THE WILDERNESS SOCIETY

Monday, 26 November 2007

Submission

To the Natural Resource Management (Climate Change) (Inquiry)

Introduction:

This submission was prepared by Peter Cooper and Felicity Wade for The Wilderness Society (Sydney) Inc.

The Wilderness Society is a national, community-based, environmental advocacy organisation whose purpose is protecting, promoting and restoring wilderness and natural processes across Australia for the survival and ongoing evolution of life on Earth.

The Wilderness Society appreciates the opportunity to present to the committee on this subject.

Summary

The purpose of this submission is to highlight the important contribution landclearing and commodity logging of native forests makes to climate change, both on a global and regional scale.

The recent intense debate on climate change in Australia has focused on greenhouse gas pollution coming from fossil fuel energy sources- oil and coal. Largely forgotten in the debate is the major role played by trees and other vegetation in absorbing greenhouse gas pollution and storing it out of the atmosphere. Also forgotten is the contribution of tree clearing and logging to increases in CO_2 in the atmosphere – clearing and logging in NSW alone releases more greenhouse pollution than adding 4 million cars to our roads.[1]

The IPCC Report[2], released on November 18 2007 estimates that 17.3% of international greenhouse gas emissions are caused by forestry, including land clearing and deforestation. This is second only to fossil fuel emissions which account for 56.6% of emissions.

[1] From Spatial Estimates of Biomass in Mature Native Vegetation, Australian Greenhouse Office and .NSW Auditor General Report data estimating that 74,000 hectares are cleared in NSW each year, releasing 11.4 million tonnes of greenhouse gas. Estimates suggest that native forest logging is contributing 5.11million tonnes of GHG each year, based on conservative estimates of carbon lost when old growth wet forests are logged. This figure is only from forests logged between 2002-2003, on the South coast of NSW only. No other data are currently available. Each 4 million tonnes of ghg is counted as equivilant to one million hence logging and clearing contribute more GHG pollution than 4 million cars.

[2] IPCC REPORT Reference

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A recent study led by the University of Queensland, "Modelling Impacts of Vegetation Cover Change on Regional Climate"[3], has also shown that landclearing has a 'significant' effect on regional climate, increasing temperature and decreasing rainfall.

Protecting and restoring NSW's native vegetation needs to be a critical policy and management consideration towards reducing the effects of climate change. This would further bring policy inline with the Natural Resource Commissions recommendations adopted within the NSW State Plan.

Specifics:

Landclearing.

Landclearing (also called deforestation) is the permanent removal of native forests and other bushland. In Australia most land clearing is done to extend grazing and farming land. Some native bushland is also cleared for housing and urban development and some areas are cleared to create young tree plantations for wood production.

In 2003 the NSW government promised to end land clearing. However, clearing at high rates continues. In 2006, the NSW Auditor General found that 740 square kilometres of bushland (74,000 hectares) was cleared in NSW in 2005.[4] The Auditor General found that attempts to curb clearing were impeded by poor monitoring and compliance by the NSW Government. The Auditor General found that 40 % of the clearing (around 30,000 hectares) was illegal. The NSW government has committed to improving its monitoring and compliance regimes, yet, despite over 1000 reported cases of illegal clearing in the past 2 years, not one case of illegal land clearing has been prosecuted under the Native Vegetation Act 2003. There are no reliable figures on what clearing rates are in 2007. There is little evidence that clearing rates have abated.

The Stern Review[5] estimated the global social cost from global warming through carbon dioxide emissions at $110 per tonne of carbon dioxide today.[6] At this price landclearing in NSW alone is costing the globe $1.2 billion every year.

Logging

Logging (forest degradation) is the removal of mature trees from native forest and woodlands for timber and paper products. Trees store carbon and old trees and undisturbed forests store more carbon than young or disturbed forests. In a world where the carbon capacities of standing forests will be increasingly valuable it makes little economic or environmental sense to allow continued logging on state or private lands.

Logging forests releases large amounts of greenhouse gases. This is for a number of reasons:

- Soils store carbon. Logging machinery creates soil disturbance which unleashes large amounts of stored carbon.
- Industrial logging operations inevitably remove vegetation which is not commercially usable. This wood is left to rot or burn releasing the carbon which it has been storing

[3] http://www.omc.uq.edu.au/news/documents/ModellingImpactsVegetationCover.pdf
[4] http://www.audit.nsw.gov.au/publications/reports/performance/2006/native_vegetation/native_vegetation.pdf
[5] http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm
[6] US$80 at November 2006 exchange rate.

