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NEGOTIATING THE CLIMATE AWAY

REPORT CARD ON ENVIRONMENTAL INTEGRITY OF OECD NATIONS' CLIMATE SUMMIT NEGOTIATION POSITIONS

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EXECUTIVE SUMMARY

Until November 24, 2000 the nations of the world are meeting in den Hague, Netherlands, to negotiate the rules under which they will reduce greenhouse gas emissions. The 1997 Kyoto Protocol assigned to each of the world's developed countries a maximum amount of greenhouse gas emissions for the period 2008 to 2012. But it also allowed nations to trade their assigned amounts of allowable emissions, to get credit for some greenhouse gases absorbed by forests and to get credit for emission reductions in developing countries. The rules for these mechanisms were either cursory or completely undecided. The Hague summit will finalize those rules.

There is a risk that many of the commitments contained in the Kyoto Protocol will be undermined by a series of loopholes. While these loopholes are often justified as providing flexibility so that nations can achieve their greenhouse gas emission targets at lower cost, in many cases they allow an increase in net global emissions of greenhouse gases.

This report card evaluates the negotiating positions of the 27 nations that are members of the Organization for Economic Co-operation and Development (OECD) and signatories to the Framework Convention on Climate Change.[1] These are the world's leading nations. They are economically the most powerful and most developed, and they include most of the largest per capita greenhouse gas emitters in the world.

Nations' positions are evaluated on the basis of four loopholes. The four loopholes are:

- **Overselling:** Overselling is the risk that a nation will sell parts of its assigned amount of allowable emissions that it needs to cover actual emissions. If a nation oversells it assigned amount and another nation uses the purchased assigned amount to increase emissions, global emissions increase. Nations score points for suggesting mechanisms that either safeguard against oversells or ensure that the purchasing nation has responsibility for ensuring that real reductions occur.

- **Hot Air:** Hot air is the portion of a nation's allowable emissions quota that is excess to that nation's business as usual emissions for the 2008 to 2012 period. Russia and a number of eastern European nations received an assigned amount under the Kyoto Protocol that was intended to give them flexibility in rebuilding their economies. However, it is now clear that even if these nations take no actions to reduce emissions, the amount of allowable emissions assigned to them is far in excess of their possible emissions in the 2008 to 2012 period. If they are allowed to trade this excess, emissions trading will allow global emissions to increase. Nations score points for suggesting mechanisms that either prohibit sales of hot air or reduce the amount of hot air available.
- **Sinks:** Sinks is the term given for forests, soils and other processes that absorb (i.e. act as a sink for) carbon dioxide or other greenhouse gases. While forests and soils can be sources, for the next several decades they are projected to be major net sinks of greenhouse gases in almost all industrialized nations. If nations receive credit for all the carbon absorbed by their forests, global greenhouse gas emissions increase. Nations score points for opposing the addition of new sink categories under the Kyoto Protocol and for suggesting mechanisms that eliminate or reduce the extent of credit for carbon absorption that would have occurred anyway.
- **CDM Baselines:** The Clean Development Mechanism is the mechanism by which developed countries can receive credit for emission reductions occurring in developing nations. Reductions are measured by comparing actual emissions with a baseline that represents what emissions would have been in the absence of the CDM or the project. If baselines are weak and credit given for reductions that would have occurred in the absence of the project, or if credits are given for projects that would have occurred in the absence of the CDM, the CDM will allow global greenhouse gas emissions to increase. Nations score points for restricting the CDM to project types that are less likely to occur anyway, criteria that screen out business as usual projects, supporting technical guidelines on development of baselines and supporting stringent approaches to baselines.

These are not the only loopholes or the only environmental concerns with the Protocol, but they have been chosen because of their clear potential to allow an increase in net global greenhouse gas emissions.

DISCLAIMER

Parties are scored on the basis of submissions available on the UNFCCC Secretariat website, negotiation interventions reported in Earth Negotiations Bulletins and interventions observed by the authors. In some cases non-papers submitted by the Parties may not be reflected in the scores. Also the report card is based on submissions up to the end of October, 2000. Recent changes in position, or changes in position that have not been made public may not be reflected in the scores. It is the sincere hope of the authors that the Parties with the lowest scores will alter their stances at CoP6.

While the authors have attempted to be as objective as possible scoring positions is ultimately subjective and dependant on interpretations. It is also sometimes dependent on second hand observations. We apologize for any misinterpretations of Party positions.

Finally, the choice of loopholes influences Parties' scores. If compliance system positions were considered it is likely that Australia and Japan would stand out for their lack of support for binding consequences. If support for nuclear in the CDM were considered, Canada, the US, Japan and, to a lesser extent, the UK and France would receive low scores because of their support for nuclear.

For each of the four loopholes, nations receive a grade from 0/10 to 10/10. A score of 10/10 represents a position that is most likely to effectively eliminate the loophole. The difference between the score and ten is then multiplied by a factor representing the estimated size of the loophole (Thus weighting loopholes by their significance).

Since completion of this report, several Parties have shifted their positions. An update is at the end of the report. Japan, Canada, US and New Zealand scores are adjusted. The parties rated as having the worst, second worst and third worst climate negotiation positions are Japan, Canada and the United States.

RANK	NATION	TOTAL LOOPHOLE MEGATONNES	TOTAL SCORE (MAXIMUM SCORE = 40)
1.	Austria	3,727	34
2.	Belgium	3,727	34
3.	Denmark	3,727	34
4.	Finland	3,727	34
5.	France	3,727	34
6.	Germany	3,727	34
7.	Greece	3,727	34
8.	Ireland	3,727	34
9.	Italy	3,727	34
10.	Luxembourg	3,727	34
11.	Netherlands	3,727	34
12.	Portugal	3,727	34
13.	Spain	3,727	34
14.	Sweden	3,727	34
15.	United Kingdom	3,727	34
16.	Korea	8,492	37
17.	Switzerland	8,526	38
18.	Poland	9,302	22
19.	Hungary	12,314	18
20.	Czech Republic	12,014	19
21.	Norway	15,655	10
22.	New Zealand	18,905	7
23.	United States	19,388	9
24.	Iceland	19,988	6
25.	Australia	19,988	6
26.	Canada	24,772	1.5
27.	Japan	24,922	1

Most Climate Friendly

Least Climate Friendly

INTRODUCTION

The Kyoto Protocol assigned to each of the world's developed countries a maximum amount of greenhouse gas emissions for the period 2008 to 2012. But it also allowed nations to trade their assigned amounts of allowable emissions, to get credit for some greenhouse gases absorbed by forests and to get credit for emission reductions in developing countries. The rules for these mechanisms were either cursory or completely undecided.

Until November 24, 2000 the nations of the world are meeting in den Hague, Netherlands, to finalize rules under which they will reduce greenhouse gas emissions. This climate summit is the most important summit since 1997, when the Kyoto Protocol was negotiated.

There is a risk that many of the commitments contained in the Kyoto Protocol will be undermined by a series of loopholes. While these loopholes are often justified as providing flexibility so that nations can achieve their greenhouse gas emission targets at lower cost, in many cases they allow an increase in global emissions of greenhouse gases, undermining the purpose of the Kyoto Protocol.

This report card evaluates the negotiating positions of the 27 nations that are members of the Organization for Economic Co-operation and Development (OECD) and signatories to the Framework Convention on Climate Change.[2] These are the world's leading nations. They are economically the most powerful and most developed, and they include most of the largest per capita greenhouse gas emitters in the world.

The next section gives background to the basics of the Kyoto Protocol. The section after that introduces the four loopholes and the process for scoring them. The final section discusses each of the loopholes and scores each of the Parties' positions.

BACKGROUND

Before proceeding with the Report Card, this section provide readers with some context about the Framework Convention on Climate Change or the Kyoto Protocol. Decisions made in previous agreements define what is being negotiated at the climate summit in the Hague — officially known as the 6th Conference of the Parties to the UN Framework Convention on Climate Change or "CoP6."

