

10 June 1998

ENGLISH ONLY

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE

Eighth session

Bonn, 2-12 June 1998

Agenda items 6 (b) and (c) and 8 (b) to (d)

SUBSIDIARY BODY FOR IMPLEMENTATION

Eighth session

Bonn, 2-12 June 1998

Agenda item 8 (b) to (d)

PREPARATORY WORK NEEDED FOR THE FOURTH SESSION OF THE  
CONFERENCE OF THE PARTIES ON THE ITEMS LISTED IN  
DECISION 1/CP.3, PARAGRAPH 5

Submissions by Parties

Addendum

1. A submission received from Canada, on behalf of a number of Parties, was recently included in document FCCC/SB/1998/MISC.1/Add.1.
2. Ukraine has now stated its wish to be associated with that submission.
3. This revision of document FCCC/SB/1998/MISC.1/Add.1 has been issued to record the association of Ukraine with the above-mentioned submission from Canada on behalf of a number of Parties.

FCCC/SB/1998/MISC.1/Add.1/Rev.1

BNJ.98-

CONTENTS

Paper No.		Page
1.	Canada (on behalf of Australia, Iceland, Japan, New Zealand, Norway, Russian Federation, Ukraine and the United States of America)  (Submission dated 10 June 1998)	3

PAPER NO. 1: CANADA  
(on behalf of Australia, Iceland, Japan, New Zealand, Norway,  
Russian Federation, Ukraine and the United States of America)

NON-PAPER ON PRINCIPLES, MODALITIES, RULES AND GUIDELINES  
FOR AN INTERNATIONAL EMISSIONS TRADING REGIME  
(In particular for verification, reporting and accountability)

1. PURPOSE

1. This paper sets out the preliminary views of Australia, Canada, Iceland, Japan, New Zealand, Norway, Russian Federation, Ukraine and the United States of America on the principles, modalities, rules and guidelines which provide the framework for international emissions trading. It is intended to facilitate on-going discussion on the development of an open international emissions trading system. Participation in the international trading system would be entirely voluntary.

2. The focus of the paper is on key technical design features which are necessary to provide for an effective and efficient trading system. The key objectives of the design features are to keep the system as simple and transparent as possible and minimise the transaction costs of trading while at the same time remaining consistent with the Protocol's environmental objective of achieving at least a 5% overall reduction below 1990 levels of greenhouse gas emissions by 2008-2012 for Annex B Parties.

3. A summary of the international emissions trading system proposed in this paper is contained in Appendix A.

2. INTRODUCTION

4. In December 1997, the Kyoto Protocol established emission targets for Annex B Parties. International trading is established in Article 17 of the Protocol<sup>1</sup>. The Conference of the Parties is authorised to decide on principles, rules, modalities and guidelines, in particular for verification, reporting and accountability.

5. Domestic measures associated with international emissions trading are for individual Parties to determine and, as such, are not addressed in this paper (beyond the need for national recording systems). However, an important consideration in designing an international emissions trading system is not to restrict the right of each Party to put in place the domestic measures it chooses. Issues such as whether and how trading is devolved to legal entities and how revenue from trading might be treated have not been addressed as these are matters for individual Parties to decide.

---

<sup>1</sup> Any reference to an 'Article' or 'Articles' in this paper refers to Articles of the Kyoto Protocol. Similarly, any reference to a 'Party' or 'Parties' refers to Parties of the Protocol.

### 3. WHAT IS EMISSIONS TRADING?

6. Emissions trading is a market based approach which enables participants to cooperatively minimise the costs of achieving an environmental objective. In the case of the Kyoto Protocol, an environmental objective has been established as the aggregate total of all individual quantified emission limitation and reduction commitments, as set out in Annex B of the Protocol for the first commitment period (2008-2012).

7. Through emissions trading, a market price for emissions abatement will emerge which reflects the marginal cost of emissions abatement<sup>2</sup> across all market participants. When participants have exhausted the opportunities available for domestic emission reductions, or sink enhancement as per Article 3(3), at a cost below the international market price, they can elect to purchase the requisite 'assigned amounts' from other Parties (or entities). In this way, the environmental benefits are achieved, irrespective of where the reductions take place, and at a lower cost than if trading was not available.