- Much of the wood removed from NSW forests ends up as wood chip made into paper which is a short term commodity. When the paper is destroyed it releases the carbon it was storing. On average, 90% of native forest wood removed from our forests ends up in paper products that release CO2 to the atmosphere within 3 years.[7]

Finally old trees store much more carbon than young trees, simply because they are bigger. It would take at least 150 years for a forest's carbon carrying capacity to return to greater than 90% of its pre-logged levels. This makes industrial logging rotations non-sensical. Old-growth forests store the most carbon. The logging industry argues that because young trees grow faster than old forests, they are better at storing carbon than older forests. This ignores that ancient forests are stores of carbon that have been progressively built up over centuries.

A seminal paper recently published in the international journal, *Journal of Applied Ecology*[8], examined the effects of logging in a mixed Eucalyptus forest in southern NSW. The researchers found that when logging occurred with just selective harvesting techniques the average carbon storing capacity in the trees, stems, branches, litter and woody debris was reduced from 350 to less than 200 tonnes per hectare. Even though there is often significant regrowth within a logging coupe, these young trees do not account for the amount of carbon which was stored in the larger, older, removed trees. The role of the big trees in these forests cannot be understated in their capacity to store carbon.

The research found that in un-logged forests, trees with a diameter greater than 100cm can contain up to 54% of the carbon in all living vegetation. This explains why even selective removal of tall trees has a major impact. So how long does a logged forest take to recover its carbon carrying capacity? The study concluded a logged forest takes 53 years to recover 75% of its full carbon carrying capacity and 152 years to return to greater than 90% of its pre-logged carbon levels.

Trees and drought

El Nino events can have a strong impact on the climate of NSW, with severe droughts leading to a reduction in primary production.

The recent University of Queensland study[8] showed that "the 2002-03 El Nino drought in eastern Australia was on average two degrees hotter because of vegetation clearing," while summer rainfall decreased by as much as 12% in eastern Australia. These changes coincided with regions where the most extensive clearing had taken place.

Destroying native forests not only produces greenhouse pollution – forests and native vegetation are also a vital part of the water cycle because they increase rainfall. This is because plants absorb water from the ground and release it into the atmosphere, a crucial process in the creation of rain clouds.

NSW State Plan

The NSW State Plan states that:

"We will identify and consider conservation priorities region-by-region in a comprehensive Biodiversity strategy to halt the loss of native plants and animals by… promoting voluntary conservation on private land and linking areas of prime habitat with corridors to mitigate the impacts of climate change"[9]

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[7] Jaako Poyry Consulting, Technical Report no 24, Australian Greenhouse office
[8] Modelling Impacts of Vegetation Cover Change on Regional Climate, Dr McAlpine and Jozef Syktus. http://www.omc.uq.edu.au/news/documents/ModellingImpactsVegetationCover.pdf
[9] NSW State Plan, page 122

And that by 2015 we will see:

- an increase in native vegetation extent and an improvement in native vegetation condition
- an increase in the number of sustainable populations of a range of native fauna species
- an improvement in the condition of riverine ecosystems
- an improvement in soil condition
- Natural resource decisions contribute to improving or maintaining economic sustainability and social well being[10]

Ending landclearing and native forest logging in NSW will contribute to each of these factors and is inline with the Government's vision for the State.

Conclusions:

- Landclearing and logging of native forests remain a major cause of greenhouse gas pollution.

- As part of the solutions to mitigating climate change, we need to include the protection of trees and native bushland. This will provide *guaranteed, cost-effective and immediate* ways to reduce greenhouse gas pollution

- In NSW, measures such as stopping old growth logging, particularly in the south east, protecting river red gum forests in the Riverina and enforcing land clearing legislation are all simple measures that would have immediate, direct and measurable impacts.

- Protecting our native forests will help to mitigate the effects of drought and El Nino events and help secure our water supplies into the future.

- There are clear economic costs associated with allowing landclearing and native forest logging to continue in NSW, these will only escalate with the establishment of an international carbon economy.

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[10] NSW State Plan, page 120