THE NEGOTIATING BLOCS

The negotiations are dominated by several groupings of nations. These include:

The Umbrella Group. Canada, the US, Russia, Australia, Norway, New Zealand and Iceland all belong to the Umbrella Group. The Umbrella Group has been the leading proponent of flexibility in the negotiations. Umbrella Group positions have been criticised as favouring flexibility over environmental integrity.

The European Union. The European Union is generally seen as a greater champion of environmental integrity than the Umbrella Group. However, its positions on some issues are weak, certain positions are poorly developed and it is not clear the extent to which EU positions reflect positioning for domestic consumption as opposed to strong commitments.

G-77/China. Along with the Umbrella Group and EU, the G-77/China is the third main negotiating bloc. Its members include groups with diverse interests, ranging from The Association of Small Island States (AOSIS) to Organization of Petroleum Exporting Countries (OPEC), united by their common interest in developing country issues such as technology transfer and funding for adaptation.

AOSIS. The Association of Small Island States. With members whose survival is endangered by sea level rise, AOSIS has taken strong environmental stance on many issues.

Environmental Integrity Group. Switzerland, Mexico and Korea. This group has distinguished itself as consistently developing positions that are environmentally defensible, while recognising the need for flexibility.

THE FRAMEWORK CONVENTION

The United Nations Framework Convention on Climate Change (FCCC) was one of several key environmental treaties negotiated at the June 1992 Earth Summit in Rio de Janeiro. Almost 160 nations have ratified the FCCC to date. These nations are referred to as "Parties." The ultimate objective of the FCCC is to achieve "stabilisation of greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous anthropogenic [human-induced] interference with the climate system." Parties listed in Annex I to the FCCC — essentially the industrialized world — are to adopt policies and measures with the aim of returning emissions to their 1990 levels by 2000.

As its name implies, the FCCC is a framework of general principles and institutions. It sets up a process for developing more meaningful commitments. In 1995 it was recognized that the commitments in the FCCC were inadequate to avoid dangerous anthropogenic climate change. This lead to the negotiation of the Kyoto Protocol in 1997.

THE KYOTO PROTOCOL

The *Kyoto Protocol to the United Nations Framework Convention on Climate Change* (the "Kyoto Protocol") contains legally binding emission reduction commitments for developed nations. The following are the major components of the Kyoto Protocol.

COMMITMENT PERIODS AND ASSIGNED AMOUNTS

Article 3 of the Protocol establishes a commitment period between 2008 and 2012 (the "First Commitment Period") during which the developed countries listed in Annex B (the "Annex B Parties") must limit their emissions. Parties are assigned an amount of allowable emissions (the "assigned amount") that is based on a certain percentage of emissions in a base year. For most purposes, the base year is 1990. Canada's assigned amount is 94% of 1990 emissions times five (to reflect the five years in the First Commitment Period). The US assigned amount is 93% of base year emissions times five; the European Union's is 92%. The Russian Federation is only required to stabilise emissions. Iceland is allowed to increase emissions by up to ten percent.

EMISSIONS TRADING AND THE FLEXIBILITY MECHANISMS

The Kyoto Protocol establishes four mechanisms, all of which involve some form of emissions trading (although only one mechanism is called emissions trading in the Protocol). Under emission trading programs, polluters (whether they are a nation or a company) are given flexibility in how to reduce their emissions. Where an emitter can, at a low or negative cost, reduce emissions beyond what is required by law they can sell or transfer an emission reduction credit or an emission allowance to polluters who cannot reduce their emissions as easily. The Party acquiring the credit or allowance is then allowed to emit more. Trading itself is not intended to reduce emissions; it is intended to reduce the cost of meeting an emission limit defined by international or domestic law. Without trading, emission limits may be impractical or not enforced. On the other hand, loopholes or weaknesses in trading systems may allow global emissions to increase over what would occur in the absence of trading. The four mechanisms established by the Kyoto Protocol are: international emissions trading, joint implementation, the clean development mechanism and joint fulfilment

INTERNATIONAL EMISSIONS TRADING

Article 17 states that the CoP will define the "principles, modalities, rules and guidelines" for emissions trading and that Annex B Parties can participate in emissions trading for the purposes of fulfilling their commitments. Article 3 states that parts of Parties' assigned amounts will be added or subtracted when Parties trade under Article 17. Beyond this, the rules of emissions trading are undefined. The units traded under emissions trading are referred to as assigned amount units ("AAUs").

CLEAN DEVELOPMENT MECHANISM

Article 12 of the Kyoto Protocol establishes the clean development mechanism ("CDM"). At its most basic, the CDM establishes a process for generating emission reduction credits in developing countries (non-Annex B Parties). The Annex B Parties can use these credits — officially know as certified emission reductions or "CERs" — to increase their domestic emissions. Projects that qualify for the CDM generate CERs by reducing emissions below a baseline that represents the level of emissions that would have occurred in the absence of the

project or absence of the CDM. The CDM is also supposed to help developing countries achieve sustainable development.

JOINT IMPLEMENTATION

Under Article 6, Annex B Parties can transfer and acquire emission reduction units ("ERUs"). When ERUs are purchased, they are added to the purchasing nation's assigned amount and subtracted from the assigned amount of the nation transferring them. The main distinction between JI and trading is that under JI, ERUs represent reductions from a specific project while in emissions trading AAUs are not associated with a particular project.

JOINT FULFILLMENT — THE EU BUBBLE

Article 4 allows parties to agree to fulfil their commitments jointly. It provides that if Parties have agreed to joint fulfilment, they will be deemed to have met commitments provided total emissions do not exceed the total assigned amount for all Parties. The terms of the joint fulfilment agreement specify the reallocation of assigned to the different Parties. Article 4 was negotiated with the European Union in mind, and the 92% target for all EU nations was agreeable to certain nations (e.g. Ireland, Portugal and Spain, all of whom have escalating emissions) on the understanding that they would be reassigned a less stringent target.

FOREST AND SOIL SINKS

The assigned amount of most countries is a percentage of "gross" emissions in 1990. Gross emissions are anthropogenic emissions of greenhouse gas emissions from energy, industrial processes, agriculture and waste. For most parties, assigned amounts do not reflect whether forest, soils and other carbon reservoirs are removing carbon from the atmosphere (i.e. acting as a sink) or acting as a source of greenhouse gases.

However, when calculating whether a Party is in compliance with its Article 3 emission limits, Parties are required to count some but not all carbon fluxes from forests. Under Article 3.3, they are required to count emissions and removals from 2008 to 2012 resulting from afforestation, reforestation, and deforestation since 1990. CoP6 may decide to add other categories of forest and soil sinks under Article 3.4.

SIX GASES

The Kyoto Protocol applies to six greenhouse gases: the three main greenhouse gases released by human activity (carbon dioxide, nitrous oxide and methane) and one gas (sulphur hexafluoride) and two families of gases (hydrofluorocarbons and perfluorocarbons) that are released in small quantities but are both long lasting and extremely powerful.

COMPLIANCE

The Protocol is virtually silent on the issue of how to ensure compliance. As a "placeholder" Article 18 states that a meeting of the Parties to the Protocol is to approve procedures and mechanisms to determine and address cases of non-compliance. Any mechanisms involving binding consequences are to be adopted by amendment to the Protocol.

COMING INTO FORCE

The Kyoto Protocol only comes into force when it is ratified by a minimum of 55 Parties representing a minimum of 55% of Annex 1 emissions in 1990. So far none of the Annex 1

countries have ratified the treaty, although almost all have signed it, indicating an intention to be bound in the future.

