

8 April 1999

ENGLISH ONLY

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE

Tenth session

Bonn, 31 May - 11 June 1999

Item 5 (a) of the provisional agenda

METHODOLOGICAL ISSUES

LAND-USE, LAND-USE CHANGE AND FORESTRY (DECISION 1/CP.3, PARAGRAPH 5 (a))

Issues to be considered at the second SBSTA workshop on land-use, land-use change and forestry

Submissions from Parties on Article 3.3 and 3.4 of the Kyoto Protocol

Note by the secretariat

1. At its ninth session, the Subsidiary Body for Scientific and Technological Advice (SBSTA) invited Parties to provide submissions by 1 February 1999 on other issues to be considered at the second workshop (FCCC/SBSTA/1998/9, para. 34 (e)). The Conference of the Parties (COP), in its decision 9/CP.4, requested the SBSTA to consider, at its tenth session, the requirements necessary to fulfil the provisions of the first sentence of Article 3.4 of the Kyoto Protocol, and invited Parties to provide submissions on such requirements to the secretariat by 1 March 1999 (FCCC/CP/1998/16/Add.1). By the same decision, the Conference also requested the SBSTA to compile, for consideration by the SBSTA at its tenth session, a list of policy and procedural issues associated with Article 3.3 and 3.4 of the Kyoto Protocol, based on existing submissions by Parties and any further submissions by Parties, and invited Parties to provide submissions on these issues to the secretariat by 1 March 1999.

2. Submissions have been received from eight Parties.* In accordance with the procedure for miscellaneous documents, these submissions are attached and are reproduced in the language in which they were received and without formal editing.

* In order to make these submissions available on electronic systems, including the World Wide Web, these contributions have been electronically scanned and/or retyped. The secretariat has made every effort to ensure the correct reproduction of the texts as submitted.

FCCC/SBSTA/1999/MISC.2

GE.99-

CONTENTS

Paper No.		Page
PART A		
ISSUES TO BE CONSIDERED AT THE SBSTA WORKSHOP ON ARTICLE 3.4 OF THE KYOTO PROTOCOL		
1.	Alliance of Small Island States (AOSIS) (Submission received 29 January 1999)	4
2.	Australia (Submission received 16 February 1999)	6
3.	Canada (Submission received 28 January 1999)	7
4.	Germany (on behalf of the European Community and its member States) (Submission received 2 February 1999)	11
5.	United States of America (Submission received 2 February 1999)	13
PART B		
REQUIREMENTS NECESSARY TO FULFIL THE PROVISIONS OF THE FIRST SENTENCE OF ARTICLE 3.4 OF THE KYOTO PROTOCOL		
1.	Australia (Submission received 4 March 1999)	21
2.	Canada (Submission received 11 March 1999)	24
3.	Germany (on behalf of the European Community and its member States) (Submission received 1 March 1999)	27
4.	New Zealand (Submission received 2 March 1999)	29
5.	United States of America (Submission received 2 March 1999)	31

Paper No. **Page**

PART C
POLICY AND PROCEDURAL ISSUES ASSOCIATED WITH
ARTICLE 3.3 AND 3.4 OF THE KYOTO PROTOCOL

- | | | |
|----|--|----|
| 1. | Australia
(Submission received 4 March 1999) | 34 |
| 2. | Canada
(Submission received 11 March 1999) | 36 |
| 3. | Germany
(on behalf of the European Community and its member States)
(Submission received 1 March 1999) | 39 |
| 4. | Japan
(Submission received 16 March 1999) | 42 |
| 5. | United States of America
(Submission received 2 March 1999) | 44 |

PART D
CROSS-CUTTING ISSUES

- | | | |
|----|--|----|
| 1. | Alliance of Small Island States (AOSIS)
(Submission received 29 January 1999) | 47 |
| 2. | Philippines
(Submission received 4 February 1999) | 50 |

PART A. ISSUES TO BE CONSIDERED AT THE SBSTA WORKSHOP ON ARTICLE 3.4 OF THE KYOTO PROTOCOL

PAPER NO. 1: ALLIANCE OF SMALL ISLAND STATES (AOSIS)

IV. FURTHER ISSUES TO BE CONSIDERED AT THE NEXT WORKSHOP

AOSIS intends to participate actively at the next workshop on land-use, land-use change and forestry, and is looking forward to discussing the questions raised in previous submissions, as well as questions raised at the 4th Conference of the Parties. It is hoped that the participation of AOSIS experts will be facilitated. Furthermore, AOSIS would like to raise some specific questions for discussion.

If a managed forest - that has been significantly seeded and/or fertilized as a part of a Annex 1 Party policy of sequestration, resulting in an increase in the amount of carbon stored in that forest - should burn down as a result of a "natural" fire, should the emissions resulting be counted as human-induced?

Should degradation of forests - whose inclusion in the definition of deforestation under article 3.3 would run counter to many conventional uses of that term - be included as a source of emissions under article 3.4?

Should the practice of draining wetlands also be accounted for a source of emissions under article 3.4?

Is there a need for the general guidelines to be refined to allow for calculations at different levels, such as local, national, regional and for the many possible variations which affect the growth, development and decay of vegetation? (Some of these factors include differences due to: forest types, species (and the mixes), densities, soils, management practices, conversion factors (tons of carbon per ton of biomass) for each species, distribution of above and below ground biomass, emission factors for decays (over different time periods), burning (natural, human- induced), differences due to weather/climate, conversion factors e.g. from grasslands to forests.)

How can a greater level of precision be ensured through improvements in the current methodology, which at present only enables crude calculations at an aggregated level (which is adequate for a first order estimation), if the Conference of the Parties is to be able to ascertain procedures for gaining credits from sinks enhancement activities?

On the question of precision, clear guidelines should be provided for the estimation of uncertainties, especially for biomass data, which due to their inherent nature, are often assigned an uncertainty of at least 100%.

Other issues related to destruction of forest or vegetation as a result of climate change also needs to be addressed.

Several related issues arising out of forest planting, conversion of natural grasslands to forests, reforestation etc. arise: definition of “directly” or “indirectly” human induced deforestation, impact on bio-diversity, hydrology and other agro-meteorological effects, ecological problems due to large-scale monoculture plantations, effect on soil fertility, erosion etc.

PAPER NO.2: AUSTRALIA

**AUSTRALIAN SUBMISSION ON OTHER ISSUES TO BE CONSIDERED
AT THE SECOND SBSTA WORKSHOP (TO FOCUS ON ISSUES
RELATED TO ARTICLE 3.4)**

Australia considers that this second SBSTA workshop should focus on technical and methodological issues along the lines of the first workshop held in September last year. It presents a timely opportunity for a report from lead authors on the progress of the IPCC Special Report on Land Use Change and Forestry, and lead authors could thereafter contribute their technical expertise to panel discussions suggested below.

The workshop also provides an ideal opportunity for Parties to share information and ideas, and could partly consist of separate contact groups or panels discussing various themes.

For instance, it would be most beneficial if the workshop could facilitate Parties' review of land use change and forestry activities being carried out under the Convention. Parties could share their practical experiences with implementing sinks activities as part of their national action plans, and explore the opportunities to build upon these via Article 3.4.

The workshop could also facilitate Parties' assessments of their data needs and data collection capacities in relation to Article 3.4. This aspect of the September workshop was found to be most useful for Parties determining their future monitoring needs. In this regard, Parties could be invited to make presentations on the availability of data and methods of collecting and storing this data under their national programs.

Parties could also turn their attention to an issue raised in several submissions on Article 3.4, namely a process for identifying activities for inclusion. Australia suggests the following guidelines for selecting additional activities for inclusion under Article 3.4:

- The activity contributes to the overall objective of the Convention and the Kyoto Protocol.
- The effects of the activity, on the basis of sound definitions and science, can be adequately identified, measured and verified.
- The activity (or changes to existing activities) take into account requirements of other international environmental agreements.
- The inclusion of the activity is consistent with the overall functioning and objectives of Article 3 and other relevant provisions of the Kyoto Protocol and UNFCCC.

Australia would be pleased to make presentations to workshop participants on any of the above themes - its activities under the National Greenhouse Strategy to abate greenhouse gases through sinks enhancement, its measurement and data collection activities, or its proposal for selection criteria for identifying activities to include under Article 3.4.

PAPER NO. 3: CANADA

**METHODOLOGICAL ISSUES RELATED TO LAND USE, LAND USE
CHANGE AND FORESTRY FOR CONSIDERATION AT SBSTA
WORKSHOP ON ARTICLE 3.4**

**VIEWS ON ISSUES RELATED TO MODALITIES, RULES AND GUIDELINES
FOR DISCUSSION AS TO HOW AND WHICH ADDITIONAL HUMAN-INDUCED
ACTIVITIES MIGHT BE INCLUDED UNDER ARTICLE 3.4**

Abstract

This note summarizes Canada's views and suggestions for discussion at the SBSTA Workshop on Article 3.4. As previously stated, Canada believes that full carbon accounting is necessary to deal properly with the issue of sinks. It is Canada's view that by excluding certain sectors and activities that ultimately influence the atmospheric concentrations of greenhouse gases, the Kyoto Protocol fails to foster the sustainability of existing forests and agricultural soils. Canada feels that the SBSTA Workshop on Article 3.4 should begin the process of establishing criteria for the inclusion of additional activities and in doing so, should be guided by the following general principles:

- 1. Decisions on Adding Activities should be based on sound science.*
- 2. Decisions on Adding Activities should promote other environmental objectives related to land use.*
- 3. Decisions on Adding Activities should maintain symmetry and consistency in the treatment of land uses, and*
- 4. Decisions on Adding Activities should promote, rather than undermine the objectives of the Convention.*

Introduction

Canada would like to thank the United States of America and the UNFCCC Secretariat for planning and organizing a very important workshop to foster discussions on additional sink activities that are to be considered for inclusion under the Kyoto Protocol. It is Canada's view that these workshops are extremely important in providing information to educate Parties and in continuing discussions that serve to ensure that the intent¹ of the Framework Convention is met.

As noted in earlier submissions, Canada is of the view that full carbon accounting is necessary to properly deal with the issue of sinks. Our view continues to be one of endorsing an approach that fosters the enhancement of sinks, and the reduction in sources. It is also important that any legally binding protocol be balanced in its treatment of sources and sinks.

While much of the discussions that have taken place on "*sinks*" have focused on land-use change and forestry and not on land-use activities, such as agricultural practices, Canada welcomes the recent decision by the Conference of the Parties at its fourth session in Buenos Aires. Decision 9.CP.4 clearly recognizes that there are at least three distinct categories:

¹ *to limit anthropogenic emissions of greenhouse gases and protect and enhance greenhouse gas sinks and reservoirs with the ultimate objective: stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.*

land-use, land use change and forestry, thus acknowledging that categories other than land-use change and forestry, such as agriculture, can have both a source and a sink term associated with them.

Canada believes it is essential to establish sound common definitions and methodologies for the treatment of all relevant land use activities, and not just limit them to some activities within forestry, agriculture and other land-use changes as is currently the case under the Kyoto Protocol. In the absence of a sound approach, each Party is likely to interpret the land use and land-use change provisions of the Protocol in a manner advantageous to it, and the integrity and environmental effectiveness of the Protocol could be severely undermined.

