

The Australia Institute

Research that matters.

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AUTHOR: Andrew Macintosh

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Every year since 2002, the Federal Environment Minister has put out a press release to accompany the publication of the National Greenhouse Gas Inventory stating that Australia is 'on track' to meet the target set under the Kyoto Protocol of an average of 108 per cent of 1990 emission levels over the period 2008-12. On the surface, this looks like good news. After all, many other developed nations are likely to exceed their Kyoto targets. But are the Government's figures accurate and is there reason to be proud of our greenhouse performance?

Unfortunately, the 'good news' in Australia's greenhouse accounts is not due to the effects of good policy winding back emissions. It is because of the so-called 'Australia clause' in the Kyoto Protocol, which allows countries with net emissions from land use change and forestry in 1990 to include net land use change emissions in their 1990 baseline. 'Land use change' essentially means land clearing – the removal of vegetation for purposes other than forestry.

Because of good agricultural conditions, the late 1980s and early 1990s happened to be bumper years for land clearing, particularly in Queensland. This raised Australia's emissions in the Kyoto base year of 1990 by around 30 per cent, making the 108 per cent target far cheaper and easier to achieve. Due to the Australia clause, any reduction in land clearing could offset emission increases from burning fossil fuels.

This is precisely what has occurred. Between 1990 and 2004, emissions from most sectors have sky-rocketed. For example, stationary energy and transport emissions increased by 43 per cent and 23 per cent respectively. However, these increases have been offset by a 73 per cent decline in emissions from land use change, providing an apparently respectable 2.3 per cent increase in overall emissions.

Given the importance of land clearing in Australia's greenhouse accounts, it is vital that there is an accurate and transparent system for accounting for land use change emissions. To perform this task, the Federal Government established the National Carbon Accounting System (NCAS), which relies on satellite data to track trends in land clearing.

In order to evaluate the reliability of NCAS outputs, the Australia Institute recently attempted a comparison between NCAS land clearing data and the data generated by

the Statewide Landcover and Trees Study (SLATS) run by the Queensland Government. Like NCAS, SLATS tracks land clearing in Queensland using satellite data.

Despite the similarities between the projects, we found significant differences in the estimates of land clearing in Queensland. The SLATS estimate of clearing between 1990 and 2001 is approximately 50 per cent higher than the NCAS estimate. In individual years the SLATS estimates are up to 164 per cent higher. Most alarmingly, there are significant differences in the trends, with NCAS showing a steady decline in clearing, while SLATS suggests clearing was high in the early 1990s, fell in the mid-1990s and then spiked again in the late 1990s and early 2000s.

We investigated whether the variation in results could be explained by legitimate differences in method. The most important issue appears to be that NCAS and SLATS have different definitions of what constitutes land clearing. NCAS only counts clearing of so-called 'Kyoto forests' – roughly vegetation covering at least 0.2 hectares with greater than 20 per cent crown cover and the potential to reach two or more metres in height. In contrast, SLATS defines land clearing more broadly as the removal of any perennial woody vegetation that can be identified by satellite, which roughly equates to vegetation with 16 per cent crown cover.

Using adjusted SLATS data, we sought to account for these definitional issues, but found that large differences remained. The SLATS clearing estimates were still significantly higher than the NCAS estimates and SLATS continued to show a spike in clearing in the late 1990s and early 2000s that was not evident in the NCAS data. Not only were we unable to explain the differences between the Federal and Queensland land clearing estimates, but when we looked at the NCAS outputs since 2002 we found large fluctuations in its own data. For example, the estimated rate of clearing in 1990 that was published in 2005 was 46 per cent higher than the estimate published in 2002. Of course, the upward adjustment of the 1990 clearing estimate has made it easier for Australia to meet its Kyoto target.

The Government dismissed the Institute's report, claiming we don't understand the Kyoto accounting rules and didn't make adjustments for differences in methods. These claims are false (and are addressed in a paper available on the Institute's website). Even if they were correct, the fact remains that NCAS is a black box: its data are not available to members of the public and are not subject to regular, independent scrutiny.

To ensure the integrity of Australia's greenhouse accounts, there needs to be an independent review of NCAS and the entire system must be made more transparent. If this doesn't occur, doubts will continue to linger over Australia's claims about its superior greenhouse performance.

Andrew Macintosh is Deputy Director of the Australia Institute, an independent public interest think tank based in Canberra. Publications by the Institute are available at: <http://www.tai.org.au/>.