BUENOS AIRES PLAN OF ACTION

The Buenos Aires Plan of Action was adopted in the final hours of the Fourth Conference of Parties (CoP4) in Buenos Aires, Argentina. It established a time frame for Parties to resolve key issues associated with the FCCC and the Kyoto Protocol. CoP6 was set as the deadline for making decisions on the mechanisms (CDM, trading and joint implementation), treatment of sinks under Articles 3.3 and 3.4, and assisting developing country Parties with adaptation to climate change (Articles 4.8 and 4.9 of the *FCCC*). Subsequently CoP6 was identified as a deadline for decisions on compliance mechanisms.

SCORING METHODOLOGY

Parties' positions are evaluated on the basis of four loopholes. The four loopholes are:

- **Overselling:** Overselling is the risk that a nation will sell assigned amount units that it needs to cover actual emissions. If a nation oversells and another nation uses the purchased AAUs to increase emissions, global emissions increase.
- **Hot Air:** Hot air is the name of assigned amount which is in excess to a nation's business as usual emissions for the 2008 to 2012 period. Russia and a number of eastern European nations received an assigned amount intended to give them flexibility in rebuilding their economies. However, it is now clear that even if these nations take no actions to reduce emissions, the amount they received under the Kyoto Protocol is far in excess of their possible emissions in the 2008 to 2012 period. If they are allowed to trade these excess AAUs, global emissions increase.
- **Sinks:** While forests and soils can be sources (and are projected to become sources in the future due to climate change), for the next decade or two they are projected to be major net sinks of greenhouse gases in almost all industrialized nations. If nations receive credit for all the carbon absorbed by their forests, global greenhouse gas emissions increase.
- **CDM Baselines:** If baselines are weak and credit given for reductions that would have occurred anyway or for reductions that are not real, the CDM will allow global greenhouse gas emissions to increase.

These loopholes were chosen because they represent clear examples of rules that run contrary to the intent of the Protocol, by allowing an increase in global emissions. These are not the only loopholes, nor the only issues of importance at CoP 6. A number of other key issues are of equal importance. They include:

- **Compliance**. Will the Kyoto Protocol have a compliance system with sufficient rigour to ensure that Parties reduce their emissions on schedule?
- **Supplementarity**. Will industrialized nations be required to achieve a percentage of their emission reductions through domestic action?
- **Permanence of Sinks**. The world's forests are expected to become an increasing source of emissions as climate changes, reversing removals achieved by sequestration. Will the

Protocol recognize this fundamental difference between emission reductions and sequestering carbon in forests, and will it contain measures to ensure that sinks are not simply transferred onto future generations.

- **Uncertainty of Sink Measurement**. Will the Protocol reflect the high degree of uncertainty in measuring carbon absorption by forests? This uncertainty is particularly problematic because of the significance of sinks and because systemic errors are not balanced by the same error in baselines.
- **Promoting Unsustainable Activities**. Will the Protocol promote unsustainable activities such as nuclear, large hydro dams and coal?
- **Promoting long term solutions to climate change**. Will the Protocol promote activities in developing countries that are consistent with the reduction of global greenhouse gas emissions to safe levels?
- **Funds for Adaptation**. Will a mechanism be developed which ensures that funds are available to adequately help developing countries adapt to climate change caused by industrialized nations?

For each of the four loopholes on which Parties' positions are graded, nations receive a grade from 0/10 to 10/10. Zero out of ten represents a position that actively supports a loophole. Ten out of ten represents a position that would effectively close the loophole. The details regarding how points are scored for the different loopholes are discussed with each loophole.

The difference between the score and ten is multiplied by a "potential loophole rating" representing the estimated size of the loophole and its probability of occurring. The result is "loophole megatonnes." To the extent Parties have positions, to the extent the effectiveness of Parties' positions can be estimated, and to extent the size of a loophole can be estimated, loophole tonnes gives an approximation of the amount of excess tonnes that would be allowed in the atmosphere if the Parties' position were adopted. The results are summarised in Table 2 below.

TABLE 2

NATION /ISSUE	OVERSELLING		HOT AIR		SINKS		CDM BASELINES		TOTAL LOOPHOLE	
	Total Mega-tonnes	Total Score	Total Mega-tonnes	Total Score	Total Mega-tonnes	Total Score	Total Mega-tonnes	Score (Max. = 10)	Total Mega-tonnes	Total Score
EUROPEAN UNION										
Austria	1,076	8	1,268	8	1,083	9	300	9	3,727	34
Belgium	1,076	8	1,268	8	1,083	9	300	9	3,727	34
Denmark	1,076	8	1,268	8	1,083	9	300	9	3,727	34
Finland	1,076	8	1,268	8	1,083	9	300	9	3,727	34
France	1,076	8	1,268	8	1,083	9	300	9	3,727	34
Germany	1,076	8	1,268	8	1,083	9	300	9	3,727	34
Greece	1,076	8	1,268	8	1,083	9	300	9	3,727	34
Ireland	1,076	8	1,268	8	1,083	9	300	9	3,727	34
Italy	1,076	8	1,268	8	1,083	9	300	9	3,727	34
Luxembourg	1,076	8	1,268	8	1,083	9	300	9	3,727	34
Netherlands	1,076	8	1,268	8	1,083	9	300	9	3,727	34
Portugal	1,076	8	1,268	8	1,083	9	300	9	3,727	34
Spain	1,076	8	1,268	8	1,083	9	300	9	3,727	34
Sweden	1,076	8	1,268	8	1,083	9	300	9	3,727	34
United Kingdom	1,076	8	1,268	8	1,083	9	300	9	3,727	34
UMBRELLA GROUP										
Australia	5,382	0	5,706	1	6,500	4	2,400	1	19,988	6
Canada	5,382	0	5,706	1	10,834	0	2,850	0.5	24,772	1.5
Iceland	5,382	0	5,706	1	6,500	4	2,400	1	19,988	6
Japan	5,382	0	5,706	1	10,834	0	3,000	0	24,922	1
New Zealand	5,382	0	5,706	1	5,417	5	2,400	1	18,905	7
Norway	5,382	0	5,706	1	2,167	8	2,400	1	15,655	10
United States	5,382	0	5,706	1	6,500	4	1,800	4	19,388	9
ENVIRONMENTAL INTEGRITY GROUP										
Korea	538	9	3,804	4	3,250	7	900	7	8,492	37
witzerland	538	9	4,438	3	3,250	7	300	9	8,526	38
OTHER										
Poland	3,767	3	1,268	8	2,167	8	2,100	3	9,302	22
Hungary	3,229	3	1,268	8	5,417	5	2,400	2	12,314	18
Czech Republic	3,229	3	1,268	8	5,417	5	2,100	3	12,014	19

THE LOOPHOLES

LOOPHOLE NO. 1: OVERSELLING

Article 17 of the Kyoto Protocol states that the CoP will define the "principles, modalities, rules and guidelines" for emissions trading and that Annex B Parties can participate in emissions trading for the purposes of fulfilling their commitments. Article 3 states that parts of Parties' assigned amounts will be added or subtracted when Parties trade under Article 17. Beyond this, the rules of emissions trading are undefined. The units traded under emissions trading are referred to as assigned amount units ("AAUs") or parts of assigned amount.

If poorly designed, trading can create incentives for Parties not to comply. There is a risk that Parties will "over-sell" — i.e. they will sell emission quotas (i.e. assigned amount units or AAUs) ultimately needed to cover their emissions. If other Parties use these non-surplus AAUs to increase their emissions, emissions trading multiplies the negative environmental impact of one nations' non-compliance.

LOOPHOLE POTENTIAL RATING

The highest risk of overselling is likely from those nations — the former Soviet Union and eastern Europe — where the transition to a market economy has been jarring, where there is a desperate need for foreign currency, and where there has been a breakdown in the institutions best able to guard against overselling. Under a worst case scenario, Russia and the Ukraine alone could sell their entire assigned amount without shifting their emissions pattern. This would allow a 13,456 megatonne (CO_2 eq.) increase in global emissions over what would occur in the absence of overselling (a sixteen percent increase in Annex B emissions relative to the Kyoto Protocol without any loopholes).[3] While this is an extreme case, it is plausible under some liability systems. However, because 100% overselling is an extreme case the 13,456 m.t. for overselling is discounted by 60%. The maximum loophole points for ineffective systems to avoid overselling is 5,382.