8. Since emissions trading is entirely voluntary, each trade will be to the mutual benefit of both participants to the trade<sup>3</sup>. Cooperation between countries in this manner will lower the aggregate cost of emission abatement to below that which would be incurred by countries acting alone. Thus, the incentives provided by trading will facilitate the achievement of the Protocol's environmental objective; and at a lower cost than would be incurred without trading<sup>4</sup>.

### 4. DESIGN FEATURES

9. In developing a framework for international emissions trading, several simple design features need to be considered to enhance the integrity of the trading system and increase the level of certainty under which it operates. These design features should facilitate the efficient operation of a competitive market which will enhance the achievement of the environmental objective.

10. Parties could trade directly and/or choose to devolve trading responsibility to legal entities. Devolving the ability to trade would be likely to increase the number of trades, thus enhancing competition in the market. Private sector legal entities would have direct knowledge of their abatement opportunities and costs and would likely be better placed to make decisions based on this information than would governments.

---

<sup>2</sup> The marginal cost of emissions abatement is the cost of undertaking the next cheapest unit of emissions abatement over and above the current level of abatement.

<sup>3</sup> Use of the word 'trade' in this paper applies to acquisitions or transfers.

<sup>4</sup> Experience with emissions trading, mainly in the United States, has demonstrated it to be a cost-effective tool for addressing air pollution problems. For example, in the sulphur dioxide (SO<sub>2</sub>) trading regime, firms are reducing emissions in excess of requirements in Phase I of the programme and accumulating a large bank of allowances for use in Phase II that begins in January 2000. Additionally, the price of allowances is much lower than anticipated and the cost to industry of emission reductions has been dramatically less than projections by both industry and regulators anticipated before the adoption of the programme.

11. To enhance the efficiency of the market, the unit of trade should be clearly denominated and freely transferable amongst trading participants. Rules which encourage transparency and information disclosure and provide appropriate incentives for compliance can also aid the efficient operation of the market<sup>5</sup>. Comprehensively specified and certain rules assist in minimising the transaction, administration and compliance costs of trading. In order to be accountable and certain, the rules (including monitoring and enforcement mechanisms) would apply to all participating Parties. Rules should maintain enough flexibility to accommodate changes to the system in the future (e.g. new entrants).

## 5. WHAT IS THE TRADABLE UNIT?

12. Assigned amount units (AAUs) would be the standardised unit of trade. AAUs would represent a tradable form of an Annex B Party's 'assigned amount'. Parties who wished to trade would issue tradable AAUs from its 'assigned amount'. Parties would be required to identify the AAUs that they issued with a unique serial number which identified the country of origin and the relevant commitment period<sup>6</sup>. This would ensure that each AAU is unique internationally.

13. 'Assigned amounts' can be traded, whether they derive from, for example, Articles 3(7), 3(3), 6 and/or 12. There would be no differentiation of AAUs on the basis of data certainty for gases or sources.

### 5.1 Specification of AAUs

14. Consistent with Article 3(1), AAUs would be denominated in 'CO<sub>2</sub> equivalent'. Consistent with Article 5(3), Global Warming Potentials (GWPs) would be used as the appropriate conversion factors to convert non-CO<sub>2</sub> gases into CO<sub>2</sub> equivalent terms and would be fixed for a commitment period. For the first commitment period, Parties should use the revised 1996 Guidelines for National Greenhouse Gas Inventories of the IPCC. GWPs used by Parties should be those provided by the IPCC in its Second Assessment Report based on the effects of the greenhouse gases over a 100 year time horizon, taking into account the inherent and complicated uncertainties involved in global warming potential estimates.

15. An AAU would express one metric tonne of CO<sub>2</sub> equivalent emissions. All AAUs would be valid for the commitment period in which they are issued and indefinitely thereafter until used. An AAU could only be used once to offset emissions equal to the CO<sub>2</sub> equivalent value (i.e. AAUs are a consumable commodity)<sup>7</sup>.