To a large extent, the only way to provide the proper environmental and economic incentives is to have an accounting system for sinks that is as comprehensive as possible. Important cost savings may be lost if certain land use activities sequester carbon more efficiently and effectively than others, but are excluded from the treaty. Moreover, by taking a “piece-meal” approach to what activities may be included, the overall uncertainties are increased. Rather than attempting to measure carbon stock changes from individual activities within forestry or agriculture, which, in fact, may not be possible, it makes much greater sense, both from an accounting perspective and an environmental one, to take a more holistic view. Canada feels that the most appropriate way in which to do this is from a land use perspective and to examine a variety of activities under distinct land management practices.

Issues for Discussion at SBSTA Workshop

We believe that there are a number of key principles that should guide the elaboration of guidelines for implementing the land use and land-use change provisions of the Kyoto Protocol, and in particular, form the basis of discussions on how to implement Article 3.4. As such, Canada feels that the SBSTA Workshop on Article 3.4 should begin the process of establishing criteria for the inclusion of additional activities. In establishing criteria, Parties should be prepared to submit information at the workshop related to measuring, monitoring and verification procedures they have in place, or plan to put in place. Canada’s views can be summarized as follows:

- 1. Decisions on Adding Activities should be based on sound science.** The guiding principles for inclusion of additional activities should be based on the most recent and accepted scientific and technical literature. Countries should employ the best practicable technical methods for measuring carbon and other greenhouse gas emissions and removals related to land uses and land-use changes, and ensure that the emissions and removals reported can be monitored, measured and verified.
- 2. Decisions on Adding Activities should promote other environmental objectives related to land use.** Land uses can have significant environmental impacts beyond their effects on greenhouse gases. Parties should be alert to creating incentives that negatively affect the broader environment. For example, activities should implicitly encourage sound forest and agricultural management practices along with carbon sequestration. To the extent that optimizing carbon sequestration conflicts with, say, improvements in biodiversity,

appropriate balances should be considered and addressed. As such, Parties should be prepared to discuss, in consultation with experts engaged in the IPCC Special Report, the implications of restricting activities and not examining the issue in a broad manner.

3. Decisions on Adding Activities should maintain symmetry and consistency in the treatment of land uses so that steady-state systems are not counted as either a source, or a sink for carbon, and for those systems not in a steady-state, appropriate accounting is undertaken. This would ensure that both credits and debits are given for some land-uses so that, as is currently the case, they are not included solely as a source. In addition, an overriding principle for interpretation within the Kyoto Protocol should be consistency between Articles. Under the Clean Development Mechanism (CDM, Article 12) where accounting is based on specific projects, rather than national totals, there is no specific restriction on the type of activity that can be included. Instead, the only requirement is that projects be certified to provide benefits that are additional to what would have otherwise occurred.

4. Decisions on Adding Activities should promote, rather than undermine the objectives of the Convention. The level of effort required to comply with the Protocol should be in keeping with, and reflect that which was understood when forging an agreement in Kyoto. The exclusion of activities that increase or reduce carbon stocks but do not alter the land use of an area can be viewed as a missed opportunity. It must also be remembered that while any change in coverage could have an impact on the meaning of the emission limits negotiated in Kyoto, any decisions taken on additional activities will also affect targets negotiated for subsequent commitment periods.

In this light, Canada would like to re-state some of our previous views and offer the following information and comments on the multiple benefits of soil carbon sequestration projects. Globally, many agricultural soils, having been depleted of much of their native carbon stocks, have a significant CO₂ sink capacity. International scientists estimate this capacity to be in the order of 20-30 Billion tonnes of C over the next 50-100 years. The soil-C sink has a finite capacity which can be filled over a relatively short-time horizon, possibly 20-25 years. More sustainable farming practices will also confer additional benefits, such as desirable improvements to soil and water quality, enhancement of biodiversity and wildlife habitat.

Land management practices to build up soil C must increase the input of organic matter to soil and/or decrease soil organic matter decomposition. In temperate regions, there is considerable evidence that increasing cropping frequency, reducing traditional summerfallow, increasing the use of perennial forages in crop rotations, retaining crop residues and reducing or eliminating tillage results in significant C gains within 5 to 10 years after adoption. Also, conversion of marginal land to permanent perennial vegetation protects fragile soils and provides additional opportunities for C sequestration.

In the tropics, increasing C inputs to soil through improving the fertility, productivity, and sustainability of cropland and pastures is essential, in particular to help reduce land clearing. Cover crops, green manures, no-till and agroforestry are also beneficial in terms of C sequestration and protecting the environment.

Soil carbon, the single most important measure of soil quality and productivity, has been studied intensively for decades. While most of the analysis of sequestration potential has been conducted for industrialized countries, the impact of land management practices on soil C is well documented globally. Although soil C levels vary on a landscape basis, protocols for sampling and monitoring have been developed for various cropping systems in different agro-ecological regions. Existing C-cycling models are being refined and validated with long-term field measurements.

Canada's experience in this field indicates that changes in C stocks can be estimated and verified with a reasonable level of confidence. More work is needed on the development and application of monitoring and verification protocols, especially for the tropics and developing countries, to determine region-specific interactions between climate, soil and land resource management for global assessments. The opportunities and benefits of increasing soil C sequestration on agricultural soils will continue to stimulate the development and application of methodologies for measurement of soil C (or components of soil C) changes with increased precision over shorter time periods.

In this context, Canada would be pleased to share information on the studies undertaken to improve our understanding of soil carbon dynamics and discuss methodologies being used to measure and monitor soil carbon changes in agricultural soils.

PAPER NO. 4: GERMANY
(ON BEHALF OF THE EUROPEAN COMMUNITY AND ITS MEMBER STATES)

**OTHER ISSUES TO BE CONSIDERED AT THE SECOND WORKSHOP ON
LAND-USE, LAND-USE CHANGE AND FORESTRY**

The EU recalls that SBSTA 9 concluded that the second SBSTA workshop should focus on issues related to Art. 3.4, such as methodologies, uncertainties, research and data needs, and those identified in document FCCC/SBSTA/1998/INF.1 and in submissions from Parties, and to further elaborate on issues from the first SBSTA workshop.

The EU notes that the first SBSTA workshop focusing on Art 3.3 activities held in Rome in September 1998 was successful because it concentrated on Parties' practical experience with definitions, data collection and analysis relevant to quantifying emissions and removals under the provisions of Art 3.3. The EU believes that a similar format, based on presentations from Parties, should be followed for the forthcoming second SBSTA workshop focusing on Art. 3.4.

To this end the EU suggests that in their presentations to the workshop Parties should address the following issues as appropriate:

1. Are there any relevant issues from the first workshop, for example have new or additional assessments on the implications of Art. 3.3 been carried out?
2. Which human induced activities not covered by Art 3.3 related to changes in greenhouse gas emissions by sources and removals by sinks in the land-use, the land-use change and forestry activities has the Party included in its greenhouse gas inventory submitted under the Convention? Can these activities be distinguished from each other and from the activities covered by Art. 3.3? What criteria does the Party propose for deciding whether an activity is human induced and how could these criteria be implemented (e.g. measurability)?
3. Which (if any) of these activities or other activities (if any) does the Party consider might be relevant to the provisions of Art 3.4?
4. Which definitions of terms are available or proposed for those activities which are considered to be relevant to the provisions of Art 3.4? Does international agreement exist on these terms?
5. Which data are available on the emissions and removals of greenhouse gases associated with the activities mentioned under 2 and 3 above, which methodologies were used to estimate these data and how often are the estimates updated?
6. Which methods are available or proposed for transparent reporting, (independent) verification and validation of the emissions and removals of greenhouse gases associated with the activities mentioned under 2 and 3 above? Could all data which are needed for reporting

on forestry activities be derived from the Party's forest inventory or which other sources have been or could be used, if any?

7. Which data are available on the uncertainties associated with these emissions and removals, how have uncertainties been measured and which information can be given with respect to spatial and temporal representativity of the data?
8. What is the level of knowledge about the dynamics of carbon stocks associated with the activities mentioned under 2 and 3 above?
9. What is the level of knowledge on impacts on emissions of other greenhouse gases and have other impacts (including socio-economic ones) associated with the activities mentioned under 2 and 3 above been assessed and if yes what are the results?
10. How would the answers to the issues raised by questions 4 to 9 in connection with activities mentioned under 2 and 3 compare with the answers given on the same questions raised in connection with activities included under Art 3.3?
11. Are there special data collection issues for Parties having large land area?
12. Are the magnitude and direction of the fluxes or changes in carbon stocks likely to be affected by climate change or other factors like acid precipitation or nitrogen fertilisation?
13. Which research needs are suggested to be most important?
14. Which approach does the Party intend to follow in order to fulfil the requirement contained in the first sentence of Art. 3.4?
15. What is the relevance of the full accounting approach to the provisions of Art. 3.4?

In addition to presentations by Parties, the EU suggests that a presentation on the relevant parts of the IPCC Guidelines for National Greenhouse Gas Inventories is made and that the IPCC provides a progress report on its Special Report on land-use, land-use change and forestry.

This submission should be read in the context of the EU's previous comments related to Article 3.4 (see FCCC/CP/1998/Misc.9).

PAPER NO. 5: UNITED STATES OF AMERICA

**UNITED STATES SUBMISSION ON ISSUES TO BE CONSIDERED
REGARDING ARTICLE 3.4 OF THE KYOTO PROTOCOL AT THE
UPCOMING SBSTA WORKSHOP**

I. Introduction

We appreciate the opportunity to provide additional comments on issues to be addressed at the SBSTA workshop on Article 3.4 of the Kyoto Protocol. We are pleased to be able to host this important meeting and look forward to welcoming participants to Indianapolis, Indiana in the heartland of the United States. In this submission, we offer recommendations on the structure and organization of the workshop, as well as suggestions on technical, policy, and procedural issues that could be addressed at the workshop. Finally, we offer to host a demonstration of forest and agriculture carbon inventory methods, carbon sequestration opportunities, and ongoing research.

The United States believes that the Kyoto Protocol represents an important achievement and framework for action to control greenhouse gas emissions. The United States views Article 3.4 as an important component of efforts toward realizing the objectives of the Kyoto Protocol.

Inclusion of additional activities under Article 3.4 could offer many Annex I Parties opportunities to use verifiable forest and agricultural activities to help meet their commitments under the Kyoto Protocol. Some Parties have national circumstances that limit the applicability of Article 3.3 activities, for example Parties with significant agricultural and range/pasture lands but relatively little forest. Such Parties could benefit from the addition of new Article 3.4 activities. Further, many of these activities provide valuable ancillary environmental and economic benefits. We must not overlook opportunities to verifiably increase long-term carbon pools on a variety of land types through incentives established in the Protocol.

The United States reiterates its support for a comprehensive approach for accounting for greenhouse gas emissions. In consideration of storage of carbon, we believe that an accounting system should cover all verifiable direct human induced sources to and removals from the atmospheric system.

II. Goals of the Workshop

This workshop offers Parties an opportunity to exchange thoughts and ideas regarding the operation of Article 3.4 of the Kyoto Protocol. It also provides a mechanism for the Parties to provide policy-relevant technical input to the IPCC Special Report authors and to respond to questions from them. Finally, this workshop and potential subsequent meetings provide the only venues (outside of subsidiary body meetings) to address policy and procedural issues that will not be addressed in the IPCC Special Report.