SCORE FACTORS

Position could allow 100% overselling	0/10
Position eliminates risk of overselling	9/10
Position has questionable effectiveness in eliminating overselling	3/10

PARTY POSITION RATINGS

Umbrella Group

Umbrella Group members have supported a system of Originating Party Liability (also known as seller liability or issuer liability). All AAUs are valid and will not be discounted or invalidated even if the Party who initially sells them (the Originating Party) grossly exceeds its assigned amount. The compliance system is used to discourage overselling. From an environmental perspective the Umbrella Group proposal is deeply flawed:

- **Entails high risk of gross overselling.** Under Umbrella Group proposals, Parties could sell their entire assigned amount while allowing emissions to increase.

- **Contemplated enforcement consequences not sufficient to restrain overselling.** Domestic trading systems using Originating Party Liability systems have worked well where the full force of the state can be brought to bear on non-compliers.[4] In contrast, the compliance consequences being contemplated by the Parties are weak: some Parties are resisting having any binding consequences; other Parties have suggested that the main consequence of non-compliance be a requirement to offset the overage in subsequent commitment periods. Indeed, in the absence of trade sanctions (a consequence no Party is advocating), there is no means of forcing a Party to comply. Enforcement under international law is unlikely to ever approach the rigor of effective domestic programs that use Originating Party Liability.
- **Recent experience suggests Parties will over-sell if it is profitable.** Recent IMF loans to Russia were conditioned on government adopting measures that involved short-term costs. After receipt of the loans, Russia immediately reneged on the commitments. This occurred despite the fact that it would likely jeopardise future loans from the IMF.

The Umbrella Group continues to actively promote originating party liability.

SCORE: 0/10
LOOPHOLE MEGATONNES: ((10-0)/10) x 5,382 = 5,382

European Union

The EU has recently suggested a mixed liability approach to avoid overselling. This appears to be the EU's preferred option, replacing three earlier options. Under the EU approach:

- AAUs which have been transferred from a Party that is out of compliance would be temporarily invalidated on a "Last in/First Out" basis — i.e. AAUs originating from a non-complying nation would be invalidated in a number equal to the amount of excess emissions; invalidation would start with the most recently transferred AAUs.
- The seller of the AAUs will remain responsible for the entirety of its excess emissions and faces consequences for the breach of its Article 3.1 commitments.
- The purchaser can only use the temporarily invalidated AAUs for purposes of compliance once the compliance body deems that the transferring Party has remedied the non-compliance.

Under the EU system, AAUs from Parties that are on track to compliance are likely to be sold at a premium. This will encourage quick compliance with reporting requirements and encourage strong, transparent measures to reduce emissions.

Modelling* shows that a similar user liability system achieves full compliance but with a twenty percent increment in costs. The modelling results may, however, be partly a result of the modelling assuming compliance by buyers. There is a risk that buyer liability allows overselling but simply transfers the obligation to reduce emissions onto the selling party. This and the cost implications of mixed liability in the future could reduce willingness to accept more stringent targets in the future. Because other options are available with comparable environmental integrity and lower costs, the EU approach is not given full marks.

SCORE: 8/10
LOOPHOLE MEGATONNES: ((10-8)/10) x 5,382 = 1,076

Switzerland

Under the Swiss proposal, Parties designate an "annual allocation plan." Allocation plans set out how much of their assigned amount will be used in each year of the commitment period. The AAUs allocated to any particular year cannot be more than five percent higher than the average for all years in the period. Parties can only sell AAUs if their cumulative annual allocation is greater than cumulative emissions for the most recent comparable period. The Swiss proposal:

- Substantially reduces the potential for overselling (as compared to Originating Party Liability). Modelling[5] suggests that the Swiss Proposal would limit non-compliance to several percentage points and could possibly encourage over-compliance. (In comparison, Originating Party Liability could allow 100% non-compliance by net sellers).
- Reduces compliance costs (as compared to Buyer Liability) by allowing Parties to purchase AAUs on an Originating Party Liability basis. Modelling* suggests that the Swiss Proposal would, relative to full compliance and no restrictions on trading, increase compliance costs slightly for net-buyers.
- Allows marginal overselling. Parties could "front-load" their annual allocation plan by projecting unrealistic emission reductions in later years. A Party projecting these reductions in their allocation plan may be able to sell and certify a significant number of AAUs in early years, even though these are needed when the reductions are not achieved.

SCORE: 9/10
LOOPHOLE MEGATONNES: ((10-9)/10) x 5,382 = 538

Korea

Korea has been largely silent on the issue of overselling, although the Chair of the Mechanisms Group, a Korean, has proposed text on overselling that uses a commitment period reserve to avoid overselling. The Koreans are assumed to support the Chair's position or that of their Environmental Integrity Group partner, Switzerland.

SCORE: 9/10
LOOPHOLE MEGATONNES: ((10-9)/10) x 5,382 = 538

Czech Republic/Hungary

The Czech Republic and Hungary supported earlier EU proposals on liability systems,[6] but not the EU's latest proposal for a mixed liability system. The earlier EU proposal involved three options:

- **Shared Liability.** Under the shared liability option, a portion of AAUs transferred to another Party is invalidated if the seller has excess emissions (i.e. emissions exceed the number of AAUs it holds). The portion invalidated is a multiple of the percentage by which a Party exceeds its assigned amount. The EU proposal could invalidate a portion of AAUs that is either much smaller or much larger than the overage of the selling Party. In some cases, this could make the system ineffective in discouraging over-selling.
- **Trigger.** Under the "trigger" option, sales proceed on an Originating Party Liability basis until a question is raised as to compliance of the seller with its Article 3 commitments. Sales after that point proceed on basis that the AAUs may be invalidated if the seller is eventually found to be out of compliance with its commitments. This option is not necessarily more environmentally effective than Originating Party Liability. Although the EU does not define what it means by "a question is raised," questions as to compliance with Article 3 are unlikely to be raised until after the end of the Commitment Period. A Party could thus sell all AAUs prior to questions being raised.
- **Compliance Reserve.** Under the proposal for a compliance reserve, a percentage (suggestions range from 10% to 2000%) of net AAU sales are put into a compliance reserve account. At the end of the Commitment Period, if a Party is out of compliance, AAUs held in the reserve are used to reduce or eliminate the overage. If the Party is in compliance, it could sell or bank AAUs from the reserve. This proposal is unlikely to be environmentally effective and would add to costs of compliance. Whether or not this approach is environmentally effective depends on choosing the correct specified percentage. A different reserve requirement would be needed for each Party that will be a net seller. It would be difficult or impossible to determine optimal reserve requirement in advance.

These two Parties have been silent on the issue of overselling in recent negotiations, and it is not clear whether they continue to support the above options. The score is based on the questionable effectiveness of these approaches with a slight discount to reflect that they are not actively supporting them now.

SCORE: 3/10
LOOPHOLE MEGATONNES: ((10-3)/10) x 5,382 = 3,767

Poland

Poland has proposed placing a percentage of net AAU sales into a compliance reserve account. Three percent would be set aside for sales that appear to be surplus given projected emissions; twenty percent would be set aside for sales that are not surplus. Like the other proposals for a compliance reserve, this is unlikely to be fully effective, although it would reduce the size of the loophole.

