA Chairs to make a joint proposal for the programme of work of the MOP, after entry into force of the Protocol.

TRINIDAD AND TOBAGO, on behalf of AOSIS, recalled that three years ago, at COP-1, AOSIS had submitted a proposal for a protocol setting significant GHG reduction targets. He said that the reduction targets for Annex I Parties in the Kyoto Protocol were insufficient and that the underlying moral message they carried was dubious: would the industrialized world continue to dump its waste? He said that Parties had not worked all these years to see GHG emissions increase. He drew attention to the fact that under the Protocol some developed country Parties were allowed to increase their emissions while others lowered theirs, and that this was difficult to understand in light of scientific facts on global warming. He said that drafters would bear the blame for future climate change-related damage and disasters, and called upon Parties to come to COP-4 with clearer commitments. COP-3 adjourned at

approximately 3:30 pm on Thursday, 11 December 1997.

A BRIEF ANALYSIS OF COP-3

ZEN AND THE ART OF PLANETARY MAINTENANCE

"Falling into the Moon's reflection

From a single petal

Rings of waves

Blown by the breeze

Touching each life."

(A Japanese poem or waka by Mahoroba Kaoru selected for this analysis by FCCC Executive Secretary Michael Zammit Cutajar. An accompanying interpretation states that each of our individual actions will together reshape the world.)

Parties to the UNFCCC adopted a Protocol with the unprecedented, legally enforced ambition of limiting and reducing the greenhouse gas emissions that have accompanied the rise and rise of the industrial era. Appropriately, they did so in Kyoto, Japan's capital city of Zen – a traditional Buddhist practice associated with mindfulness. During the COP, Executive Secretary Michael Zammit-Cutajar explained that the Zen path to enlightenment requires a practitioner to break through mental boundaries imposed by established ways of looking at the world.

The Kyoto Protocol will become a 21st century koan, a Zen-like riddle or challenge to break through boundaries imposed by political, economic, technical and cultural practices deeply embedded in the Annex I capitals of a development model whose leading export to the rest of the world is an unsustainable state of mind.

The most immediate constraints on thought lingering in Kyoto were hangovers from the original FCCC process. They took the familiar form of hesitations when Parties were confronted with the prospect of adopting a legally binding agreement. They remained through the AGBM process that concluded the Sunday before COP-3, when delegates stuck fast to their established negotiating positions. And they help to explain the gaps between the FCCC's stated goal and actual impact. Parties readily acknowledge the ineffectiveness of their commitments to alter energy and economic patterns and thus prevent harmful changes in the climate system. The Kyoto Protocol will, inevitably, be described as a first step. Another first step. In the absence of more ambitious reduction and limitation targets it can be no more. Moreover, while the question of equity struggles to find a place in the calculations of negotiators, the ambition to universalize the imperative of reducing global GHG trends through expanded participation

by developing countries remains several steps down the road. In the meantime, the ethical question is condemned to caricature in exchanges within and with the G-77 and China.

The Executive Secretary's challenge permits a wide range of interpretations and, like Zen itself, can offer few conclusive answers before inquirers embark on their own quest. This analysis will limit itself to three aspects of what was an intense, intricate negotiating experience:

- *The strategic paths and influences of the key players;

- *The utility of a negotiating paradox; and

- *The question of whether a return to the marketplace can both serve and reconcile the higher purposes of equity, climate change protection, and a credible protocol that sends a strong and clear signal to the stakeholders about the virtuous path of sustainable energy production and consumption.

The Zen of Strategy

Throughout the negotiating process the EU, the US and Japan were in constant communication both within the precincts of the Kyoto International Conference Hall and by telephone. Meanwhile, the US, including Vice President Al Gore during his high profile visit to the COP, maintained high-level contact with key developing country partners. As Zammit Cutajar suggested, Kyoto was a conference of the hammer and the hotline. He might have added hype.