III. Structure of the Workshop

We greatly appreciated the thoughtful and open discussions on land use and forestry issues related to Article 3.3 that occurred in Rome at the first workshop. We hope to continue the dialogue and collegial relationships begun in Rome at the Indianapolis meeting. One of our objectives in requesting a workshop was to encourage interaction and communication among the participants, and to bridge the gap between policy and science. We view this as a learning process and that both of the workshops will be invaluable to making progress in the negotiations.

We would suggest a less formal mode of procedure for the upcoming workshop than in Rome; we would like to see an informal, open discussion.

Discussion papers

We believe it would be most useful to the participants if an informal document is prepared that will outline the issues and options, which would be circulated to participants prior to the meeting. This would be similar to the format used for the Bonn GHG Inventory workshop held in December 1998. We suggest that the Secretariat prepare this informal paper (or papers) prior to the Article 3.4 workshop to address issues related to 'how' and 'which' additional activities could be added. The Secretariat's paper could draw on questions raised in our and other Parties' interventions and submissions.

Presentations

Parties should be invited to have appropriate experts give presentations on issues related to Article 3.4. These presentations could include information on a Party's particular national circumstances; on additional activities a Party would like to have considered; related data, data quality and methodological information; and/or on the process for addition of activities under Article 3.4. In addition, the Secretariat may want to have presentations by experts on issues in the discussion paper(s) to start the process.

Plenary sessions

It would be useful to conduct parts of the meeting in plenary sessions with all participants present. We envision a session concerning the IPCC Special Report, with a briefing by the IPCC Chair and other authors in the plenary. This could be followed by a dialogue session among all the participants. We also can imagine technical presentations from one or more experts chosen by the Secretariat to provide a summation of the issues and questions raised in the informal discussion paper prior to working group sessions. There may also be a desire on the part of several Parties to have their experts give short presentations concerning the issues at hand, such as their national circumstances, desired additional activities, or thoughts on a process. If many presentations are offered, or if the level of detail warrants, these expert presentations may be made in the appropriate working group.

Working groups

We anticipate that with the large number of interested individuals expected, there will be a benefit to utilizing break-out sessions, perhaps with two to four separate groups. We propose that there should be working groups on the specifics of the additional activities (the

“which” question) and the process and policy discussions (the “how” question). In addition, depending upon the size of the groups and the expertise available, it may be useful to divide the “which” discussion among cropland, range and pasture, and forest management activities.

Products

We believe that part of the benefit from a workshop is carrying forward the relationships and ideas shared by the participants. In addition, we need to share the proceedings with others. Informal reports should be prepared from the working groups that summarize the group discussions. This set of working group reports could be submitted to the full SBSTA for consideration and used by the IPCC Special Report authors as guidance and input to their process.

Research site visits

We propose that a portion of the time allotted for the workshop be used to visit field sites related to our discussions. We have identified a number of sites in the region that can demonstrate measurement, monitoring, and verification of changes in carbon due to management activities. We feel that such a field trip may be most beneficial to the discussions if it were to take place during the workshop, as a respite from the discussions and to allow reflection and informal discussions. An alternative would be to conduct the site visits after the workshop is over. Sites that may be of interest are detailed below. We expect that visits to the research sites would be feasible in an afternoon. The Secretariat may wish to indicate in the workshop invitations and materials that a trip to field research sites is planned, and participants should bring appropriate clothing and shoes. The U.S. is prepared to assist in making the necessary logistical arrangements.

Participation

The United States believes that participation is one of the keys to the success of a workshop. Discussions should be informal and open to a range of ideas and concerns. An important ingredient for that discussion is a diversity of informed inputs from various stakeholders. We believe that, to be successful, the workshop should include authors for the IPCC Special Report, SBSTA representatives from Parties, and appropriate experts from the Parties, including NGO experts. In addition, the Secretariat may see a need to invite other relevant experts from the roster, to present issues and options papers related to the issues that we have identified below. At the same time, we recognize the needs of the Secretariat to manage the number of participants in order to have an effective discussion, and we recognize the need to balance participation from developed and developing nations.

Duration

We believe that this meeting will require 3-4 days to meet its objectives. We are flexible as to when the meeting could be held and have offered several dates to the Secretariat.

IV. Issues to Address at the Article 3.4 Workshop

Issue 1: Status Report from IPCC on the Special Report on Land Use, Land Use Change and Forestry

The IPCC Chair and convening lead authors should make a status report on the IPCC Special Report, with emphasis on the chapters addressing Article 3.4. The workshop should provide an opportunity for initial feedback from the Parties and the other experts present. These thoughts should be captured in a summary document from the meeting, perhaps prepared by the FCCC Secretariat. This document should be shared with the IPCC Special Report lead authors to guide them in the production of the report. Alternatively, a working group comprised of a sub-set of meeting participants could be formed to prepare this feedback. This summary report would be discussed and agreed to by the workshop plenary.

Action for this issue during the workshop:

1. Briefing in plenary by IPCC Chair and IPCC authors
2. Discussion between SBSTA representatives and IPCC representatives
3. Option: Working group discussion on feedback to IPCC
4. Report back to IPCC on feedback from SBSTA workshop
5. Report back to SBSTA on briefing

Issue 2: Which “new and additional” activities to consider under Article 3.4

The United States believes that direct, human-induced activities upon the land that influence emissions or sequestration of greenhouse gases should be a part of the greenhouse gas accounting system. Human practices in crop production, animal production, forest management, and management of other ecosystems can either cause emissions from the system, increase storage of carbon in the system, or protect existing stocks.

In order to utilize any additional activities in meeting our commitments under the Kyoto Protocol, the emissions and sequestration must be measurable and verifiable. An assessment would need to be made of the change in carbon stock, on the affected lands, during the commitment period, as in accounting for Article 3.3 activities. We should not, however, hold these land use categories to a higher standard of measurability and verifiability than other sources of greenhouse gases that are already included under the Protocol. Attention must be given to data availability and quality. This workshop should consider development of good practice guidance for these activities.

One approach to “additional activities” under Article 3.4 could be to prepare a list of specific practices where humans have a direct impact on carbon emissions or storage. These practices could include no-till agriculture, rehabilitation of over-grazed land, or intensive management of forest plots. We believe that such a list approach, by definition, will leave gaps. These gaps will result in the loss of opportunities to act by some Parties due to their particular national circumstances, the likelihood for unaccounted emissions, and the potential for unintended incentives.

A contrasting approach would be to add entire categories of practices where humans have a direct impact on carbon emissions or storage. By using broad categories, where a Party is both accountable for emissions and can take credit if net sequestration takes place, we can avoid the limitations of a list approach. Such an approach would allow Parties to act effectively to mitigate climate change, given their particular national circumstances.

We propose that the SBSTA should take the latter approach in consideration of “which” additional categories should be included. New and additional activities under Article 3.4 should include cropland management, grazing land management, and forest management.

Activities should be defined as to not be limited to currently known or applied practices and systems. Innovation to devise carbon restoration management systems should be encouraged. Most activities that increase storage of organic carbon also provide other important environmental benefits (such as improvements to air and water quality).

Activities to Be Considered:

1. Cropland Management

Agricultural activities can deplete the soil organic matter reserve that has accumulated in pre-cultivated grassland, wetland, and forested ecosystems. This represents a substantial pool of carbon that, if restored to the soil, can contribute to the reduction of anthropogenic inputs to the atmosphere. Improved management of cultivated cropland (and also in grazing lands) can accomplish soil carbon restoration.

Practices that increase the level of sequestered soil carbon could include: the use of cover crops, crop rotations, application of manure and composts, crop residue management, and tillage reduction. The establishment of permanently vegetated buffers on the agricultural landscape will also contribute to storage of carbon in agricultural ecosystems.

2. Grazing Land Management

Overgrazing of range and pastureland depletes soil organic carbon. Implementation of grazing management practices that will optimize vegetative growth will restore soil organic matter. For instance, in some rangeland systems, restoration of grasses will contribute to an overall increase in sequestered carbon.

3. Forest Management

Forest and wood product management practices can include regeneration, tending, harvesting, processing, conservation, rehabilitation, and disposal practices. The specific practices or set of practices utilized for management will depend upon stand and site conditions, management objectives, and economics. The effects of management practices must be considered as part of a whole system.

Future developments

We must not close the door to innovation and scientific developments. The process should provide incentives for developments in activities, practices, techniques, and understanding of

the processes for storage of carbon. The workshop participants may wish to discuss areas where there is a need or potential for further developments. This could include further investigation or development in: forest carbon inventory and comprehensive accounting methods; life cycle analysis; methods to manage governing processes to improve soil productivity and increase carbon capture and storage; developing science and technologies to ensure ecological and economical production and use of biofuels; developing technologies for direct sequestration of carbon in forest soils; low-impact harvest methods; fuel and fire management in range and forest lands; and extending wood use and product life.

Action on this issue for the workshop:

1. Preparation and dissemination of discussion paper(s)
2. Presentations by technical experts (overview and introduction)
3. Presentations by Parties
4. Working group sessions
5. Reports back to plenary and discussion
6. Preparation of informal working group reports

Issue 3: Process and policy issues

Article 3.4 states that at its first session or as soon as practicable thereafter, the COP/mop shall “decide on modalities, rules and guidelines as to *how*, and *which*, additional human-induced activities... shall be added to, or subtracted from, the assigned amounts for Parties included in Annex I...” (emphasis added). Article 3.4 also states that “such a decision *shall* apply in the second and subsequent commitment periods” (emphasis added). Each Party has the option to apply the COP/MOP’s decision on additional activities for its first commitment period, for activities taking place since 1990; all Parties must apply that decision during the second and subsequent periods.

We believe that determining ‘how’ activities can be added to the Protocol is as important as resolving the scientific questions. The two issues are often linked. For example, Parties will need scientific information concerning data quality, methodological reliability and stability of sequestered carbon to assist them in adding activities.

We believe that a discussion on process may be best guided by a discussion of the principles and criteria desired. These include the desire for transparency and verifiability, a need to take into account national circumstances, cost-effectiveness, and contribution to protection and enhancement of natural sinks. We will further address this issue in the upcoming March 1 submission.

Specific questions that the workshop could address in this regard include:

1. How will Parties propose activities and how will proposals be evaluated?
2. Do we need to set up guidelines for a Party to follow, e.g., similar to the inventory guidelines? If so, when?
3. Will we only address additional activities under Article 3.4 once or agree to consider adding to the list of accepted activities over time?
4. Should Parties be allowed to select from a list of 3.4 activities, or will they have to take

into account all approved categories, during the first commitment period?

5. Should a Party's ability to use a category depend upon its having sufficient documentation and data quality?

Action on this issue for the workshop:

1. Preparation and dissemination of discussion paper(s)
2. Presentations by technical experts (overview and introduction)
3. Presentation by Parties
4. Working groups sessions
5. Reports back to plenary and discussion
6. Preparation of informal working group reports

V. Research Tour and Site Visits

We also offer to host a research tour to forest and agriculture sites close to the conference facility. We propose this trip either for one afternoon during the meeting, or the visits could be held directly after the meeting.