SCORE: 3/10
LOOPHOLE MEGATONNES: ((10-3)/10) x 5,382 = 3,767

LOOPHOLE NO. 2: HOT AIR

Hot air is the excess of Parties' individual assigned amounts over their projected emissions for the 2008 to 2012 period. Currently, the Parties of the former Soviet Union and Eastern Europe are the primary holders of hot air. The amount from Russia and Eastern Europe is substantial because assigned amounts of the largest emitters of the former Soviet Bloc are based on emitting at 100% of 1990 levels, but emissions have collapsed due to economic decline. Ukraine's emissions declined by 50.5% between 1990 and 1998, Russia's by 35.4%, and Latvia's by 67.7%.[7] If Russia and other economies in transition are allowed to trade hot air, the result will be an increase in emissions compared to if there was no emissions trading.

LOOPHOLE POTENTIAL RATING

West Coast Environmental Law estimates that there is potentially 1268 mt. CO2 eq. of hot air per year available for trade (6,340 m.t. over the Commitment Period.). This is based on US Energy Information Agency (US EIA) year 2000 projections for carbon dioxide emissions and Russian and Ukranian projections for methane and nitrous oxide emissions.[8] It is equal to 7% of Annex B 1990 emissions.[9] While this estimate of hot air is rough and dependant on eastern European economic performance over the next decade, it is believed to be more accurate than earlier, somewhat lower, estimates.[10]

SCORE FACTORS

Formula for Eliminating Hot Air	**Proportional to effectiveness to a maximum of 10 points**
Supports principle of trading not increasing emissions (but no formula).	1 point
Not opposed to mechanism to eliminate hot air (but no formula)	2 points
Early Start to JI to draw down Hot Air (but no formula for hot air)	1 point

PARTY POSITION RATINGS

EU, Poland, Czech Republic and Hungary

These Parties' position on hot air is as follows:

- Limit net sales of AAUs and ERUs. The EU has suggested restricting sales of AAUs and ERUs based on a formula. The formula would limit sales to between four and five percent of Parties' assigned amounts.
- Allow increased sales to the extent a Party can demonstrate that the reductions are due to domestic action taken after 1993.

The EU position would eliminate up to 80% of hot air (based on US EIA estimates of hot air from the Former Soviet Union and Eastern Europe), but could be less effective depending on the ease or difficulty of demonstrating that reductions are due to domestic action.

SCORE: 8/10
LOOPHOLE MEGATONNES: ((10-8))/10) x 6,340 = 1,268

Umbrella Group

The Umbrella Group opposes any restrictions on hot air trading. The Umbrella Group has supported an early start to joint implementation, which could provide some minor mitigation of hot air.

SCORE: 1/10
LOOPHOLE MEGATONNES: ((10-1))/10) x 6,340 = 5,706

Switzerland

Switzerland proposed early start to JI to draw down hot air. Beyond this Switzerland has been silent on the issue of hot air. It has not opposed restrictions on hot air sales.

SCORE: 3/10
LOOPHOLE MEGATONNES: ((10-3))/10) x 6,340 = 4,438

Korea

Korea has supported the principle of climate change effectiveness for emissions trading and has supported objective criteria to prevent hot air. It has been silent on specifics.

SCORE: 4/10
LOOPHOLE MEGATONNES: ((10-4))/10) x 6,340 = 3,804

LOOPHOLE NO. 3: SINKS

The assigned amount of most countries is a percentage of "gross" emissions in 1990. Gross emissions are anthropogenic emissions of greenhouse gas emissions from energy, industrial processes, agriculture and waste. For most parties, assigned amounts do not reflect whether forest, soils and other carbon reservoirs are removing carbon from the atmosphere (i.e. acting as a sink) or acting as a source of greenhouse gases. However, when calculating whether a Party is in compliance with its Article 3 emission limits, Parties are required to count some but not all carbon fluxes from forests. Article 3.3 provides that a nation will be credited with any increase, or debited for any decrease, in sequestered carbon in the period 2008 to 2012 due to afforestation, reforestation or deforestation since 1990.[11] Article 3.4 provides a mechanism for adding other activities into the carbon accounting system. There are a number of issues associated with credit for sinks: including uncertainty of sink estimates, permanence, credit for natural sequestration and credit for business as usual activities.

LOOPHOLE POTENTIAL RATING

Adding activities under Article 3.4 will increase emissions if credit for business as usual activities. For the 2008 to 2012 time period, almost all Parties are projecting that their land use, land use change and forestry sector (the "LULUCF" sector) will be a net sink. West Coast Environmental Law estimates that Annex B Parties' net sequestration is equal to 10,834 megatonnes.[12]

SCORE FACTORS

Exclusion of additional sinks under 3.4 during First Commitment Period	10/10
Explicit exclusion of additional activities in FCP except with combination of discounts, thresholds, activity selection,	Proportional to stringency of approach to a maximum of 9
Silent on addition of new activities.	5/10
Addition of Narrow Activities with no discussion of thresholds or discounts	4/10
Comprehensive Inclusion in First Commitment Period with undefined threshold of discount	4/10
Comprehensive Inclusion in First Commitment Period without discount.	0/10

PARTY POSITION RATING

Canada

Canada supports tonne for tonne credit for all net sequestration from managed forestland or agricultural land. Canada has opposed attempts to establish thresholds that separate natural or business as usual sequestration from human induced enhancements to sequestration.

SCORE: 0/10
LOOPHOLE MEGATONNES: ((10-0)/10) x 10,834 = 10,834

United States

The United states position supports comprehensive credit for carbon sequestration, but given the potential size of the loophole has suggested a discount on credits during the First Commitment Period or limiting credit to sequestration that exceeds a particular threshold. The US has not provided detailed proposals.

SCORE: 4/10
LOOPHOLE MEGATONNES: ((10-4)/10) x 10,834 = 6,500

Australia

Australia has proposed allowing, under Article 3.4, credit for all sequestration on areas of land where 'human induced additional activities" have occurred since 1990. Australia proposes specifying relatively narrow categories of "human induced additional activities." The only such activity specified by Australia is re-vegetation. According to Australia's submission., this would increase Australia's assigned amount by 1.5%; however, the Australian NGO's estimate that it would give Australia 100 mega-tonnes credit for business as usual sequestration. Australia does not make any reference to concerns that Parties may choose additional activities that give them the greatest credit under their national circumstances.

SCORE: 4/10
LOOPHOLE MEGATONNES: ((10-4)/10) x 10,834 = 6,500

Iceland

Iceland's position is similar to that of Australia.

SCORE: 4/10
LOOPHOLE MEGATONNES: ((10-4)/10) x 10,834 = 6,500

Japan

Japan has proposed an approach to sinks equivalent to Canada.

SCORE: 0/10
LOOPHOLE MEGATONNES: ((10-0)/10) x 10,834 = 10,834

New Zealand

New Zealand receives a huge amount of credit under Article 3.3. New Zealand has not proposed adding any additional activities under Article 3.4, although its submission clearly contemplates adding new activities.

SCORE: 5/10
LOOPHOLE MEGATONNES: ((10-5)/10) x 10,834 = 5,417

Norway

Norway has stated that parties should anticipate clearly limited credit from additional activities under Article 3.4 for the first commitment period. Norway has suggested adding activities analogous to afforestation since 1990, e.g. re-vegetation since 1990. Norway has suggested baselines or thresholds are appropriate for factoring out business as usual activities. It has not called for any discounting to reflect issues of permanence or uncertainty.

SCORE: 8/10
LOOPHOLE MEGATONNES: ((10-8)/10) x 10,834 = 2,167

Poland

Poland's position on sinks is unclear, but its statements suggest opposition to addition of new activities under Article 3.4 for the First Commitment Period.

SCORE: 8/10
LOOPHOLE MEGATONNES: ((10-8)/10) x 10,834 = 2,167

Hungary and Czech Republic

Hungary and Czech Republic have been silent on the issue of additions to 3.4.