---

<sup>5</sup> Transparency of the regime refers to public disclosure of information, more specifically, disclosure of emission levels, assigned amounts and transfers between trading participants. Disclosure of this information would be based on the public reporting of these data by Parties and reports by the FCCC Secretariat.

<sup>6</sup> It may be useful if a standardised format was used for serialisation. It would also simplify and enhance the 'book keeping' process for Parties when recording acquisitions and transfers of AAUs.

<sup>7</sup> A Party could request that any AAUs not used within a current commitment period be banked forward into a subsequent period, consistent with Article 3(13). This procedure could become automatic at the end of each commitment period if requested by that Party.

## 6. WHO CAN PARTICIPATE IN THE TRADING REGIME?

16. The participants in the international trading regime could be Parties (i.e. governments) and/or legal entities authorised by that Party to trade. Legal entities could include private individuals, companies, societies (which could include environmental and other non-governmental organisations), industry groups and brokers.

17. Devolution of the right to trade to legal entities would be at the discretion of each participating Party. However, responsibility for the Kyoto Protocol commitments would always remain with the Government as Party to the Protocol.

## 7. CONDITIONS TO TRADE 'ASSIGNED AMOUNTS' INTERNATIONALLY

18. Each Annex B Party will need to meet conditions to ensure the integrity of the system. These conditions are:

- (a) Parties must comply with Articles 5 & 7 of the Kyoto Protocol.
- (b) Parties must establish and maintain a national system for recording their 'assigned amount' and accounting and tracking AAUs held or traded by the Party and/or its legal entities.

19. Compliance with the conditions would be assumed to continue unless a breach of the conditions was established under the Protocol. Failure to maintain compliance with the conditions could result in suspension of the right for the Party and its legal entities to transfer AAUs internationally. However, the Party or its legal entities would not be precluded from acquiring AAUs.

## 8. HOW MUCH CAN BE TRADED?

20. Article 17 provides that trading is to be supplemental to domestic actions but does not quantify that term or authorise the Conference of the Parties to quantify it.

21. International emissions trading will be more effective in achieving emissions reduction at lowest cost if there are no restrictions on the quantity of AAUs able to be transferred or acquired to contribute to compliance with a Party's 'assigned amount'. The ability to trade without quantitative restriction would encourage ratification of the Protocol; encourage earlier emission reductions and minimise the overall cost of achieving the collective Annex B environmental objective.

22. Internationally mandated limits on the quantity available to be traded, by substantially reducing the benefits available from trading, would increase the cost of emission reductions; discourage ratification of the Protocol; and ultimately, in the long term, reduce the quantity of reductions that can be achieved, thus delivering less environmental benefit.

## 9. INSTITUTIONAL REQUIREMENTS

23. Markets play a central role in the efficient exchange of “goods” such as commodities, shares, bonds and financial instruments. Existing international markets have a number of well-established practices for contracting, delivery and settlement. An issue for international emissions trading is whether it is necessary to establish a new official institution to facilitate trades. Given the large number of existing commercial market institutions that handle international transactions (both financial and commodity), there seems no benefit in establishing a new international forum/institution to cater for trades of AAUs<sup>8</sup>. The only additional function, over and above those required in the absence of trading, is a system to record ownership and transfers of AAUs at the national level. This system is discussed below.

### 9.1 National Recording System

24. The national recording system of a Party would record AAUs issued by the Party and transfers and acquisitions of AAUs by the Party, including those AAUs devolved to legal entities, and subsequent transactions by those entities. The national recording system would also be required to provide verification of ownership of AAUs. A Party could choose to maintain a list of all legal entities it authorises to trade.

25. By recording every change of legal ownership, the national recording system would protect against the possibility of counterfeit AAUs being generated and questions regarding legal ownership of legitimate AAUs<sup>9</sup>.

26. Each Party would be required to report annually on trading activity to a designated authority approved by the FCCC COP<sup>10</sup>. This report would identify the aggregate quantity of international trades and any changes to the Party’s ‘assigned amount’ pursuant to Articles 3(3), 3(10), 3(11) and 3(12). This would enable the designated authority to produce a synthesis report of each Party’s ‘assigned amount’, including AAU holdings by each Party and transfers to, and acquisitions from, other Parties.