The research demonstration would be a combination of displays and field tour. We propose that an afternoon be dedicated to the field session, starting about 2:00 PM to provide for a fairly lengthy morning workshop session and a late lunch. The visit would conclude at about 6:30 PM, arriving back at the conference site. Buses would be used for transport. Travel time is about 1 hour south of Indianapolis. Only two sites should be visited; we offer the following possibilities. (For example, the forestry stops could be consolidated to accommodate the schedule.)

Possible research sites for a visit by workshop participants:

1. Cropland and Grazing Land Management Activities - USDA Natural Resources Conservation Service

The stop will describe the advantages of using conservation practices that increase soil carbon in agriculture and discuss means in increasing use of these practices within the farming community. The carbon budgets associated with different treatment methods will be explained and demonstrated.

- a. Cropping system: cover crops, rotations, organic amendments, buffers, reduced tillage
- b. Livestock production system: rotational grazing system
- c. National Resources Inventory/soil survey: prototype soil carbon equation application

2. Forest Inventory and Monitoring Plot - USDA Forest Service

The Forest Service is responsible for inventorying our Nations forest resources. This information is invaluable for policy and business decisions, and also serves as a basis for the inventorying of carbon sinks in forestlands. Several methods are included that include remote sensing and ground survey. The stop will highlight what variables are measured and how the data is analyzed and compiled for use and distribution.

3. Urban Forestry - USDA Forest Service and Indiana University

The stop will describe collaborative urban forestry research effort in the measurements of carbon emissions and sequestration, and the development of management strategies to enhance tree utility and life in an urban environment. This stop will showcase the monitoring and management aspects of using trees and planned forests to mitigate environmental concerns.

4. Ameriflux Site - USDA Forest Service and Indiana University

Ameriflux is a cooperative effort with many agencies and universities. The purpose of these sites is to measure and monitor long-term measurements of CO₂, water, and energy exchange for major ecosystems. The visit will be to the Morgan Monroe State Forest site managed by the University of Indiana. The site contains a deciduous forest. The monitoring and data collection process will be demonstrated. Preliminary results will be explained.

PART B. REQUIREMENTS NECESSARY TO FULFIL THE PROVISIONS OF THE FIRST SENTENCE OF ARTICLE 3.4 OF THE KYOTO PROTOCOL

PAPER NO. 1: AUSTRALIA

AUSTRALIAN SUBMISSION ON THE REQUIREMENTS NECESSARY TO FULFIL THE PROVISIONS OF THE FIRST SENTENCE OF ARTICLE 3.4 OF THE KYOTO PROTOCOL

The first sentence of Article 3.4 reads:

“Prior to the first session of the Conference of the Parties serving as the meeting of the parties to this Protocol, each Party included in Annex I shall provide, for consideration by the Subsidiary Body for Scientific and Technological Advice, data to establish its level of carbon stocks in 1990 and to enable an estimate to be made of its changes in carbon stocks in subsequent years.”

Australia considers that it is possible to begin to clarify the intent and operation of the first sentence of Article 3.4 but not to resolve all the issues at this stage of the negotiations.

Australia considers that the COP4 decision on the interpretation of Article 3.3 has made 1990 carbon stocks data unnecessary for the operation of Article 3.3. The currently agreed method for counting the specified afforestation, deforestation and reforestation activities under Article 3.3 is to measure carbon stocks in 2008 and 2012 and report the change. There is no need under this methodology to refer to stock levels in 1990, because Article 3.3 only allows emission or sequestration of specified activities during the commitment period to count toward the target.

If this approach (as for Article 3.3) is adopted for Article 3.4, then data on levels of carbon stocks may not be necessary for its operation. Noting however that the provision of 1990 carbon stocks baseline data as mentioned in Article 3.4 remains a requirement of the Protocol the following should be considered.

Methodological and Reporting Consistency

In our view, Articles 3.3 and 3.4 need to function consistently with regard to measuring changes over the target commitment period. This is necessary to ensure consistency in the systems, methodologies and guidelines under Articles 5 and 7 for sinks and their application to Article 3.3 and 3.4 activities for the first commitment period.

Australia considers that SBSTA should request the IPCC to investigate ways to optimise methodological and reporting consistency between Articles 3.3 and 3.4.

A determination of which carbon pools should be covered in the 1990 data at this stage of the Article 3.4 negotiating process is premature.

The IPCC Special Report will be an important input to the negotiating process. Once the IPCC Special Report has been completed and the negotiations on additional activities have

progressed, Parties will gain a clearer indication of which carbon pools would be most useful to include in the 1990 carbon stocks.

At present we do not know which additional activities will eventually be allowed under Article 3.4. A set of carbon pools measured for a 1990 determination prior to a COP decision on additional sinks activities may not bear sufficient relation to a Party's final set of allowable pools under Article 3.4. The selection process for these additional activities will be governed by, among other things, whether it is possible to measure the change in carbon stocks resulting from the activity, in other words a key criterion is likely to be those activities that can be adequately measured. Hence, there is an iterative relationship between deciding which pools to include in any 1990 stocktake (most likely only those relevant to activities that will be included under Article 3.4) and considering activities that will qualify for inclusion under the Article. Therefore, at this stage in the negotiations, substantive consideration of specific approaches to the first sentence of Article 3.4 is premature

Australia considers that SBSTA should defer determination of which carbon pools should be included in the 1990 stocktake pending completion of the IPCC Special Report and further negotiations on the activities to be included under Article 3.4.

Ensuring methodological relevance

A retrospective stocktake of carbon pools for 1990 may not deliver the information needed to demonstrate compliance with Article 3.4 during the commitment period. Methodologies, for example measurement algorithms, used for obtaining data by the first COP/MOP on carbon stocks in 1990 may not be compatible with those used in 2008 because of potential improvements in methodology. In addition, not all relevant '3.4' activities may be identified by the first COP/MOP (several years ahead of the commitment period) which could result in an incomplete picture. This being the case, it is unlikely that provision of 1990 data can actually allow an estimate to be made of changes of carbon stocks in subsequent years.

Rules for the operation of Article 3.4 to avoid the increase of one carbon pool at the expense of another

It has been suggested that a full carbon accounting requirement will reduce the likelihood of carbon sequestration in one pool being credited at the expense of another uncounted pool. However this can be avoided by requiring all carbon pools connected to the one activity to be counted. For example, if improved forestry practices were included as an Article 3.4 activity, growing trees, harvested wood, harvest waste, forest litter, soil carbon and below ground biomass would all need to be counted.

Conclusion

Australia considers that:

- It is possible to begin to clarify the intent and operation of the first sentence of Article 3.4 but not to resolve all the issues at this stage of the negotiations.

- SBSTA should request the IPCC to investigate ways to optimise methodological and reporting consistency between Articles 3.3 and 3.4.
- SBSTA should defer determination of which carbon pools should be included in the 1990 stocktake pending completion of the IPCC Special Report and further negotiations on the activities to be included under Article 3.4.

Australia considers that in their future determination on operationalising the first sentence of Article 3.4, Parties should recognise:

- If an approach similar to that of Article 3.3 is taken, 1990 stock levels may be unnecessary for reporting on a change in carbon stocks between 2008 and 2012
- A retrospective stocktake of carbon pools for 1990 is unlikely to deliver the information needed to demonstrate compliance with Article 3.4 during the commitment period.

PAPER NO. 2: CANADA

ISSUES RELATED TO LAND-USE, LAND-USE CHANGE AND FORESTRY

At the fourth Conference of the Parties in Buenos Aires, Argentina, in November 1998, Parties agreed in FCCC/CP/1998/16/Add.1, Decision 9/CP.4, paragraphs 6 and 8 respectively, to:

1) Request the SBSTA to consider, at its tenth session, the requirements necessary to fulfil the provisions of the first sentence of Article 3.4 of the Kyoto Protocol, and invites Parties to provide submissions on such requirements to the secretariat by 1 March 1999, and

2) Request the secretariat to compile, for consideration by the SBSTA at its tenth session, a list of policy and procedural issues associated with Article 3.3 and 3.4 of the Kyoto Protocol, based on existing submissions by Parties and any further submissions by Parties and invites Parties to provide submissions on these issues to the secretariat by 1 March 1999.

Abstract

Article 3.4 Data Requirements

Canada believes that all relevant carbon stocks must be considered in any accounting framework in order to deal properly with the issue of sinks. Given the COP4 decision on the meaning of Article 3.3, Canada considers the requirement to “provide data to establish its level of carbon stocks in 1990” irrelevant and unnecessary for the operation of Article 3.3. Likewise, it is Canada’s view that the Article 3.4 request for data on 1990 carbon stocks is unrelated to the discussions on additional sink activities that might be added to those included under Article 3.3. If, and only if, there is a fundamental change in the manner in which sinks are included under the Kyoto Protocol should data on 1990 carbon stocks be a reporting requirement.

However, Article 3.7 of the Kyoto Protocol contains the only reference to quantifying 1990 emissions and removals data from the land-use change and forestry categories. As such, it is Canada’s view that for those Parties wishing to invoke the provisions of Article 3.7, the requirement for 1990 carbon stock data may be relevant. Given the current lack of agreement and clarity on definitions and methodologies in the land-use, land-use change and forestry categories at this time, Canada urges the Parties to continue discussions on these issues..

Article 3.4 Data Requirements

The first sentence of Article 3.4 reads as follows:

“Prior to the first session of the Conference of the Parties serving as the meeting of the Parties to this Protocol, each Party included in Annex 1 shall provide, for consideration by the Subsidiary Body for Scientific and Technological Advice, data to establish its level of carbon stocks in 1990 and to enable an estimate to be made of its changes in carbon stocks in subsequent years.”

As noted in earlier submissions, Canada is of the view that full carbon accounting is necessary to properly deal with the issue of sinks. However, given the result of the

negotiations in Kyoto, it is worth revisiting the discussions that ultimately led to the wording of Articles 3.3, 3.4, and 3.7 and, the current relevance of the first sentence of Article 3.4.

During the lead up to Kyoto and during the negotiations in Kyoto, two diametrically opposed views on sinks were evident. On one hand, some Parties felt that in keeping with the aims of the Framework Convention, all relevant anthropogenic sinks should be included in setting emission reduction targets. On the other hand, many Parties were completely opposed to the inclusion of any sinks, claiming that to include them would undermine the effectiveness of the agreement. What was also not apparent to all Parties were two very important points:

- 1) *The fact that what was really being discussed were both **sources** and **sinks** from land-use and land-use change activities, and*
- 2) *That there was never any agreement on how they would be included, if agreement was reached on including them. Would they be included in the base year and also the commitment period (**net/net approach**), or would they only be included in the commitment period (**gross/net approach**)?*

As such, a number of alternatives were put forward by Parties in an attempt to reach some sort of compromise. Article 3.4 is the result of one such alternative. The first sentence of Article 3.4 only makes sense in the context of a net/net approach, and the remainder of Article 3.4 only makes sense because Article 3.3 currently limits the activities that can act as sinks.

Given the COP4 decision on the meaning of Article 3.3, Canada considers the requirement to “provide data to establish its level of carbon stocks in 1990” irrelevant and unnecessary for the operation of Article 3.3. The currently agreed¹ accounting method for afforestation, deforestation and reforestation under Article 3.3 is to measure carbon stock changes over the period 2008 - 2012 that are the direct result of these three activities undertaken after 1 January 1990. There is no need under this methodology to measure carbon stocks in 1990, because it is only the change in stocks during the commitment period that Article 3.3 specifies will count towards the target.