While the EU provided the ambition that drove the numerical targets of the agreed Protocol, the US played an influential role in shaping the institutional approach to implementation, notably with emissions trading. With the latitude provided by an ecologically literate constituency, the EU targeted US reticence and championed NGO concerns about proliferating loopholes, including those associated with sinks and trading. In doing so, the EU was also targeting the flexibility with which the US and other JUSSCANZ countries sought to reduce the domestic impact of the limitation and reductions targets. Celebrated by NGOs for its role, the EU stumbled a little over its own institutional clumsiness. The US perception of the EU approach to the negotiation was this: "They were having more fun being green than in being practical. We had to convince everyone else." Some tensions emerged when members of the larger EU group (Germany in particular) resisted giving the lead negotiators in the Troika – the UK, Netherlands and Luxembourg – the flexibility they needed to respond rapidly to new positions and red herrings, notably those of the US.

There were also tensions over issues such as emissions trading, with countries such as the UK more culturally receptive to adopting market-oriented mechanisms than some

others. The EU gained inclusion of policies and measures according to "national circumstances" and permission to form a bubble, relenting on expressed resistance to six gases, sinks, emissions trading, and broader differentiation of targets.

The G-77/China – or rather the key players who skillfully swing the bloc – played an effective role in defeating an article on voluntary commitments for developing countries, but left observers wondering whether they would go on to a broader victory. In a clever play, India and China led off a debate on emissions trading, ambushing the US and JUSSCANZ and succeeding in delaying the pace at which trading will come into effect. In doing so in the closing hours of the negotiations, they signaled decisive opposition to the article on voluntary commitments and exhausted all proponents. As a result, the article on voluntary commitments was dropped.

The complex, ambiguous and virtual world of G-77/China "interests" was demonstrated by Brazil's role in brokering a Clean Development Fund. With US sponsorship, this idea became the clean development mechanism – a hybrid institution which brings together credited joint implementation and emissions trading, all with "certified" voluntary developing country participation. US negotiators attracted other Latin American supporters who, in the words of one observer, "had their national interests explained to them."

The Clean Development Mechanism (CDM) became the focus of the biggest trade-off of the negotiations, according to one observer. Even in the face of China and India's continued resistance, the US and its allies gained considerable ground with the CDM and declarations supporting voluntary participation by Mexico, the Republic of Korea and others.

Brazil and the US led development of the CDM. Originally presented by Brazil as a means of financing projects through penalties for non-compliance, the CDM, as established, will facilitate emission reduction projects in developing countries financed by developed countries. The developed countries, after the projects and their emissions are certified, can use those emissions as credits against their own reduction objectives, a form of joint implementation with credit the US and others have long argued for.

The idea gained unstoppable momentum as the US recognized it as a politically correct avenue for getting some key developing countries on board. It may also become a contentious source of off-shore tradable emissions credits for Annex I countries. Just who stands to gain most from the CDM will only become clear when outstanding questions are answered: will the GEF or the World Bank control the new Mechanism and where will the new institution be

located?

Overall, developing countries helped push higher targets by supporting an emissions reduction position close to that of the EU. Developing countries vetoed the broad inclusion of voluntary commitments and a stigmatized form of joint implementation, and helped craft the CDM, eventually accepting the flexibility and differentiation approach to QELROs that they had earlier resisted. Led by the eloquent Ambassador Slade from Samoa, AOSIS continued to provide the formative conscience of the Convention and the Protocol process. AOSIS maintained its moral voice, although the group's influence within the G-77 was often muted by those allied to OPEC interests.

NGOs and members of the "fourth estate" – the media – played a pivotal role that paralleled the remote negotiations going on between presidents and prime ministers. Their experts provided back-up information and analyses to delegations ready to listen, their communication experts produced press releases in Kyoto and at home within hours of developments, and their traditional activists staged colorful and thought provoking actions ranging from a Friends of the Earth award for the top dirty industries and penguins sculptured in ice, to a procession which raised the specter of the environmental martyrs of the Ogoni people in Nigeria to link human rights to climate change politics.