SCORE: 5/10
LOOPHOLE MEGATONNES: ((10-5)/10) x 10,834 = 5,417

Switzerland and Korea

Switzerland had proposed land based full carbon accounting in the long term, but has called for negotiation of thresholds to separate natural or business as usual sequestration from human-induced effects. It has not called for any discounting to reflect issues of permanence or uncertainty.

SCORE: 7/10
LOOPHOLE MEGATONNES: ((10-7)/10) x 10,834 = 3,250

European Union

The European Union has promoted adding no new activities under Article 3.4 during the First Commitment Period except if COP decides that the issues of scale, uncertainty and risk are resolved. It has proposed that priority be given to emission reductions when deciding what

activities to add under Article 3.4. It has suggested using a combination of the following approaches:

- discounting for uncertainty;
- adding only narrow classes of additional activities and crediting only detectable human induced effects on carbon stocks;
- discounting activities by 95% in the first commitment period;
- limiting credit to 1% of assigned amount;
- only crediting carbon stock changes that exceed a threshold; and
- strict separation of credit from natural levels of sequestration and human induce effects.

Although the EU approach could effectively eliminate any loopholes, certain options are less effective. The one- percent cap on increases to assigned amount would allow an 866 megatonne increase in emissions. The 95% discount could allow 541 m.t. increase in emission if applied to a broad range of activities.

SCORE: 9/10
LOOPHOLE MEGATONNES: ((10-9)/10) x 10,834 = 1,083

LOOPHOLE NO. 4: ELIGIBILITY AND BASELINES UNDER THE CLEAN DEVELOPMENT MECHANISM

Annex B Parties can use Certified Emission Reductions (CERs) generated by the Clean Development Mechanism (CDM) to meet their emission reduction targets. Projects that qualify for the CDM generate CERs by reducing emissions below a baseline that represents what would have occurred in the absence of the project or absence of the CDM. Since it is impossible to know exactly what would have occurred in the absence of the CDM, there is a risk that CERs will represent either emission reductions that are not real or emission reductions that would have occurred anyway.

If the CDM simply certifies emission reductions from projects that would have occurred without Annex B commitments — i.e. if it certifies business as usual improvements in technology — it will reduce the effectiveness of Annex B commitments. To avoid weakening the effectiveness of the Kyoto Protocol, the volume of CERs generated by the CDM must be no greater than the number of emission reductions that are caused by the CDM.

The debate over baseline setting is largely a debate over the concept of additionality. A number of terms are used — often inconsistently:

- **Program Additionality (or simply "Additionality")**. The project or reduction would not have occurred in the absence of the CDM (or it would have occurred later). Indicators of program additionality include:
    - Regulatory Additionality. Has the project been directly or indirectly mandated by law or regulation?
    - Investment Additionality. Would the project have occurred under the investing party's normal investment decision rules and in the absence of any value assigned to emission reductions?

    - Technological Additionality. Does the project involve technology or practices that go beyond conventional practice in a sector and geographic area?
- **Emissions or Environmental Additionality**. Reductions are additional to what would occur without the project. Environmental additionality is an important issue. However, if the CDM certifies reductions that are environmentally additional but not program additional — i.e. if it certifies business as usual improvements in technology that would have occurred in the absence of Annex B commitments — it will reduce the effectiveness of Annex B commitments.
- **Financial Additionality**. Public funding for a CDM project is in addition to existing financial commitments of Annex II Parties or in addition to existing development assistance flows.

Whether rules for baseline setting and eligibility of projects for the CDM accurately estimate program additional emission reductions will depend on the details of the rules, the size of the CDM market and how markets react to CDM incentives. If demand for CERs is low and the incentives created by the CDM only lead to marginal shifts in technologies, there is a high risk of overestimating emission reductions, potentially by an order of magnitude. A number of factors suggest that overestimating additional emission reductions is a greater risk:

- Transaction costs and adaptation fees associated with the CDM are likely to reduce CDM competitiveness relative to emissions trading.
- Credit for non-additional activities (hot air and sinks) could minimize demand for the CDM.
- Incentives generally transform the most efficient aspect of the market. Investors who are already investing in relatively efficient technologies and practices due to sophistication and access to capital and technology are best poised to use the CDM.

Given these factors, a conservative approach is warranted. A conservative approach would set baselines on the basis of better than average current practices. It would also call for development of guidelines on baseline setting methodology. Such guidance is important for ensuring consistency in the development of baselines. Mere oversight by the Executive Board is likely to prove ineffective, as at is a political agency that may, in the absence of technical guidance, have difficulty rejecting weak project baseline methodologies.

LOOPHOLE POTENTIAL RATING

Credits from non-additional emission reductions and unrealistic baselines are virtually unlimited. If only a fifth of CDM credits are for business as usual reductions, and if the CDM market is as large as projected (3,092 megatonnes of CO_2 reduction credits per year),[13] the CDM could allow an increase in emissions of over 3,000 megatonnes during the First Commitment Period.

SCORE FACTORS

Party Scores are based on the following:

No opposition to need for additionality tests and stringent baselines?	1 point
Has the Party acknowledged the need for program additionality?	1 point
Has the Party supported thresholds to exclude non-additional projects?	1 point
Has the Party suggested restrictions on project eligibility with the intention of excluding types of projects that tend to be non-program additional?	2 points
No opposition to CDM Manual with Technical Guidance	1point
Has the Party supported a CDM Manual of CDM Handbook that gives technical guidance on setting of baselines?	1 point
Has the Party suggested baselines that represent at least average practice?	1 point
Has the Party suggested baselines that represent better than average practice?	2 points

PARTY BY PARTY RATINGS

European Union

Project Eligibility and Additionality: The EU has proposed several mechanisms that would help ensure CDM projects are program additional. First of all, the EU has promoted initially restricting the CDM to renewable and energy efficiency projects.

Although they have rejected strict investment and technological additionality tests, The EU has said that projects must not be business as usual but has said that they must represent the best environmentally safe and sound technology. They have also suggested that the executive board have the power to audit decisions of operational entities and, to reject projects that would have been done anyway in the absence of the CDM. The EU has also promoted rigorous socio-economic impact assessments for CDM projects.

CDM Handbook: The EU along with the Czech Republic and Poland has suggested the need for a CDM reference Manual that provides technical guidance on baseline setting. Baselines must or methodologies used for baselines must be compatible with the Guidelines. The European Union alone has suggested the need for IPCC advise on baseline methodologies.

Baselines: The EU has also promoted draft decision language on baselines that is relatively stringent. In particular they have suggested that baselines represent the lowest of:

- Existing actual emissions prior to the project (for retrofits only)
- Most reasonable technology which represents an economic course of action;
- Better than average current industry practice in the host country or an appropriate region.

Multi-project baselines are to be even more conservative with baselines representing trends in emission rates, and where there are several better than average current practices, the lowest emission rate is to be chosen.

SCORE: 9/10
LOOPHOLE MEGATONNES: ((10-9)/10) x 3,000 = 300

Poland and Czech Republic

Poland and the Czechs have supported calls for additional technical guidance on baselines in a CDM Manual.

They have not opposed additionality tests.

SCORE: 3/10
LOOPHOLE MEGATONNES: ((10-3)/10) x 3,000 = 2,100

Hungary

Hungary has been silent on all CDM issues.

SCORE: 2/10
LOOPHOLE MEGATONNES: ((10-2)/10) x 3,000 = 2,400

Umbrella Group (Other than US, Japan and Canada)

Project Eligibility and Additionality: The Umbrella Group has promoted no restrictions on the types of project that would qualify for the CDM. As a whole the group has not made any statements on the need for an additionality screen.

CDM Handbook: The Umbrella Group has rejected the need for a reference manual or handbook that provides technical guidance on development of baselines. Instead it has suggested that first of a kind methodologies for baseline setting shall be subject to approval by the Executive Board of the CDM. Moreover, the purpose of the reference manual is facilitating development of baselines and enhancing transparency of baselines. Notably absent from the proposed purposes of the reference manual is ensuring environmental integrity of baselines. The reference manual is only to include methodologies approved by the Executive Board and such other guidance that will facilitate and enhance transparency in the development of baselines. This approach (relying on operational entities and the oversight of the Executive Board to ensuring effective baselines) is highly problematic given the lack of guidance on key issues such as determination of additionality.