Likewise, it is Canada’s view that the Article 3.4 request for data on 1990 carbon stocks is unrelated to the discussions on additional sink activities that might be added to those included under Article 3.3. If, and only if, there is a fundamental change in the manner in which sinks are included under the Kyoto Protocol should data on 1990 carbon stocks be a reporting requirement. If the same consistent approach is adopted for additional activities included under the provisions of Article 3.4, which in our view it must be, then much of the data required to establish 1990 carbon stock levels and to enable the estimation of changes in subsequent years, is unnecessary. In any case, an estimate of carbon stocks in 1990 should not be a determining factor in deciding which additional activities should be included as sinks. Rather, the determining factors should be based on the ability of a Party to develop transparent, reliable and accurate carbon stock estimates.

¹ Decision 9/CP.4 - 11th November, 1998

Given the fact that some Parties (as evidenced by Article 3.4) have indicated that the list of activities included under Article 3.3 should be expanded, it is important to consider what criteria should be used in deciding how and what to include. Among a number of criteria, Canada believes that what is of utmost importance are transparent, effective, efficient, accurate and consistent monitoring systems. Systems that allow for different national circumstances, but also provide data that meets agreed to standards of quality, reliability and uniformity. These are some of the main reasons that led to the choice of a gross/net approach for dealing with sinks. Any approach that is restricted to *recent* activities is not only easier to verify because of an increase in precision afforded by real and measurable data, but is also more equitable by providing a level starting point. . Canada believes that it is extremely important to remember that carbon stock changes resulting from sinks will be measured at a **future date**. As a result, more detailed, transparent and accurate measurement systems can be established to provide more **certainty** in the estimates.

Nevertheless, the Article 3.4 requirement that Parties provide data to establish 1990 carbon stock levels and changes in subsequent years remains a requirement of the Protocol Canada believes that this requirement **might only** be relevant when a Party chooses to invoke Article 3.7 and include 1990 emissions from land-use change in calculating their base year, given that it is only Article 3.7 that requires an estimate of sources and removals of greenhouse gases to be made for the year 1990. In all other cases, the data will have no relevance in helping to ensure that Parties are meeting their commitments, or are in compliance, and may, in fact, depending on what constitutes “*carbon stocks*”, be overly onerous to estimate. Given the current lack of agreement and clarity on definitions and methodologies in the land-use, land-use change and forestry categories at this time, Canada urges the Parties to continue discussions on these issues.

What data then, should be required? It is Canada’s view that the SBSTA could consider the following when examining the requirements necessary to fulfil the provisions of the first sentence of Article 3.4.

1. What is the purpose of the data? Is it relevant to Articles 3.3 and 3.4?
2. Should the data only be developed if the Party wishes to invoke the provisions of Article 3.7?
3. How are the data to be developed? What methodologies are to be used? (Current IPCC?) What level of accuracy is required?
4. What constitutes “*carbon stocks*”? Should carbon stocks referred to in Article 3.3 be the same as those referred to in Article 3.4?
5. Should there be consistency in terms throughout the Protocol?

PAPER NO. 3: GERMANY
(ON BEHALF OF THE EUROPEAN COMMUNITY AND ITS MEMBER STATES)

**REQUIREMENTS NECESSARY TO FULFIL THE PROVISIONS OF THE
FIRST SENTENCE OF ART. 3.4 OF THE KYOTO PROTOCOL**

Pursuant to the first sentence of Art. 3.4 each Annex I Party shall provide, prior to COP/MOP1 and for consideration by the SBSTA, data to establish its level of carbon stocks in 1990 and to enable an estimate to be made of its changes in carbon stocks in subsequent years.

The EU believes that the data required by this provision is a key part of the treatment of sinks under the Kyoto Protocol. It is a link to full carbon stock accounting and an essential safeguard, given Parties commitments under Art. 4.2 of the Convention and under Art. 2.1 (a) (ii) of the Protocol to protect and enhance sinks in general. It contributes to an assessment of the effects of Art. 3.3 and 3.4 in comparison to all carbon stocks.

The reporting requirements should cover for each Annex I Party all carbon stocks associated with the land-use, land-use change and forestry categories according to the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories¹, including the relevant worksheets. The information from Parties on their carbon stocks in 1990 should cover all carbon pools, but at least data on

- a) forest and other wooded land area,
- b) standing volume of trees,
- c) total biomass expressed in tons of dry material and tons of carbon (above- and below-ground) and
- d) an estimate of soil carbon inter alia for forest soils and agricultural soils.

Data could also comprise an estimate of the stocks of long-lived wood products.

Changes in forest area and carbon stocks associated with the activities of deforestation, reforestation and afforestation should be reported separately.

The EU notes that the level of carbon stocks may be very uncertain for some categories and that it may not be possible to establish changes in stocks from the difference in levels. In these cases Parties should provide data showing the directions and rates of change directly.

Parties should also:

- a) describe the method used to estimate the carbon stocks and explain the selection of the method used,
- b) report on the uncertainty of the data and the methods used to estimate the uncertainty,
- c) report on the verification and the validation of data,
- d) explain why data are missing, and
- e) report on the needs for further methodological work.

¹ Abbreviated as 1996 IPCC Guidelines

The EU believes that Parties should be requested to submit preliminary data required by the first sentence of Art. 3.4 before SBSTA 12.

This submission should take into account the provisions of 1996 IPCC Guidelines, but further guidance will be needed. for subsequent submissions. For instance the term carbon stocks is not defined in the 1996 IPCC Guidelines. The EU anticipates that the IPCC Special Report on Land-use, Land-use Change and Forestry (IPCC SR) will help to provide this guidance. The EU's submission in document FCCC/CP/1998/MISC.1/Add.2 includes in section 2 specific requirements regarding refinements within the context of the 1996 IPCC Guidelines to establish reliable, consistent and accurate inventories for the land-use change and forestry sector. Other details of the view of the EU with respect to methodological requirements are included in documents FCCC/CP/1998/MISC.1 and FCCC/CP/1998/MISC.9.

PAPER NO. 4: NEW ZEALAND

REQUIREMENTS NECESSARY TO FULFIL THE PROVISIONS OF THE FIRST SENTENCE OF ARTICLE 3.4 (DECISION 9/CP.4 REFERS)

1. The text of Articles 3.3 and 3.4 of the Kyoto Protocol will, as negotiations continue towards the Protocol becoming operative, be subject to clarification, including definitions of words and phrases where required. SBSTA and COP decisions have already provided for the clarification of some specific matters. Other matters are outstanding and will be informed, for example, by the IPCC Special Report on Land Use, Land Use Change and Forestry.
2. The first sentence of Article 3.4 may be subject to such clarification.
3. The adoption of this sentence, proposed early in the sinks negotiations in Kyoto, reflected a general agreement that reliable Land Use Change and Forestry (LUCF) activities inventory data for 1990, or in fact any year, was not readily available for some Annex B Parties. The sentence establishes that reliable 'baseline' data from all Annex B Parties will be required to give the Protocol effect.
4. As clarified in decision 9/CP.4, data on carbon stocks in 1990 is not required to make adjustments of Parties assigned amounts during 2008-2012 based on changes in carbon stocks as a result of LUCF activities provided for in Articles 3.3 and 3.4.
5. In order to calculate the changes in carbon stocks during 2008-2012, a baseline estimate of carbon stocks relating to land use, land use change and forestry activities as at 1 January 2008 is necessary. The level of carbon stocks in 1990 is not relevant for this calculation, and therefore, is not required for the successful implementation, measurement and verification of Articles 3.3 and 3.4.
6. It may be, however, that some other formulation of data about LUCF activities in 1990 may be required in light of the IPCC Special Report. We would need to address these when the report becomes available.
7. For example, there may be a need for information on the *area* of forest and other forms of land-use and land-cover that existed in 1990, in order to provide a basis for verifying the 'since 1990' proviso of Articles 3.3 and 3.4 for the first commitment period. Alternatively, it is technically possible to estimate the age of a forest at 1 January 2008, as a means of verifying whether it was established 'since 1990'. The definition, measurement and verification of changes in carbon stocks under Article 3.3 and 3.4, and related information and data requirements, is a matter that we understand will be addressed by the IPCC Special Report.
8. New Zealand proposed in Kyoto that all sources and sinks be included in a full carbon accounting approach that would be consistent with the objectives of the UNFCCC, in particular the stabilisation of atmospheric concentrations of greenhouse gases. Under the approach proposed by New Zealand, in setting the environmental objective of the Protocol

(i.e. the overall emissions target for Annex B Parties) an estimate of total CO₂ removals by all Annex B Parties anthropogenic LUCF activities in 1990 would have been required. This information would have been necessary to establish the environmental objective of the Protocol on a *net* basis (i.e. taking into account the rate of net CO₂ removals by LUCF in 1990 in setting the overall target for Annex B Parties). The environmental objective of the Protocol, however, was established on a *gross* basis for the first commitment period so this information is not required. If further consideration is to be given to full carbon accounting, base year LUCF net CO₂ removal data would be relevant (either based on data reported by Parties or estimates by the IPCC). We anticipate that the IPCC Special Report will give consideration to these issues.

PAPER NO. 5: UNITED STATES OF AMERICA

UNITED STATES SUBMISSION ON THE 1ST SENTENCE OF ARTICLE 3.4

Introduction

As requested in FCCC/CP/1998/16/Add.1, we offer recommendations on the requirements necessary to fulfill the provisions of the first sentence of Article 3.4 of the Kyoto Protocol.

Motivation for Provision of 1990 Carbon Stock Estimates

The first sentence of Article 3.4 reads: “Prior to the first session of the Conference of the Parties serving as the meeting of the Parties to this Protocol, each Party included in Annex I shall provide, for consideration by the Subsidiary Body for Scientific and Technological Advice, data to establish its level of carbon stocks in 1990 and to enable an estimate to be made of its changes in carbon stocks in subsequent years”.

After giving consideration to the provisions of Article 3 and the objectives of the Protocol, along with the types of information needed to ensure that there is an appropriate accounting of each Annex I Party's carbon stocks, the United States concludes that each Party should be required to report a comprehensive number for carbon in the biosphere, plus carbon in wood products and landfills, for their national territories in 1990. That comprehensive number should be broken down into various subcategories. Parties should, however, concentrate on developing the tools and methods necessary for evaluating those stocks covered by Articles 3.3 and 3.7 of the Kyoto Protocol, and likely to be relevant to Article 3.4, so that this exercise could best inform development of future accounting systems to be used in the first commitment period. We elaborate on these requirements in the next section.

We believe that providing such information could: (a) advance the scientific understanding of the global carbon budget; (b) improve our estimates of carbon stocks in the biosphere; (c) identify the most compelling techniques and approaches for monitoring and verifying carbon stocks in the biosphere; (d) reveal important gaps in each Party's ability to monitor and verify carbon stocks; and therefore (e) contribute to an identification of the most compelling advances required for future monitoring and verification of carbon stocks. In addition, carbon stock estimates for 1990, when combined with additional subsequent periodic estimates of carbon stocks, could serve as an essential database to (1) track overall trends in carbon sequestration and emissions from land use; (2) develop methodologies and data bases to track changes in carbon stocks under Article 3.3, 3.4, and 3.7; and (3) allow comparisons of comprehensive accounting of carbon stocks with the limited accounting of activities currently prescribed in the Kyoto Protocol.

