Inquiry into the impacts on health of air quality in Australia

Submission by Mark Selmes (Vice President of the Goulburn Field Naturalist's Society)

This submission focuses on the sourcing of firewood from native forests on private lands in NSW through the Private Native Forestry Code of Practice. (PNF COP)
The PNF COP has left the way open for logging the native forests of the Southern Highlands and Southern Tablelands on a commercial scale for the sole purpose of firewood for sale into Sydney and Canberra markets .

Recently AECOM prepared a report (Economic Appraisal of Woodsmoke Control Measures 2011) for the OEH projecting that **the cost of woodsmoke to NSW between 2010 -2030 to be $8 billion.** Greens MP and environment spokesperson Cate Faehrmann said:
"The $8 billion figure isn't surprising when you consider that ***even in Sydney, more particle pollution is caused by wood smoke during winter than any other source...****Taking action now will literally shave millions off the NSW* ***health*** *budget for years into the future."*

In Canberra the **pollution issues and health effects** have become so bad, that in some areas new subdivisions are being prohibited from installing wood heaters.

Yet the OEH is approving the felling of native forests for the sole purpose of firewood with forestry groups stating their intent to promote the end product –firewood in areas such as Sydney and Canberra .

The forests and woodlands of the Southern Tablelands were largely protected in the past by the fact that they were not considered to be saw log standard, and are mostly 'defective' in silvicultural terms (but provide high biodiversity value). These declining woodlands and forests on private lands were targeted as genetic reservoirs for conservation by our governments, but will now be logged with government approval with firewood as the economic driver. All under the guise of large scale 'silvicultural improvements'. This NSW PNF COP now provides a pathway for ADDITIONAL areas of forest, that would otherwise be overlooked, to be logged and harvested as firewood.

The Southern Tablelands Farm Forestry Networks (STFFN) Plan, in their own words.

"There is over 1.5 million hectares of existing native forest on private land in the Southern Tablelands and most of it is unmanaged...the native forest types of the Southern Tablelands rarely produce reasonable quantities of sawlog grade trees. In fact most of the wood in our forests is ***firewood grade****. Therefore commercial harvesting will require access to the* ***firewood industry****...Don't be fooled, as the* ***firewood industry is booming*** *...the challenge lies in* ***co-ordinating a private industry*** *and ensuring consistent supply."*
*"****The first step is to promote the inherent commercial opportunities in order to fund both the management required for recovery and to create a new industry*** *which has as its core the sustainable management of native forest. Commercial opportunities are real and exist right now. These include (but not limited to):*
1. Firewood*. Environment Australia estimates 6 million tonnes used per year, half of which is sold to other users.*
2. Post &Poles*. Shortages are apparent in many regions, expanding vineyard industry in Victoria is sourcing some of its supplies from Queensland!"*

" ***Firewood in use in Canberra ..here is the answer. The Southern Tablelands has 1.2 million hectares of private native forest (PNF)*** *, which if managed properly, could yield an estimated 800,000 tonnes of firewood per annum. However, 95% of this is unmanaged, and* ***most PNF owners do not realise the potential of the resource.*** *As well as supplying all of the Southern Tablelands with firewood in a carbon neutral manner, the 800,000 tonnes can also generate electricity, provide industrial charcoal and bio-char for agriculture. "*

When commercial firewood logging can be given bio-certification by the NSW Environment Minister, the firewood sourced promoted as a "greenhouse positive" "bio-fuel" by forestry networks, when firewood floggers can state it is only a means to improve and regenerate the supposedly "dead and dying" forests of the Southern Tablelands, then I know the lunatics have taken over the asylum.
Landholders are allowed to source firewood for domestic use and in these rural areas many homes are kilometres apart with smoke dissipating unlike densely populated urban areas. Farm forestry networks should

be promoting agro forestry and plantation establishment on suitable lands (with safeguards to protect water) and the establishment of woodlots for farm use and future sale. Not promoting the logging of native forests over vast tracts of sensitive forests and woodlands for firewood into towns and cities.

Governments would ban the importation of such a product if it was sourced in threatened species habitat and rare forests from overseas .
Responses from Departmental bureaucrats have been that firewood **is a 'social' issue and the end product of PNF is not the department's concern.** This attitude could also see the remaining woodlands of the Southern Tablelands (in fact any lands anywhere in NSW) turned into firewood.

A spokesperson for the then Environment Minister Verity Firth answered questions in the Goulburn POST newspaper in October 2008 with *"there were no loopholes...The way the end product (the wood) is used does **not alter the environmental outcomes**, and the PNF rules do not govern this... there is a wide range of **other** programs focussed on climate change*
So there you have it. Using native forests as firewood does NOT alter environmental outcomes?

It is counter-productive to create economic incentives to reduce emissions while the NSW Government encourages increasing of emissions under PNF.

"Protecting the native forests offers a low economic cost means to mitigate net greenhouse gas emissions ...and it allows for the maintenance of biodiversity of the whole suite of biota that constitutes the forest ecosystem. Furthermore, biodiversity performs ecosystem functions which give native forest resilience "Dr Sandra Berry and Professor Brendan Mackey ANU WildCountry Development Hub ANU 2008 Submission in response to Garnaut Climate Change review : Issues Paper 1 Land –use –Agriculture and Forestry".
PNF approvals will not increase biodiversity but **will increase pollutants** and exacerbate **the health concerns** of low lying city dwellers. Where population density is high more people risk more concentrated exposure to the products of burning wood fuel over sustained periods In rural areas there are larger distances between households and smoke dissipates. There is nothing healthy in expanding firewood use into Sydney and Canberra, and especially not if it comes from EEC's and threatened species habitat.

