

15 August 2000

The Secretary  
Joint Standing Committee on Treaties  
Parliament House  
**Canberra ACT 2600**

Dear Sir/Madam

**Inquiry into the Kyoto Protocol**

Attached please find summarised comments and supporting papers addressing matters relevant to the above. I trust your inquiry finds them useful in its deliberations.

Yours faithfully

W H Burrows, M. Agr. Sc. PhD, FTSE, FAIAST  
Senior Principal Scientist (Woodland Ecology)

## Summary Comments

1. Australia has presented a **factually flawed** argument in claiming that its *Land Use Change and Forestry* sector was a net source of emissions in 1990. In fact, this sector was then, and remains today, very much a net **sink**.

As a result Australia does not qualify as a beneficiary under the last sentence of Article 3.7 of the Kyoto Protocol and therefore should not include in its “1990 emissions base year or period the aggregate anthropogenic equivalent emissions minus removals in 1990 from land use change for the purposes of calculating its assigned amount.”

2. Australian and International scientific scrutiny/audit will expose the fallacy of Australia’s post Kyoto Position, that its Land Use Change and Forestry sector was a net source in 1990, when it presents its 1990 Baseline emissions. (These have to be documented so that each country’s “success” in meeting targeted emissions for the 2008-2012 Commitment Period can be gauged). The error in Australia’s accounting arises from its failure to include growth from significant areas of forest and woodlands in its baseline calculations. [It is also highly likely that use of the IPCC default value for soil carbon losses following clearing (30% over 20 years to 30 cm depth), has led to **gross** overestimates of losses from this source]. The National Greenhouse Gas Inventory for the Land Use Change and Forestry Sector 1990-1998 (AGO 2000) lists a **total** area of Australian forests on which forest growth (sink) effects are measured as **c. 16 M ha** (see Appendix Table 5, p. B-8 in AGO 2000). A small area of regrowth following forest/woodland clearing is also factored into the present inventory calculations. Yet Burrows *et al.* (1998) note that there are **c. 60 M ha** of grazed woodlands (sensum ‘managed forests’) in Queensland alone. And embedded in this latter figure are **17 M** of freehold and **3 M ha** of leasehold **private** forests from which that State obtains **c. 60%** of its commercial hardwood timber (DPI Forestry 1998). It is apparent from these comparative figures that we have grossly under estimated the area of forest and woodland contributing to greenhouse sinks in the Land Use Change and Forestry sector.
3. This huge error can be traced back to two factors:
  - (a) poor appreciation of ecological processes in grazed woodlands (see Archer *et al.* (2000) for an international perspective and analysis of impacts on greenhouse gas emissions) and lack of knowledge of the extensive tree growth monitoring network in this vegetation in Queensland by the Canberra based compilers of the original 1990 Inventory, which was put together in 1994
  - (b) continued failure to redress the error in successive NGGIs despite the then Department of Environment Sport and Territories convening a specific ‘experts’ workshop (including invited overseas ecologists of the highest international standing) to deliberate on the issue in October 1996 (see Noble 1997).
4. Australia should urgently consider renegotiating its commitments under the Kyoto Protocol. Paradoxically, when true net emissions for the Land Use Change and Forestry sector are included in the National Greenhouse Gas Inventory for 1990, Australia’s total stated net emissions for all sectors should fall by **>100 Mt CO<sub>2</sub> –e/yr** (or **>20%**). There will be corresponding large reductions in our presently portrayed net emissions per capita.

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Supporting documents are appended. These, updated where appropriate, are essentially the same as those provided to the Australian Greenhouse Office when it called for submissions on an Issues Paper “Greenhouse Sinks and the Kyoto Protocol” in March 2000.

## References:

- \* Archer, S., Boutton, T.W. and Hibbard, K.A. (2000). Trees in grasslands: biogeochemical consequences of woody plant expansion. In: "Global Biogeochemical Cycles in the Climate System". (eds. E. D. Schulze, S.P. Harrison, M. Heimann, E.A. Holland, J.Lloyd, I.C. Prentice and D. Schimel). (Academic Press: San Diego). (in press).
- AGO (2000). National Greenhouse Gas Inventory: Land Use Change and Forestry Sector 1990-1998 (Australian Greenhouse Office: Canberra).
- \* Burrows, W.H., Compton, J.F. and Hoffmann, M.B. (1998). Vegetation thickening and carbon sinks in the grazed woodlands of north-east Australia. *Proceedings Australian Forest Growers Conference*, Lismore. pp 305-316.
- DPI Forestry (1998). An Overview of the Queensland Forest Industry. (Dept. of Primary Industries: Brisbane).
- \* Noble, I.R. (1997). The contribution of "Vegetation Thickening" to Australia's Greenhouse Gas Inventory. (Report prepared for the Department of Environment, Sport and Territories: Canberra). 14pp.
- \* Copies of these papers are included in the attachments.