The United States believes that reporting a single figure for each Party's carbon stocks will minimize the usefulness of this exercise. We offer an approach that will allow reporting and presentation of data in a way that will promote scientific understanding of carbon budgets, and recognize the limitations and uncertainties involved in the production of an estimate of total carbon stocks. This approach will aid identification of needed data or research efforts, and can be adapted to differing levels of data availability and capability among Parties.

At the same time, we believe these stock estimates are not necessary for direct verification of changes in carbon stocks for activities falling under Article 3.3 and 3.4 of the Kyoto Protocol. Article 3.3 of the Protocol discusses “verifiable changes in carbon stocks in each commitment period”. Changes in carbon stocks in the first commitment period—2008 to 2012—require stock accounting for the two endpoint years, or estimates of carbon fluxes for each of the years between (and including) 2008 and 2012. Knowledge of carbon stocks for 1990 is not required to verify stocks or flows from in the period 2008 to 2012, nor can verifiable estimates of carbon stocks or flows during the first commitment period be reliably or accurately extracted from stock estimates for 1990.

Periodic estimates of carbon stocks for managed lands could, however, provide useful information on national trends, and insight into techniques and data used to generate reports of activities under Articles 3.3, 3.4, and 3.7. In addition, these 1990 stock estimates will allow Parties to understand the differences between full, comprehensive accounting of managed carbon stocks and the partial treatment of sinks currently allowed under the Protocol.

Finally, the United States opposes the use of 1990 stock estimates to define which activities will be allowed under Article 3.4 of the Kyoto Protocol. Rather, the identification of activities under Article 3.4 should be used to inform the reporting system developed for the 1990 stock estimates.

1990 Carbon Stock Reporting

The United States believes that Parties should move toward a comprehensive carbon-accounting system for direct, human-induced activities. An initial comprehensive estimate of carbon stocks in the baseline year of 1990 will allow an early evaluation of the potential of and challenges for comprehensive carbon accounting, and promote scientific understanding of global carbon stocks. In addition carbon stocks prior to 1990 and subsequent carbon stock reports will be necessary for countries reporting net emissions from land use, land use change, and forestry under Article 3.7 of the Kyoto Protocol.

The sub-categories for reporting of carbon stocks should be defined so as to allow as comprehensive an estimate as possible for carbon stocks in the biosphere within national territories. Moreover, production of the 1990 carbon-stock numbers for each Party will help identify the most promising tools and methods for monitoring and verifying carbon stocks, and help identify the most compelling needs for advances in those tools and methods. This information will prove most useful for informing verification and monitoring activities under the Kyoto Protocol if categories are defined in such a way as to extend to those ecosystem complexes, activities, and reservoirs likely to be affected by direct, human-induced activities, and thus likely to be important under Articles 3.3 and 3.4 of the Protocol. Thus, the stock estimate reporting should be structured so as to provide stock information in different ecosystem complexes (e.g., forests and grasslands); under different land uses (e.g., cropping versus grazing); under different management systems (e.g., crop residue management versus removal); and within different reservoirs of an ecosystem (e.g., live vegetation versus soil carbon). Finally, categories should be defined so as to disaggregate those stocks whose

numbers can be assigned with greater or lesser uncertainty. For instance, a stock that can be estimated to within 40% should not be aggregated, in the categorization scheme, with one that can only be estimated to within 100%, or there will be a general degradation in the usefulness and quality of information being reported.

The United States believes that (a) each Party should adopt a similar accounting system for reporting of 1990 carbon stocks; and (b) the accounting system should be developed by SBSTA, with input from the Parties. The development of such an accounting system by SBSTA is particularly crucial given that current IPCC guidelines for estimating and reporting carbon stocks are extremely limited. We realize, however, that different national circumstances may mean that completely uniform estimation or reporting may not be feasible.

Defining categories for 1990 carbon stocks in the absence of information on potential 3.4 activities may lead to an accounting system that is less useful in informing future such accounting than it need be. Moreover, categories could best be defined with additional information on our technical capacity to assess and verify stocks. Thus, SBSTA should, if the timing allows, draw on the information contained in the Special Report on Land Use, Land-Use Change, and Forestry and on the information presented in 3.4 negotiations and discussions to define categories for the reporting of 1990 carbon stocks.

Regardless of the accounting system or categories adopted, we believe that the maximum utility and information can be gained from this exercise if, for each stock category, Parties report:

- (a) a number or a range for the carbon stock of interest
- (b) the data sources, modeling approaches, and methods used for estimating that number or range;
- (c) an estimate of the uncertainty associated with the number or range; and
- (d) the data sources and methods used for evaluating the uncertainty.

Parties should wherever possible use multiple approaches to estimate stocks in each of the categories, including (but not limited to):

- (a) direct ground-based measurements (extrapolated to give estimates for all national lands)
- (b) remote sensing data
- (c) models at a variety of scales (e.g., site specific or whole-ecosystem estimates)

In some cases, Parties may be unable to estimate carbon stocks. In such cases, Parties should identify the data, models, or tools required to provide estimates in the future. Moreover, Parties should concentrate on narrowing the uncertainties for those stocks that are (a) capable of changing significantly over the next decade (e.g., short-lived stocks) or (b) likely to be of importance under Articles 3.3 and 3.4 (e.g., forest and agricultural stocks).

PART C. POLICY AND PROCEDURAL ISSUES ASSOCIATED WITH ARTICLE 3.3 AND 3.4 OF THE KYOTO PROTOCOL

PAPER NO. 1: AUSTRALIA

AUSTRALIAN SUBMISSION ON POLICY AND PROCEDURAL ISSUES ASSOCIATED WITH ARTICLE 3.3 AND 3.4 OF THE KYOTO PROTOCOL

While many technical issues relating to land use change and forestry may only be resolved once the findings of the IPCC Special Report on Land Use, Land Use Change and Forestry are made available in May 2000, there may be a number of policy issues that could be progressed in parallel with this work. Australia considers the following issues could usefully be progressed by the SBSTA in the lead up to COP6.

Links with issues across the Protocol

Advances in the land use change and forestry agenda will need to inform other negotiations under the Protocol. For example the treatment of relevant sinks under the flexibility mechanisms and the more overarching issue of inventories and compliance will both need to remain consistent with decisions on modalities for Articles 3.3 and 3.4. The Subsidiary Bodies could play an important role in identifying and advancing these links during the Special Report process and providing additional direction to the IPCC Special Report process. Items below on IPCC inventory work and best practice methodologies and reporting are examples of such links.

IPCC inventory work: best practice methodologies and reporting

Consideration of inventories and reporting in the context of demonstrating compliance with Kyoto targets is an important future work stream for the IPCC. A new IPCC inventory task force is being established with a support unit in Japan. The Special Report will also examine methodological and inventory issues related specifically to Articles 3.3 and 3.4.

The Subsidiary Bodies have an important role in ensuring that any ongoing IPCC inventory work includes a comprehensive treatment of land use change and forestry, in particular the new task force being established. The Subsidiary Bodies are also in a position to ensure that best practice methodologies are achieved where possible, thereby ensuring confidence in the assessment of a Party's reporting in relation to its Kyoto target. The Subsidiary Bodies will also need to feed the inventory work of the IPCC back into the Convention processes in order to advance the operation of the Protocol.

Clarification of the intent of the first sentence of Article 3.4

As noted in Australia's submission it is possible and desirable for SBSTA to begin the process of clarification of the intent of the first sentence of Article 3.4.

- Australia considers that SBSTA should request the IPCC to investigate ways to optimise methodological and reporting consistency between Articles 3.3 and 3.4.

- Australia considers that SBSTA should defer determination of which carbon pools should be included in the 1990 stocktake pending completion of the IPCC Special Report and further negotiations on the activities to be included under Article 3.4.

Clarification of the intent, to the extent possible at this stage of the negotiations, will serve several useful purposes. It will assist Parties in considering the remaining issues in a more focussed way and it will also assist the IPCC to provide more focussed policy relevant advice in the Special Report.

PAPER NO. 2: CANADA

POLICY AND PROCEDURAL ISSUES

At the fourth Conference of the Parties in Buenos Aires, Argentina, in November 1998, Parties agreed in FCCC/CP/1998/16/Add.1, Decision 9/CP.4, paragraphs 6 and 8 respectively, to:

1) Request the SBSTA to consider, at its tenth session, the requirements necessary to fulfil the provisions of the first sentence of Article 3.4 of the Kyoto Protocol, and invites Parties to provide submissions on such requirements to the secretariat by 1 March 1999, and

2) Request the secretariat to compile, for consideration by the SBSTA at its tenth session, a list of policy and procedural issues associated with Article 3.3 and 3.4 of the Kyoto Protocol, based on existing submissions by Parties and any further submissions by Parties and invites Parties to provide submissions on these issues to the secretariat by 1 March 1999.

Abstract

Policy and Procedural Issues

Policy and procedural issues that deserve consideration by SBSTA while the IPCC Special Report is underway are those related to establishing criteria for the inclusion of additional activities, for ensuring consistency in the treatment of sources and sinks in all provisions of the Protocol, and in ensuring confidence that those estimates for which a measure of certainty is less precise, can, in fact, demonstrate compliance.

Policy and Procedural Issues

Canada believes that there are a number of key principles that should guide the elaboration of guidelines for implementing the land use and land-use change provisions of the Kyoto Protocol, and in particular, form the basis of policy and procedural discussions on how to implement Article 3.4.

The outline of the IPCC Special Report (SR) on Land-use, land-use change and forestry was approved by the IPCC at its Fourteenth Session. It has been designed to provide scientific, technical, economic and social information relevant to operationalizing Article 3.3 and Article 3.4 and other relevant articles of the Kyoto Protocol. It will be policy relevant, but not policy prescriptive.

While the SR is being written, it is clear that discussions can and should continue on issues related to land- use, land-use change and forestry. Policy and procedural issues that deserve consideration by SBSTA while the IPCC Special Report is underway are those related to establishing criteria for the inclusion of additional activities, for ensuring consistency in the treatment of sources and sinks in all provisions of the Protocol, and in ensuring confidence that those estimates for which a measure of certainty is less precise, can, in fact, demonstrate compliance.