Baselines: The Umbrella Group has not made any statements on means for setting baselines, other than that they be approved by operational entities and that first of a kind methodologies be approved by the Executive Board. This, in combination with the lack of technical guidance in the CDM handbook, creates a potential for emission reductions that are exaggerated through use of baselines that reflect worst emission case scenarios.

The Umbrella Group as a whole has not opposed the need for some thresholds or tests to determine program additionality.

SCORE: 1/10 (FOR UMBRELLA GROUP MEMBERS OTHER THAN THOSE LISTED BELOW)
LOOPHOLE MEGATONNES: ((10-1)/10) x 3,000 = 2,700

United States

Project Eligibility and Additionality: The US has supported Umbrella Group submissions on baselines, but has clearly acknowledged the importance of program additionality, stressing the importance of an effective test for whether reductions are additional to what would have occurred in the absence of CDM incentives. The US has proposed limiting CDM eligibility to projects with a level of performance that is significantly better than average compared to a reference scenario. The reference scenario consists of recent and comparable activities or facilities in a relevant geographic area. The relevant geographic area would be the host country or possibly smaller or larger regions.

Whether performance is "significantly better than average" is determined by applying methodologies approved by the executive board of the CDM. The US narrative text suggests that the "significantly better than average" threshold be determined by reference to a particular percentile of performance. For instance, a new kraft pulp mill in China might only qualify for the CDM if its emissions rate exceeds the 75th percentile (ranked from worst to lowest emission rates) of recently installed kraft pulping capacity in China.

Baselines: If the eligibility threshold is met, draft decision language proposed by the US refers to baselines representing what would occur in the absence of the project. The US has proposed setting baselines by reference to weighted average performance level for recent, comparable projects (weighted average means that a facility with larger production is given more weight). Comparable projects would be projects using the same fuel type.

The US approach is relatively clear in its operation. However, it is less conservative than options promoted by Switzerland, Korea and a number of other countries. Because baselines are based on projects using the same fuel type, there is a risk that the US approach could create an incentive for projects that use carbon intensive fuels.

SCORE: 4/10
LOOPHOLE MEGATONNES: ((10-4/10)) x 3,000 = 1,800

Canada

Canada is a Party to Umbrella Group submissions, but Canada has focused on the difficulties in implementing any form of additionality other than emissions additionality. Canada has not explicitly rejected program additionality, but it has not provided any constructive suggestions for setting baselines or establishing project eligibility criteria.

SCORE: 0.5/10
LOOPHOLE MEGATONNES: ((10-0.5)/10) x 3,000 = 2,850

Japan

Japan is a Party to Umbrella Group submissions, but Japan has rejected any test other than environmental additionality, especially rejecting financial additionality.

SCORE: 0/10
LOOPHOLE MEGATONNES: ((10-0)/10) x 3,000 = 3,000

Korea

Eligibility and thresholds: Korea promotes restricting projects to renewable energy projects and energy efficiency and has taken a strong stance on the need for program additionality. It has suggested a strict investment additionality criteria, technological additionality assessment and financial additionality assessment.

CDM Handbook: Korea has supported the need for a technical CDM manual on baseline issues. Korea recognizes the need for technical elaboration of guidelines.

Baselines: Korea has shown support for stringent baselines by suggesting amendments to negotiation language that would allow additionality to be based on better than average (as opposed to average) practices in the OECD.

SCORE: 7/10
LOOPHOLE MEGATONNES: ((10-7)/10) x 3,000 = 900

Switzerland

Eligibility: Switzerland has suggested listing eligible project types based on their additionality and consistency with sustainable development criteria. The Swiss have also supported rigorous, public socio-impact assessments for CDM projects.

CDM Handbook: Switzerland has proposed guidelines on information that would need to be presented with a project in order to have a baseline approved. Switzerland has focused on the need for baselines that reflect better than average current practice. Switzerland has recommended development of a detailed Baseline Reference Manual with more relatively comprehensive guidance than suggested in EU submissions. For instance, the Swiss guidance document would include standard leakage correction factors and baseline safety margins

Baselines: Switzerland has supported baselines being set on reasonable better than average practices.

SCORE: 9/10
LOOPHOLE MEGATONNES: ((10-9)/10) x 3,000 = 300

COP6 UPDATE ON PARTY SCORES

At the first meeting on the treatment of sinks at The Hague, several Parties elaborated their positions on sinks or changed their positions on sinks. These developments lead to new scores for Canada, the United States, Japan and New Zealand. The Canadian and Japanese scores improved marginally from 0/10 to 2/10. The US score declined from 4/10 to 2/10. The New Zealand score improved to 6/10.

The US ranking changed from fifth worst to third worst. Canada and Japan's ranking remained the same (second worst and worst, respectively). New Zealand's ranking was unchanged.

PARTY POSITION RATING

Canada, US and Japan

Prior to CoP6, Canada and Japan supported 100% tonne for tonne credit for all net sequestration from managed forestland or agricultural land. Canada has opposed attempts to establish thresholds that separate natural or business as usual sequestration from human induced enhancements to sequestration. This position was given a score of 0/10 in the initial draft of this paper.

The US had called for comprehensive credit from managed forestland or agricultural land, but had recognized the need for discounts or thresholds to deal with the problem of credit from business as usual. The US had been given a score of 4/10.

At CoP6, all these Parties changed their positions. In a joint submission, the US and Canada, supported by Japan, proposed that Parties receive 100% credit for all net carbon sequestration (i.e. absorption) from activities other than forest management (e.g. agricultural soil management, shelterbelts, re-vegetation).

For forest management, Parties would receive 100% credit for all net carbon sequestration up to a maximum "initial interval." The maximum of 100% credit for net sequestration in the initial interval would be the lower of a fixed tonne value or a fixed percent of 1990 emissions.

The Party would receive discounted credit for all tonnes of net sequestration above the initial interval but lower than a threshold. The threshold would be based on historic (1995—1998) levels of carbon sequestration from forest management, although it might be reduced for Parties that have declining business as usual sequestration levels.

Over the threshold, Parties would receive 100% credit.

Key points in relation to this proposal:

- It is possible that a country could receive 100% for all of its sequestration. If the initial interval is set at an absolute level or a percent of 1990 emissions, while the threshold is set at historic or business as usual levels, the threshold could be less than the initial interval. All net sequestration (both business as usual and additional) would receive 100% credit.

- The discount might apply only to the US and Russia. The forest management sink in these two countries is huge — far larger than any other Party.
- The initial interval has no logical basis.
- Basing the threshold on 1995 to 1998 emissions is inconsistent with the Protocol and UNFCCC (both of which use a 1990 baseline). It will tend to make it easier to generate credit for Parties with declining levels of sequestration.
- Without specific figures for the discount rate and initial interval, it is impossible to know how much credit is given for business as usual.
- 100% credit for net sequestration from re-vegetation, agricultural soils, shelterbelts, etc. could involve a significant amount of credit for business as usual sequestration. Australia's business as usual sequestration for re-vegetation alone is estimated at up to 100 megatonnes.
- The proposal represents a minor improvement on Canada and Japan's positions as it recognizes the need to discount.
- The proposal represents a worsening of the US position, as it allows for some countries receiving undiscounted credit for all their business as usual sequestration.

SCORE: 2/10
LOOPHOLE MEGATONNES: ((10-2)/10) x 10,834 = 8,667

New Zealand

New Zealand receives a huge amount of credit under Article 3.3. New Zealand has not proposed adding any additional activities under Article 3.4. Although its submission clearly contemplates adding new activities, at COP 6 New Zealand stated that no credit should be given for business as usual under 3.4.

