

effectiveness of the Kyoto Protocol. John Drexhage and Murray Ward provided helpful elaboration on their rationale for certain requirements; in particular John's reference to a mechanism for monitoring the rate of allowable emission sales against a reasonable compliance track was helpful. However, my impression is that both their presentation and the paper tabled by Canada on behalf of the Umbrella Group would have been better received if they added more to the draft article that was deleted and replaced by Article 17 at the last session of Kyoto. My perspective is that the Umbrella Group would have achieved more progress on international trading had they dealt constructively with issues such as liability and hot air.

### Liability

I was please to see the statement in the Umbrella Group's non-paper on trading that issues regarding allocation of risk need to be further explored. It is recognized by many environmental groups that a system of seller liability trading is ideal from an economic perspective when there is a very high probability that non-compliance will be discovered and when there is a mechanism to impose strong sanctions on non-compliers. However, neither of these preconditions are met in the context of the Kyoto Protocol. As a result, a system of "seller beware" trading could lead to trading allowing the environmental effects of non-compliance to multiply.

Joint buyer and seller responsibility for non-compliance is likely to provide the best guard against the environmental effects of non-compliance multiplying and spreading as a result of trading. While buyer liability will tend to reduce the attractiveness of purchasing international allowable emission units from other nations, the use of a "first in -- last out" approach to which units are invalidated could reduce uncertainty. Also brokers could maintain a pool of emission rights from different nations, maintain a buffer of units to ensure compliance and require indemnities from seller nations for any losses resulting from the sellers' non-compliance. In other words, given sufficiently rigorous reporting requirements, the market could cope with the uncertainty created in a buyer liability system in much the same way as it copes with uncertainty in securities markets.

The use of a limited buyer beware system -- the so-called "green-yellow-red light" system -- could also provide some protection against the environmental effects of non-compliance multiplying through trading. However, to be effective such a system would likely be both bureaucratic and lead to a situation where many trades occur under a "yellow light". As a result a simple buyer liability system may be preferable.

### Hot Air

Obviously, hot air continues to be an issue for environmentalists. Hot air trading not only reduces the environmental effectiveness of the Kyoto Protocol, it also sets a poor precedent for setting budgets of developing countries. The argument that Article 17 defined a certain type of trading which allows hot air is disingenuous, and out of keeping with the events of the final session at Kyoto and the language of the Protocol. Clearly