Criteria for Additional Activities

- 1. Decisions on Adding Activities should be based on sound science.** The guiding principles for inclusion of additional activities should be based on the most recent and accepted scientific and technical literature. Countries should employ the best practicable technical methods for measuring carbon and other greenhouse gas emissions and removals related to land uses and land-use changes, and ensure that the emissions and removals reported can be monitored, measured and verified.
- 2. Decisions on Adding Activities should promote other environmental objectives related to land use.** Land uses can have significant environmental impacts beyond their effects on greenhouse gases. Parties should be alert to creating incentives that negatively affect the broader environment. For example, activities should implicitly encourage sound forest and agricultural management practices along with carbon sequestration. To the extent that optimizing carbon sequestration conflicts with, say, improvements in biodiversity, appropriate balances should be considered and addressed.
- 3. Decisions on Adding Activities should maintain symmetry and consistency in the treatment of land uses** so that steady-state systems are not counted as either a source, or a sink for carbon, and for those systems not in a steady-state, appropriate accounting is undertaken. This would ensure that both credits and debits are given for some land-uses so that, as is currently the case, they are not included solely as a source. In addition, an overriding principle for interpretation within the Kyoto Protocol should be consistency between Articles. Under the Clean Development Mechanism (CDM, Article 12) where accounting is based on specific projects, rather than national totals, there is no specific restriction on the type of activity that can be included. Instead, the only requirement is that projects be certified to provide benefits that are additional to what would have otherwise occurred.
- 4. Decisions on Adding Activities should promote, rather than undermine the objectives of the Convention.** The level of effort required to comply with the Protocol should be in keeping with, and reflect that which was understood when forging an agreement in Kyoto. The exclusion of activities that increase or reduce carbon stocks, but do not alter the land use of an area can be viewed as a missed opportunity. It must also be remembered that while any change in coverage could have an impact on the meaning of the emission limits negotiated in Kyoto, any decisions taken on additional activities will also affect targets negotiated for subsequent commitment periods.

Criteria for Ensuring Consistency throughout the Protocol

1. As noted in previous submissions by Canada, there are a number of inconsistencies throughout the Protocol, with respect to the treatment of sources and sinks in the land use and land use change categories. SBSTA could establish procedures for ensuring that these inconsistencies are minimized. In addition, it is important that links with other issues under the Protocol be consistent. Will there be different criteria established for how sink activities

are treated and included under the Kyoto Mechanisms from those decided upon under Article 3? A key role for the Subsidiary Body could be in identifying these criteria.

2. While it is certain that the IPCC Special Report will identify some flaws in the Kyoto Protocol and its treatment of the land-use and land-use change categories, it is unclear how these inconsistencies will be addressed. If it becomes evident that there is a more appropriate way in which to deal with the issue of sinks, perhaps by combining several of the provisions within Articles 3.3, 3.4 and perhaps 3.7, how will this be accomplished? Clearly, it is the Subsidiary Bodies that must decide this, and given the timing of the Special Report, some consideration should be given to establishing the appropriate procedures at the next session of SBSTA.

Criteria for Ensuring Confidence in the Estimates

1. Canada, like many Parties, places great importance on the work of the IPCC in developing methodologies for estimating and reporting emissions and removals of greenhouse gases. As such, Canada supports the current inventory work program of the IPCC that is establishing good practice guidelines. However, this current work program is not examining the land-use, land-use change and forestry categories. While it may be somewhat premature for SBSTA to discuss the methodological issues related to good practice in these categories, it is extremely important that SBSTA begin the process of developing guidelines to deal with the various levels of uncertainty in greenhouse gas inventories, both as they pertain to the sinks issue and the overall inventory. It is Canada's view that with respect to land-use and land-use change activities, the current IPCC reporting guidelines are inadequate and must be improved to help in monitoring compliance. This, Canada believes, is the role that SBSTA should play to ensure that the appropriate guidance is provided.
2. For example, should a minimum level of uncertainty be established for reporting? How should these data be dealt with if this minimum level of uncertainty is not met?

PAPER NO. 3: GERMANY
(ON BEHALF OF THE EUROPEAN COMMUNITY AND ITS MEMBER STATES)

**POLICY AND PROCEDURAL ISSUES ASSOCIATED WITH ART. 3.3 AND 3.4
OF THE KYOTO PROTOCOL**

1. Policy Issues

The EU believes that it will only be possible to identify all policy issues associated with Art. 3.3 and 3.4 after the completion of the IPCC SR and its consideration by the SBSTA. The relationship between Art. 3.3 activities, possible Art. 3.4 activities and other carbon stocks itself is seen as a policy issue. In addition, the EU believes that at least the following policy issues on which agreement is needed are important:

- a) Definitions of terms related to activities under Art. 3.3, taking into account inter alia the commitment of Parties under Art 4.2 of the Convention and under Art. 2.1 (a) (ii) of the Protocol to protect and enhance sinks and reservoirs in general.
- b) Definitions of terms required related to possible additional human induced activities under Art. 3.4, taking into account inter alia the commitment of Parties under Art 4.2 of the Convention and under Art. 2.1 (a) (ii) of the Protocol to protect and enhance sinks and reservoirs in general.
- c) Reporting requirements which ensure that carbon stocks are properly accounted for in national communications, recognising that the growth and decay periods may extend over several commitment periods.
- d) Treatment of the uncertainties mentioned in the second sentence of Art. 3.4 (e.g. long term stability of sinks under conditions of climate change and socio-economic changes, uncertainties in inventory accounting).
- e) Relationship between the calculation of emissions minus removals under Art. 3.7, and any additional categories that might be agreed under Art. 3.4, considering the need to avoid double counting.
- f) Definition of a threshold above which refinements of the 1996 IPCC Guidelines shall be mandatory, taking into account the costs for data collection and management and the importance of afforestation, reforestation and deforestation for the Protocol commitment of the respective Parties.
- g) Compatibility with general forestry principles, especially those concerning sustainable forest management.
- h) Implications of sinks within the climate context and other contexts, for example on water, soils, biodiversity, and other environmental and socio-economic effects .

With respect to policy issues, the EU recalls its earlier submissions contained in documents FCCC/CP/1998/MISC.1 and Add.2 and FCCC/CP/1998/MISC.9.

Further work is necessary on the following issues:

- How the implementation of Articles 3.3 and 3.4 could promote protection and enhancement of existing carbon stocks, establishment of new carbon stocks and increased use of bioenergy.
- Treatment of below-ground carbon stocks including soil carbon, carbon in litter, woody

debris, and dry standing stems and the fate of harvested wood in a full carbon stock reporting system.

2. Procedural Issues

The overall procedural framework associated with Art. 3.3 and 3.4 is defined by decision 9/CP.4 which covers a

- recommendation, at the first COP following the completion of the IPCC SR and its consideration in the SBSTA, of a draft decision, for adoption by COP/MOP1, on
 - definitions related to activities under Art. 3.3, and
 - modalities, rules and guidelines as to how, and which, additional human-induced activities related to changes in greenhouse gas emissions by sources and removals by sinks in the agricultural soils and the land-use change and forestry categories might be included under Art. 3.4 of the Protocol, and a
- recommendation, at the first COP practicable following the completion of the IPCC SR and its consideration in the SBSTA, of a draft decision, for adoption by COP/MOP1, on guidelines for necessary supplementary information with respect to annual greenhouse gas inventories under the provisions of Art. 7.1 and 7.4 of the Protocol for reporting required in connection with Art. 3.3 and 3.4 of the Protocol.

2.1 Items for further work before the completion of the IPCC SR

- a) Consideration and analysis of the outcome of the second SBSTA workshop focussing on issues related to Art. 3.4.
- b) Consideration of the list of policy and procedural issues associated with Art. 3.3 and 3.4.
- c) Submissions of preliminary data required by the first sentence of Art. 3.4 by Parties before SBSTA 12.

2.2 Items for further work after the completion of the IPCC SR

- a) Discussion of the results of the IPCC SR in the SBSTA and possibly at a workshop.
- b) Submissions by Parties, prior to the workshop referred to under c) below, on
 - the effect on national carbon stocks of different definitions related to activities under Art. 3.3 as contained in the IPCC SR,
 - the effect on national carbon stocks of additional activities that might be included under Art. 3.4 of the Protocol, and
 - elements of guidelines for necessary supplementary information with respect to annual greenhouse gas inventories under the provisions of Art. 7.1 and 7.4 of the Protocol for reporting required in connection with Art. 3.3 and 3.4 of the Protocol as well as in connection with Art. 3.7 of the Protocol.
- c) Convening a SBSTA workshop before COP6 covering
 - definitions related to activities under Art. 3.3,
 - modalities, rules and guidelines for additional activities which might be included under Art. 3.4, and

- guidelines for necessary supplementary information with respect to annual greenhouse gas inventories under the provisions of Art. 7.1 and 7.4 of the Protocol for reporting required in connection with Art. 3.3 and 3.4 of the Protocol as well as in connection with Art. 3.7 of the Protocol.

PAPER NO. 4: JAPAN

SUBMISSION ON POLITICAL AND PROCEDURAL ISSUES ASSOCIATED WITH ARTICLE 3.3 AND 3.4 OF THE KYOTO PROTOCOL RELATED TO THE DECISION OF THE COP4

The Government of Japan submitted information related to Article 3.3 on August 26, 1998, and that related to Article 3.4 on October 26, 1998, to SBSTA. It is of prime importance that both of those submissions be fully taken into consideration and discussed in drafting the IPCC Special Report on Land Use, Land Use Change and Forestry (SRLUCF). The GOJ, however, has not submitted any information related to “Project-based activities” and “the Guidelines for reporting under the Kyoto Protocol” so far, both of which were determined to be discussed in the SRLUCF. Therefore the GOJ takes this opportunity to submit some additional information on these issues to SBSTA.

With respect to political and procedural issues associated with Article 3.3 and 3.4 of the Kyoto Protocol, the allocation of responsibility between the IPCC and SBSTA will pose a problem throughout the process. However, it seems to be impractical to make a mutually exclusive division of their roles. It will be important to give consideration as to how they can establish a complementary relationship which will bring great progress, ensuring the principle that IPCC should deal with scientific aspects while SBSTA should deal with political issues. In this sense, it would be and have been good practice to hold the IPCC Lead Authors meetings back to back with the SBSTA workshops related to Article 3.3 and 3.4.

Regarding project-based activities related to sinks, it will be important to develop the scientific understanding in the discussion of Chapter 6 of SRLUCF, and that results will be fully taken into account in the parallel discussions by SBSTA on political issues. Taking this into consideration, SBSTA should clearly request to the IPCC what is necessary to be provided by SRLUCF..

With regard to project-based activities related to sinks, there are some important issues including the following ones, that should be discussed from a political viewpoint taking into account scientific discussions.

- Consistent accounting methods with that of country level activities
- Ensuring transparency in the accounting methods
- Feasible methods for setting baseline
- Appropriate consideration of issues such as leakage, uncertainty and additionality.

At the same time, however, in addition to bearing in mind these points, it is important to establish a well-balanced system by ensuring simplified procedures and minimizing transaction cost to consequently maximize the effect of reducing CO₂ emissions and/or enhancing CO₂ removals by facilitating implementation of sink projects.

In the consideration of the reporting guidelines, firstly, it must be respected that the Task Force on National Greenhouse Gas Inventories (TFI) by IPCC was established in order to develop further discussion of scientific issues associated with inventories. It is therefore necessary to keep consistency between the scientific discussion conducted by the TFI and the

description of the Chapter 7 of SRLUCF. For example, TFI experts should participate in considering the processes of SRLUCF.

Secondly, it should also be noted that there are two guidelines for reporting currently which include sink matters: the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories and the Revised Guidelines for the Preparation of National Communications by Parties Included in Annex I to the Convention. It is required not only to define clearly the relationship between both of these guidelines and among these guidelines, “adjustment” under Article 5 and “supplementary information” under Article 7, but also to specify the items to be addressed by each of them respectively. In addition, “Good Practice” on reducing CO₂ emissions and/or enhancing CO₂ removals by sinks through LUCF activities should be discussed to supplement the IPCC Guidelines. It will be necessary to discuss how to treat them in the relationship with the reporting guidelines. Regarding these reporting issues, SBSTA must specify what IPCC should be requested to provide in SRLUCF.