27. The synthesis report would confirm, at an aggregate level, that correct double-entry book keeping between Parties had occurred. In the event of discrepancies in the reports submitted by Parties, the designated authority would request that those Parties investigate and correct such discrepancies.

28. Two or more Parties could voluntarily consolidate their national recording systems

---

<sup>8</sup> For example, in the USEPA sulphur dioxide (SO<sub>2</sub>) market, no forum or institution was established to facilitate the exchange of SO<sub>2</sub> allowances. Instead, several brokerages have emerged to facilitate private transactions.

<sup>9</sup> “Contract trades” for transferring or acquiring AAUs at a specified time in the future would not need to be recorded until the actual trade occurred and the AAUs were officially transferred to the new owner (i.e. the legal ownership changed).

<sup>10</sup> Reporting annual trading activity would complement annual emission inventories prepared by Parties under Article 7. Information from a Party’s national recording system could be made publicly accessible more frequently.

into one system, provided that each individual Party's account was reflected. This might simplify tracking of AAU transfers and preparation of synthesis reports as well as reduce the possibility of discrepancies between Parties' reports on trading activity.

## 9.2 Tracking AAU holdings

29. One way to track AAU trades by the Party and its legal entities would be for the national recording system to operate an account for the Party and accounts for all legal entities authorised to trade.

30. All trades of AAUs would result in a debit and credit to the relevant accounts (i.e. a simple double-entry accounting system). For international trades, the 'seller' would request that its national recording system remove the AAUs in question from its account and authorise the national recording system of the 'buyer' to credit the buyer's account with those AAUs. For domestic trades (i.e. those that did not cross national borders) only the national recording system in that country would need to be involved.

31. National recording systems would only be required to track the account from which AAUs are to be transferred from (or to) and the quantity of AAUs to be transferred (including the serial numbers for the purpose of verifying ownership). Contractual information beyond the number of AAUs transferred between participants would not have to be divulged. Participants could choose not to divulge price details of individual trades to protect commercially sensitive information. Average current prices would be revealed through market mechanisms such as exchanges and brokers.

## 10. VERIFICATION AND ACCOUNTABILITY

32. The trading rules should provide appropriate compliance and enforcement mechanisms relevant to the trading system. Other compliance issues could be addressed under Article 18.

33. One enforcement mechanism under the trading rules could be to deny (or restrict) the right of a Party (and its legal entities) to transfer AAUs if they are found to be in breach of the trading rules and/or are no longer in compliance with the conditions for issuing AAUs (e.g. in breach of conditions to trade AAUs internationally).

### 10.1 Establishing Compliance

34. Each Party will be assessed for compliance at the end of the commitment period. For a Party to be found in compliance with Article 3, its emissions must be no more than its 'assigned amount'.



35. At the end of the commitment period and following finalisation of emission inventories, each Party would be required to submit a report to the designated authority<sup>11</sup>. This report would include emissions for the commitment period and aggregate information on the number of acquisitions and transfers of AAUs and any changes to a Party's 'assigned amount' pursuant to Articles 3(3), 3(10), 3(11) and 3(12) (i.e. a compilation of annual emission inventories and information on trading activity). Based on this information, the Party could ascertain whether it had exceeded its 'assigned amount'.

36. The report would also indicate the serial numbers of AAUs used by the Party for the purposes of contributing to compliance. AAUs used by the Party to contribute to compliance would no longer be valid and would be required to be removed from the Party's national recording system (i.e. AAUs are a consumable commodity). At a Party's request, any AAUs not used to offset emissions or the remaining portion of its 'assigned amount' would be banked forward into the next commitment period pursuant to Article 3(13).

37. A Party that had exceeded its 'assigned amount' would be able to come into compliance during a short grace period (e.g. three months). To meet the shortfall, a Party could either purchase AAUs within the grace period and/or utilise other options to meet the shortfall. After the completion of the grace period, Parties would re-submit a (modified) report. Parties who were non-complying could face non-compliance consequences developed under Article 18.