SCORE: 6/10
LOOPHOLE MEGATONNES: ((10-6)/10) x 10,834 = 4,334

TABLE 2 (UPDATED TO REFLECT CHANGES IN POSITION AT COP6)

NATION \ ISSUE	OVERSELLING	HOT AIR	SINKS	CDM BASELINES	TOTAL LOOPHOLE MEGATONNES
EUROPEAN UNION					
Austria	1,076	1,268	1,083	300	3,727
Belgium	1,076	1,268	1,083	300	3,727
Denmark	1,076	1,268	1,083	300	3,727
Finland	1,076	1,268	1,083	300	3,727
France	1,076	1,268	1,083	300	3,727
Germany	1,076	1,268	1,083	300	3,727
Greece	1,076	1,268	1,083	300	3,727
Ireland	1,076	1,268	1,083	300	3,727
Italy	1,076	1,268	1,083	300	3,727
Luxembourg	1,076	1,268	1,083	300	3,727
Netherlands	1,076	1,268	1,083	300	3,727
Portugal	1,076	1,268	1,083	300	3,727
Spain	1,076	1,268	1,083	300	3,727
Sweden	1,076	1,268	1,083	300	3,727
United Kingdom	1,076	1,268	1,083	300	3,727
UMBRELLA GROUP					
Australia	5,382	5,706	6,500	2,400	19,988
Canada	5,382	5,706	8,667	2,850	22,605
Iceland	5,382	5,706	6,500	2,400	19,988
Japan	5,382	5,706	8,667	3,000	22,755
New Zealand	5,382	5,706	4,334	2,400	17,822
Norway	5,382	5,706	2,167	2,400	15,655
United States	5,382	5,706	8,667	1,800	21,555
ENVIRONMENTAL INTEGRITY GROUP					
Korea	538	3,804	3,250	900	8,492
tzerland	538	4,438	3,250	300	8,526
OTHER					
Poland	3,767	1,268	2,167	2,100	9,302
Hungary	3,229	1,268	5,417	2,400	12,314
Czech Republic	3,229	1,268	5,417	2,100	12,014

UPDATED TABLE 1 TO REFLECT NEW POSITIONS ON SINKS

RANK	NATION	TOTAL LOOPHOLE MEGATONNES
1.	Austria	3,727
2.	Belgium	3,727
3.	Denmark	3,727
4.	Finland	3,727
5.	France	3,727
6.	Germany	3,727
7.	Greece	3,727
8.	Ireland	3,727
9.	Italy	3,727
10.	Luxembourg	3,727
11.	Netherlands	3,727
12.	Portugal	3,727
13.	Spain	3,727
14.	Sweden	3,727
15.	United Kingdom	3,727
16.	Korea	8,492
7.	Switzerland	8,526
18.	Poland	9,302
19.	Hungary	12,314
20.	Czech Republic	12,014
21.	Norway	15,655
22.	New Zealand	17,822
23.	Iceland	19,988
24.	Australia	19,988
25.	United States	21,555
26.	Canada	22,605
27.	Japan	22,755

ENDNOTES

[1] Turkey is the only nation that is a member of the OECD but not a member of the Framework Convention.

[2] Turkey is the only nation that is a member of the OECD but not a member of the Framework Convention.

[3] This is based on the total AAUs for Russia and Ukraine minus a 6,340 megatonne estimate for hot air.

[4] The US Acid Rain Trading Program combines a near 100% chance of excess emissions being detected (i.e. "getting caught") and automatic fines for non-compliance that exceed the cost of compliance by over an order of magnitude. The penalty is ultimately enforceable through the domestic court system and criminal sanctions. The penalty for non-compliance is $2000 (1990 dollars, adjusted upwards for inflation) for every excess ton plus a requirement to offset the excess tonne. In comparison, initial estimates for the cost of reducing emissions were $500 to $800.

[5] All references to modelling are based on "Costs and Environmental Impacts of Liability Proposals" (May 26, 2000) by Erik Haites and Fanny Missfeldt.

[6] FCCC/SB/1999/MISC.3?Add.3.

[7] Framework Convention on Climate Change Secretariat document FCCC/SBI/2000/11, Table A.1 and A.2, Column A.

[8] The US EIA's latest estimate (March 2000) is that, in the absence of any efforts to reduce greenhouse gas emissions, emissions of carbon dioxide from the Annex B Parties of the former Soviet Union and Eastern Europe will be 73% of 1990 emissions in 2010. This will yield 1165 m.t. CO_2 eq. per year of hot air due to reductions in carbon dioxide emissions alone. Parties' own projections suggest additional hot air will result from projected reductions in other greenhouse gases. Projected drops in methane emissions for Russian and the Ukraine amount to 94 m.t. of CO_2 eq. An additional 9 m.t. CO_2 eq. of hot air is created by projected reductions of N_2O. Derived from FCCC/CP/1998/11/Add. 2, Table C.3. The difference between 1990 and 2010 emissions was converted to CO_2 eq. Comparison to Annex B assigned amount based on FCCC/SBI/2000/11. Table A.1 (18,147,110 gigagrams of CO_2 eq. for 1990).

[9] The US EIA's latest estimate (March 2000) is that, in the absence of any efforts to reduce greenhouse gas emissions, emissions of carbon dioxide from the Annex B Parties of the former Soviet Union and Eastern Europe will be 73% of 1990 emissions in 2010. This will yield 1165 m.t. CO_2 eq. per year of hot air due to reductions in carbon dioxide emissions alone. Parties' own projections suggest additional hot air will result from projected reductions in other greenhouse gases. Projected drops in methane emissions for Russian and the Ukraine amount to 94 m.t. of CO_2 eq. An additional 9 m.t. CO_2 eq. of hot air is created by projected reductions of N_2O. Derived from FCCC/CP/1998/11/Add. 2, Table C.3. The difference between 1990 and 2010 emissions was converted to CO_2 eq. Comparison to Annex B assigned amount based on FCCC/SBI/2000/11. Table A.1 (18,147,110 gigagrams of CO_2 eq. for 1990).

[10] For instance, a number of projections around the time of CoP3 in Kyoto assumed that Russian emissions would increase to between 80% and 90% of 1990 levels by 2010: (See Izrael, Yu *et al.*, "Mitigation Analysis for Energy System and Forestry Sector of the Russian Federation" in *Global Climate Change Mitigation Assessment: Results for 14 Transitioning and Developing Countries* (Washington, D.C.: US Country Studies Program, August 1997) at 139; UNFCCC Secretariat, *Summary of the Report of the In-Depth Review of the National Communication of the Russian Federation* (Geneva: FCCC Secretariat, 1997). The larger estimate for hot air is believed to be more accurate as it reflects the continued Russian economic slump of the late 1990s.

[11] COP 5 clarified the obtuse language of Article 3.3, agreeing that 3.3 meant: "The adjustment to a Party's assigned amount shall be equal to verifiable changes in carbon stocks during the period 2008 to 2012

resulting from direct human induced activities of afforestation, reforestation and deforestation since 1 January 1990. Where the result of this calculation is a net sink, this value shall be added to the party's assigned amount. Where the result of this calculation is a net emission, this value shall be subtracted from the party's assigned amount." FCCC/CP/1998/L.5. C

[12] See *Sinking the Climate: will Canada's approach to carbon sequestration sink the Kyoto Protocol* (September 2000) available at www.wcel.org.

[13] Estimates range from 103 Mt. of carbon per year to 844 Mt. C per year (3,092 Mt. CO_2). See A.D. Ellerman et al., "The Effects on Developing Countries of the Kyoto Protocol and CO_2 Emissions Trading" (November 1998) MIT Global Change Joint Program, Report # 41; Christian Vrolijk "The Potential Size of the CDM Market" in *global Greenhouse Emission Trader* Issue 6, February 1999.