Finally, SBSTA should request that scientific discussions on reporting methods in the Chapter 7 of SRLUCF adequately reflect the discussions on definitions of ARD (afforestation, reforestation and deforestation) activities under the Article 3.3, additional activities under the Article 3.4 and sink projects in the respected chapters of SRLUCF. Taking these into considerations, SBSTA should have political considerations on these issues.

PAPER NO. 5: UNITED STATES OF AMERICA

UNITED STATES SUBMISSION ON POLICY AND PROCEDURAL ISSUES

Introduction

As requested in FCCC/CP/1999/16/Add.1, we offer recommendations on the policy and procedural issues associated with Article 3.3 and 3.4 of the Kyoto Protocol. The secretariat has been asked to compile, for consideration by the SBSTA at its tenth session, a list of policy and procedural issues based on existing submissions by Parties and any further submission by parties.

Article 3.4 states that at its first session or as soon as practicable thereafter, the COP/MOP shall “decide on modalities, rules and guidelines as to *how*, and *which*, additional human-induced activities... shall be added to, or subtracted from, the assigned amounts for Parties included in Annex I ...” (emphasis added). Article 3.4 also states that “such a decision *shall* apply in the second and subsequent commitment periods” (emphasis added). Each Party has the option to apply the COP/MOP’s decision on additional activities for its first commitment period, for activities taking place since 1990; all Parties must apply that decision during the second and subsequent periods.

Policy and Procedural Issues

With respect to Articles 3.3 and 3.4, we recognize the distinct roles of the Intergovernmental Panel of Climate Change (IPCC) and SBSTA. The IPCC will address technical and scientific issues such as those relating to implications of definition interpretation, data requirements, and measurement methods in the Special Report on Land Use, Land Use Change and Forestry. SBSTA will be required to address a range of policy and procedural issues that focus more on *how* activities can be added to the Protocol, which is as important as resolving the scientific questions. The two issues are often linked. For example, Parties will need scientific information concerning data quality, methodological reliability and stability of sequestered carbon to assist them in adding activities. Parties will need to determine principles, criteria, and decision rules for adding activities.

We believe that consideration of a process may be best guided by a discussion of the principles and criteria desired. These include the desire for transparency and verifiability, a need to meet national circumstances, cost-effectiveness, and contribution to protection and enhancement of natural sinks as is called for in the FCCC and the Kyoto Protocol.

Principles for guiding the development of a process to select additional activities: Our actions must be consistent with the relevant articles of the FCCC to act to mitigate climate change and to protect sinks, and with the relevant articles of the Kyoto Protocol, in Articles 2 and 3:

Framework Convention on Climate Change text:

Article 3.3: "measures should be cost-effective...[and] be comprehensive, cover all relevant sources, sinks and reservoirs of greenhouse gases"

Article 3.4: "measures...should be appropriate for the specific conditions of each Party"

Article 4.1.d: "Promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs...including biomass, forests...as well as other...ecosystems"

Kyoto Protocol text:

Article 2.1.a.ii: "protection and enhancement of sinks and reservoirs" and

Article 2.1.a. iii: "promotion of sustainable agriculture in light of climate change considerations"

Article 3.4: "modalities, rules and guidelines as to how, and which, additional human-induced activities related to changes in greenhouse gas emissions by sources and removals by sinks in the agricultural soils and the land-use change and forestry categories shall be added to, or subtracted from, the assigned amounts"

Specific *policy and procedural* questions that should be considered include:

1. How will Parties propose activities and how will proposals be evaluated?
2. Do we need to set up guidelines for a Party to follow, e.g., similar to the inventory guidelines? If so, when?
3. Will we only address additional activities under Article 3.4 once, or agree to consider adding to the list of accepted activities over time?
4. Should Parties be allowed to select from a list of 3.4 activities, or will they have to take into account all approved categories, during the first commitment period?
5. Should a Party's ability to use a category depend upon its having sufficient documentation and data quality?

Time Line for Addressing Policy and Procedural Issues

In order to be prepared to make recommendations related to activities under Article 3.3 recommendations on additional human induced activities under Article 3.4, we recommend:

1. Procedural issues be included on the agenda for the SBSTA April workshop on Article 3.4. Workshop action on this issue could include: compilation and distribution

of the March 1 submissions; presentation by Parties at workshop on policy and procedural issues; a working group session to discuss policy and procedural issues, and preparation of a summary report.

2. Policy and procedural issues be included on the agenda at SBSTA 10. Discussion would be based on the March 1 submissions and the workshop summary report.
3. Policy and procedural issues be included on the COP 5 agenda. Discussion would be based on the March 1 submissions, the workshop summary report, and discussions at SBSTA 10.

PART D. CROSS-CUTTING ISSUES

PAPER NO. 1: ALLIANCE OF SMALL ISLAND STATES (AOSIS)

INITIAL VIEWS OF THE ALLIANCE OF SMALL ISLAND STATES (AOSIS) ON LAND-USE, LAND-USE CHANGE AND FORESTRY

The Alliance of Small Island States (AOSIS) welcomes this opportunity to present further comments on these very important issues. AOSIS had provided input on these issues in a previous submission (see FCCC/CP/1998/Misc.1), and participated actively in the discussion at the 4th Conference of the Parties.

At the outset AOSIS wishes to stress that the continuing dialogue in the subsidiary bodies regarding these issues should in no way be construed as being prejudicial to the work and the outcome of the Special Report on land-use, land-use change and forestry being prepared by the Intergovernmental Panel on Climate Change (IPCC). Although certain basic principles can and will be expressed by AOSIS there are still a large number of outstanding factors which will have to be deliberated upon by the IPCC prior to AOSIS making final policy decisions on the issues of land-use, land-use change and forestry. Such decisions can only be taken after a full and in-depth discussion on the findings of the IPCC Special Report.

This submission should therefore be viewed as a contribution to further enhance the debate prior to the in-depth deliberations which will have to take place after the Special Report on land-use, land-use change and forestry has been submitted to the subsidiary bodies by the IPCC.

I. Introduction

It is the view of AOSIS that to stabilize atmospheric greenhouse gas concentrations at safe levels the international community is required to place very strict limits on greenhouse gas emissions at source, i.e. from the use of fossil fuels, and hence total fossil fuel combustion and a substantial net increase is required in the levels of biotic carbon stocks. The emphasis that AOSIS has placed here is not accidental. It is derived from the very basic principle that the international community must move away from its excessive dependence on fossil fuels - the principal cause of green house gas emissions, and the principle that it is neither possible nor desirable for policy purposes to prevent climate change by focusing on sequestration. In order to achieve stabilization of greenhouse gas concentrations, it is the view of AOSIS that the primary priority should rest with the reduction of emissions and that enhancement of sinks is an additional activity in the short term.

Many countries may be able to carry out such activities themselves as these activities do not require the same level of resources as that required for emissions reductions efforts.

AOSIS is in favor of full carbon accounting as a task to be achieved in the context of the Framework Convention on Climate Change and the Kyoto Protocol. There is a need for a system or methodology which is transparent and enables the verification of changes in carbon stock in all carbon pools. The carbon accounting would be established to allow for the

various activities on a time scale which will reveal long-term carbon storage.

However, this represents an ideal situation whereby a comprehensive approach would be possible. Realistically, AOSIS is of the view that this task would at this stage be impossible to achieve. Nevertheless it is expected that the Subsidiary Body on Scientific and Technological Advice should deliberate on the matter to see what solutions may be found in the near term. It is also possible that no additional sequestration activities will be included due to the great uncertainties surrounding many of these activities.

II. Accounting for additional activities

Article 3.4 of the Kyoto Protocol stipulates that the Annex 1 Parties shall provide data that would enable a calculation of each Party's carbon stocks. Presumably this information, and the IPCC Special report on land-use, land-use change and forestry, would enable the Conference of the Parties serving as the Meeting of the Parties to make an informed decision on how and which additional human-induced activities might be included. This huge assumption aside, AOSIS is concerned that since the article does not affect the baseline emissions defined in article 3.7, the effect would be that for every further sink accounted for there would be an increase in the emissions "allowed" from fossil fuel sources. For the first commitment period, this could have the result of allowing a continuation of the business as usual scenario, in terms of the real emissions seen by the atmosphere.

Therefore, AOSIS considers that no additional categories of sinks should be added to the Kyoto Protocol under article 3.4 until the current difficulties of accounting for sinks allowed by the Kyoto Protocol under article 3.3 are satisfactorily resolved.

III. Risks involved with over-reliance on sinks

AOSIS continues to reaffirm the ultimate objective of the Framework Convention on Climate Change in this context of the discussion. As stated earlier, it is the net emissions of climate relevant gases that will determine their concentrations in the atmosphere. But this is not a static system. To achieve stabilization over the long term, one must take account of the dynamics over time, of the sources and the sinks, and of various processes taking place in the atmosphere. AOSIS stresses that carbon dioxide emissions can not be offset against sinks because of the lack of correspondence between the lifespan and durability of a sink and the residence time of carbon dioxide in the atmosphere.

AOSIS has furthermore strongly advocated utilizing technological innovations for the reductions of greenhouse gas emissions, and where currently no such technology exists, to assist the development of technology in areas where it is lacking. Incentive schemes are thus of greatest importance. AOSIS considers focusing on sequestration will weaken the signal to markets to develop alternatives to carbon intensive fuels and uses, and will thus stifle technological innovation.

The IPCC have cautioned that rapid climate change may lead to forest dieback, which would alter the terrestrial uptake and release of carbon. The decomposition of forests, let alone the

increases in the risks of forest fires, in such a scenario could result in large amounts of carbon being released into the atmosphere as the forests change, and before other plants take the place of the former vegetation in an adaptation scenario.

Again, given that atmospheric stabilization will require large increases in stored biotic carbon, maintained in a secure and stable form, AOSIS is of the view that certain incentives for preserving and enhancing sinks are appropriate, while emphasizing and ensuring that in the near and medium terms the main efforts of Annex 1 Parties should be concentrated on the reduction of emissions from the use of fossil fuels.

PAPER NO. 2: PHILIPPINES

**ADDITIONAL PHILIPPINE POSITION PAPERS ON ISSUES FOR THE
10TH SESSIONS OF THE SUBSIDIARY BODIES OF THE FRAMEWORK
CONVENTION ON CLIMATE CHANGE ON ISSUES RELATED TO
ARTICLE 3.4 OF THE KYOTO PROTOCOL**

In addition to the comments provided by the Philippines on matters related to Land-use Change and Forestry, as contained in document no. FCCC/CP/1998/MISC.1, please add the following clarification:

The official definition of “forest”, as contained in Philippine documents is “an area of one hectare or more which is at least 10 percent stocked with forest trees (including seedlings and saplings), wild palms, bamboo or brush. Narrow strips of land bearing forest must at least be 60 meters wide and one hectare in size to qualify as forest. Industrial tree plantations and tree farms of one hectare or more in size are also included.”

Agro-forestry is defined as “land management which combines agricultural crops and forest plants and/or animals simultaneously or sequentially, and applies management practices which are compatible with cultural patterns of the local population.” As such, agro-forestry should necessarily be part and parcel of the definition for forests.

- - - - -