NGOs played a pivotal role in identifying and advising receptive delegations on loopholes in the proposals, notably in emissions trading and sinks. At a meeting with NGOs, Vice President Gore also proved receptive to advice on moderating the content of his Plenary speech on the need for developing country commitments.

the Utility of Negotiating Paradox

A paradox emerged as major factions in the negotiations struggled towards higher targets through contrary approaches. The EU and other supporters of an ambitious target, such as the G-77/CHINA and AOSIS, decided to hold out until the US signaled willingness to improve on its offer of stabilization at 1990 levels. The EU resisted conceding to the US and JUSSCANZ members on flexibility in implementation, notably on emissions trading and sinks criteria. The US and JUSSCANZ required commitments on these very issues to run the numbers and fix realizable targets. The standoff was compounded by the late – but long anticipated – agreement to adopt a differentiation formula as opposed to a flat rate, together with the traditional negotiating strategy of taking the process to the wire. The latter strategy raises the ante and can serve trade negotiators well, however, it does little to raise the quality of complex institutional arrangements in the context of climate change politics.

The conceptual model adopted, the so-called "Big Bubble" approach originally suggested by Russia, provided some scope for groups pursuing both approaches to targets – the ambitious and the nervous. It allowed Parties to suggest a global reduction number that was essentially the product of each Party's calculation of what the policy pieces would permit them to achieve individually. Each calculation produced a range of figures which became the zone of tolerance to be negotiated between those who stood at each end. Top of the range was the EU. At the bottom were those countries seeking to actually increase emissions above 1990 levels. The EU had always made it clear that their 15% negotiating figure was never intended as a unilateral offer. But differentiation left the group somewhat high and dry – struggling to develop a fall back position.

Where differentiated targets had been based on complex formulae of social and economic criteria, the Big Bubble reduced differentiation to a purely political formulation and the negotiating process to something which, at times, had the appearance of a bargain basement-auction. A Russian delegate recalled how he had been approached by COW Chair Estrada with an offer, to which he replied: "Not yet. Never." Others compared the process to a shell game, with frequent second guessing and back tracking once countries discovered what other Parties had to offer. Within hours of the close of the conference the US discovered that Japan had agreed on a lower target than Washington anticipated – sending one lead negotiator hurtling down the aisle towards Estrada to demand an explanation from the man who was largely responsible for cajoling the Annex I Parties into going as far as they did.

Under differentiation the main criterion became each country's relative willingness to declare a target level of emissions related to 1990. From the deeply contemplated center of each delegation's emissions projections, a lack of consistent political will emerged as a collective political non-decision – as if out of nothingness or, in fact, what one NGO observer described as Estrada's "black box." In finest Zen tradition, the agreement forms itself.

Return to the Market Place

If there are precedents for the scope and nature of the Kyoto Protocol they are not encouraging. One observer suggested that we look to the IMF's now best forgotten attempt to regulate global money flows, ambitious commodity agreements run by now rusting institutions like the Tin Council, and those lofty plans associated with the New International Economic Order. The business of America is business, however, recalled a US negotiator at the close of the Kyoto deal. So business and the markets will be key to implementation, via emissions trading and the CDM. The private sector is also the key target group for the political signals from Kyoto that business as usual is no longer an option. Therein lies the second paradox.

It is the economic engine rooms of the world – the US, Japan and Europe – who have built their power-bases upon unsustainable technologies and who must now lead the way in reversing the trends they have led. Moreover, the diplomats who are responsible for translating the signal into political reality at home are also among the vanguard of the cosmopolitan lifestyles.

Another inconsistency in the market-based approach built into the Protocol, according to another observer, is the US insistence on flexibility while championing the role of the market. Clear signals to markets will demand minimum uncertainty. Tradable permits will be akin to commodities in a market where some certainty will be important. With low emissions reductions targets and high flexibility, great difficulties are anticipated in regulating and determining compliance. Questions arise as to the value of the new commodities. A participant at the heart of UN climate change politics, commenting on the Protocol, feared that it would not go far enough to ensure that emissions reductions would be achieved, for the most part, at home. Instead, there would be a drift towards off-shore fulfillment of commitments.