## 11. FURTHER WORK

38. Some rules or a process to deal with instances of anti-competitive behaviour may be necessary. Issues regarding allocation of risk need to be further explored.

---

<sup>11</sup> The submission of final reports would depend on the speed in which national inventories could be prepared by each Party. It would be in the interest of an efficient process in this regard that Article 5.1 of the Protocol, pertaining to national inventories, addressed this issue and required inventories to be submitted within a relatively short timeframe.

## APPENDIX A - SUMMARY OF THE TRADING SYSTEM

1. International trading is established in Article 17 of the Kyoto Protocol.
2. Parties could elect to participate in the trading system.
3. The tradable unit would be Assigned amount units (AAUs) i.e. AAUs are the tradable form of 'assigned amounts'.
4. AAUs would be denominated in CO<sub>2</sub> equivalent. The unit of trade would be one metric tonne. GWPs used to calculate CO<sub>2</sub> equivalence would be fixed for a commitment period.
5. Each Annex B Party could issue serialised AAUs from its 'assigned amount'.
6. Each AAU would have a unique serial number which identified the country of origin and the commitment period in which the AAUs were issued.
7. AAUs would be valid until used to offset emissions for the purposes of contributing to compliance (i.e. once used to offset emissions, AAUs would be removed from the trading system).
8. AAUs acquired by a Party with an 'assigned amount' would be added to the Party's 'assigned amount'. Similarly, AAUs transferred by a Party would be subtracted from its 'assigned amount'.
9. 'Assigned amounts' can be traded, whether they derive from, for example, Articles 3(7), 3(3), 6 and/or 12.
10. Parties could authorise legal entities to acquire and/or transfer AAUs. Issues such as whether and how trading is devolved to legal entities and how revenue from trading might be treated are matters for individual Parties to decide.
11. Governments, as Parties to the Kyoto Protocol, would remain responsible for compliance with their 'assigned amount'.
12. Each Annex B Party who wanted to trade its AAUs internationally (and/or allow their legal entities to do so) will need to meet the following conditions:
  - (a) Parties must comply with Articles 5 & 7 of the Kyoto Protocol.
  - (b) Parties must establish and maintain a national system for recording their 'assigned amount' and accounting and tracking AAUs held, transferred or acquired by a Party and/or its legal entities.
13. The national recording system of a Party would be required to:
  - (a) record AAUs issued by the Party;
  - (b) record transfers and acquisitions of AAUs by the Party (including those AAUs transferred by the Party to legal entities, and subsequent transactions by those entities);
  - (c) provide verification that a legal entity transferring AAUs was the registered owner of the AAUs in question; and
  - (d) retire AAUs used to offset emissions.
14. Each Party would be required to report annually on trading activity to an authority designated by the COP identifying the quantity of international trades and any changes to its 'assigned amount' pursuant to Articles 3(3), 3(10), 3(11) and/or 3(12).
15. Each Party will be assessed for compliance at the end of the commitment period. For

a Party to be found in compliance with Article 3, its emissions must be no more than its 'assigned amount'. To assess compliance at the end of the commitment period (and following finalisation of emission inventories), each Party would be required to submit a report to the designated authority on emissions for the period and aggregate information on the number of acquisitions and transfers of AAUs and any changes to a Party's 'assigned amount' pursuant to Articles 3(3), 3(10), 3(11) and 3(12) (i.e. a compilation of annual emission inventories and information on trading activity).

16. Parties would inform the designated authority which AAUs (identified by serial number) were used to offset emissions. Such AAUs would no longer be valid for use in a subsequent commitment period.
17. A Party that had exceeded its 'assigned amount' would be able to come into compliance during a short grace period (e.g 3 months). To meet the shortfall, the Party could either acquire AAUs within the grace period and/or utilise other options to meet the shortfall.
18. After the completion of the grace period, Parties would re-submit a modified report. Parties who were non-complying could face non-compliance consequences developed under Article 18.
19. Any AAUs not used to offset emissions or remaining portions of a Party's 'assigned amount' not used could be banked forward into the following commitment period at the request of a Party (including on behalf of legal entities).

-----