So a central concern with the market-driven approach is the tendency of the market to facilitate an externalization of the costs or burden. Interestingly, a US representative conceded to this up to a point. While it was agreed that the classic General Equilibrium Model can accompany an externalization of costs, this is viewed by the US negotiators as a short- to medium-term phenomenon. Believers in the General Equilibrium Model argue that in a trading regime, particularly with an advance signal that the market is about to be launched, people will exercise their external options early and internal options later. If the classic model is right, then by 2008-2012 (the first budget period), the US negotiators believe, they might be undertaking some 60-90% of their emissions reductions efforts domestically – because the costs will be lower. Coincidentally, that would also imply that both the current and prospective Democratic administrations can look forward to minimal or only incremental pressure to adapt to climate change protection at home. Asked if Vice President Gore and the Clinton administration were in the business of buying time, the US representative insisted that they were buying time for the world.

Optimists and those with an interest in talking down the prospect of a greater emphasis on a regulatory regime take the view that the political signal already emerging from Kyoto will be sufficient. An electric utilities lobbyist said it was too soon to calculate all the implications of the Protocol – notably the inclusion of SF₆ – however one thing was immediately clear: the impact on his clients would amount to the equivalent of a 37% budget reduction. Asked if the signal coming out of Kyoto would be sufficient

to force his clients to step up their work in sinks enhancement and high efficiency gas turbines, he replied: "Any more of a signal and we would not be standing here."

Conclusion: The man who has not slept for 14 years

Asked for thoughts after the grueling all-night meeting of the Committee of the Whole at the close of the negotiations, an Indian delegate told the story of a man who has been awake for 14 years. Like any good Zen koan, the story appears to say little about the original question: how did Kyoto affect climate change policy? The consensus among the world's scientific community is that the climate is "out of kilter" and the human species is, in all probability, largely responsible. Such is the political process, however, that it is unlikely that political leaders have even begun to formulate the most salient questions, let alone formulate appropriate answers. The politics of climate change – as demonstrated by the Kyoto Protocol process – raises dilemmas and paradoxes for politicians whose careers are framed by the demands of attending to a development model that must now come under scrutiny. There is more than the weather out of kilter. And for more than one reason, the Kyoto Protocol text will have the quality of a riddle – designed to raise more questions rather than provide comfortable solutions. Fortunately, there are two main schools of thought in the Zen tradition. One holds that the breakthrough to enlightenment comes in a flash of inspiration. A second, more applicable approach, advocates an incremental journey of trial and error. And on the journey the important thing is to tread lightly upon the earth.

THINGS TO LOOK FOR

FCCC MEETINGS: The FCCC subsidiary bodies will meet from 2-12 June 1998 in Bonn, Germany. The subsequent subsidiary bodies meetings will coincide with the Fourth Conference of the Parties in Buenos Aires, Argentina, scheduled from 2-13 November 1997. For more information contact the UNFCCC secretariat in Bonn, Germany; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.de. Also try the FCCC home page at <http://www.unfccc.de> and UNEP's Information Unit for Conventions at <http://www.unep.ch/iuc.html>.

FOURTH INTERNATIONAL CONFERENCE ON GREENHOUSE GAS CONTROL TECHNOLOGIES (GHGT-4): This conference will be held from 30 August - 2 September 1998 in Interlaken, Switzerland. For information contact: Dr. Baldur Eliasson, Head, Energy and Global Change, ABB Corporate Research Ltd., Baden-Dättwil, Switzerland.; tel: + 41-56-486 80 31; fax: + 41-56-493 45 69 e-mail: baldur.eliasson@chcrc.abb.ch.

ELEVENTH WORLD CLEAN AIR & ENVIRONMENT CONGRESS (& EXPO): The Congress is scheduled from 13 - 18 September 1998 in Durban, South Africa. For information contact: Conference

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