It seems ironic that private lands for logging are called the **forgotten forests** and that the firewood industry is called the **forgotten forestry**.

"It has been estimated that Australia wide, the annual harvest of remnant timber for domestic firewood exceeds woodchip export quotas" (Robinson 1994)

"A major issue is the firewood industry – the total amount of firewood cut nationwide rivals the export woodchip industry.

(Lindenmayer, Crane and Michael. Woodlands a disappearing landscape. 2005.)

The Stern Review (Emissions from Land Use Change and Forestry sector) states that the loss of natural forests around the world contributes more to global emissions each year than the transport sector. Carbon stored within trees is released into the atmosphere as carbon dioxide, either directly if vegetation is burnt or more slowly as the unburned organic matter decays.

They don't come much more carbon emitting than burning trees felled for firewood. **No storing of carbon for the life of the product when the product goes straight up a chimney!**

'Forest protection is an essential component of a comprehensive approach to mitigating the climate change problem for a number of key reasons. These include: For every hectare of natural forest that is logged or

degraded, there is a net loss of carbon from the terrestrial carbon reservoir and a net increase of carbon in

the atmospheric carbon reservoir. The resulting increase in atmospheric carbon dioxide exacerbates climate change. (Mackey B, Keith H, Lindenmayer D, Berry S, 'Green Carbon: The Role of Natural Forests in Carbon Storage")

Eucalypt forests recovery for removal of CO2 from the atmosphere can take more than a 100 years. On average the recovery rate is over 50 years for 75% carrying capacity and over 150 years for 90% carrying capacity. Currently logging rotations in Australia are typically 50 years and often 20-30 years and sometimes as low as 5 years. Under PNF it is whenever suitable regeneration occurs and I believe this can be measured as when stocking rates achieve 50%.The amount of carbon stored in the regrowth can never equal the amount lost in logging and then burning as firewood. The older a forest is the more effective a carbon sink. Even if the trees die they still store carbon. The removal of vegetation and the introduction of heavy machinery also disturbs the soil, causing it to release its stored carbon into the atmosphere.

Commercially logged forests have substantially lower carbon stocks and reduced biodiversity than intact natural forests, and studies have shown carbon stocks to be 40 to 60 per cent lower depending on the intensity of logging. If people in cities must use firewood there are better sources than native forest logging.

Plantations, residues from tree lopping industries, trees felled from roads and subdivision clearing and under power lines, salvage timber, used fence posts, old wharf timbers etc. The Australian Government has developed regulatory impact statements on firewood (Environment Australia 2001) recommended encouraging use of waste wood, establishing plantations and the use of RESIDUES from private and state forests as alternative sources. Not to approve logging of entire native forests with firewood as the sole product as is happening where I live in Mount Rae forest.

Mount Rae forest is a significant area for the Endangered Ecological Community – Tablelands Basalt Forest and the Federally (EPBC ACT) listed *Diuris Aequalis* (buttercup Doubletail) orchid as well as 10 NSW listed threatened species. It has been documented to contain over 250 species of fauna and flora.
Yet a full time firewood has purchased lands here, as well as approaching other land holders to operate on their properties, and is currently conducting logging for the sole purpose of firewood in an EEC and threatened species habitat without the requirement of ANY environmental surveys. It does not need approval by local Catchment Management Authorities as would other landholders plans under the native vegetation act . These hastily approved plans are granted biocertification by the NSW Environment Minister and are 'deemed " to meet the requirements of the NV and TS acts when clearly they do not.

PNF does not regulate the end product and so a loophole has been presented to such firewood floggers to degrade such ecologically sensitive areas as Mount Rae forest for such low end products as firewood at a commercial level. This same landholder first came to the attention of the NSW Government when he was initially stopped from clearing land with a bulldozer for firewood and any future felling of standing trees in this forest was prohibited by the NSW Threatened Species unit in Canberra as well as the unanimous decision of the local councillors of Upper Lachlan Shire . These decisions were ignored under the PNF approval system and these authorities were removed from the process. Approvals take approx. 28 days **.**
The NSW Government claims to have ended broad scale land clearing, to be protecting biodiversity, that climate change is a serious issue, that they encourage input from local communities and representation from local catchment management authorities. That decisions are science based. **Then they ignore all of the above through PNF and consign our forests and their dependent fauna and flora to the woodpile and the chimney.**

The below is from the NSW Health Department's own website:

"Wood smoke can affect anyone. Children, the elderly and people with heart or lung conditions like angina, asthma or emphysema (COPD) are most likely to be affected by wood smoke.

What can you do to reduce the chance of wood smoke affecting your health?

Don't use a wood-burning heater in your home

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Wood-burning heaters make a substantial contribution to air pollution in NSW.
Smoke from wood-burning heaters can affect your health. Long-term exposure can cause heart and lung disease while brief exposures can aggravate asthma or worsen pre-existing heart conditions.
Use of a wood-burning heater will affect the air quality inside your home and the surrounding environment.

The NSW Office of Environment and Heritage estimate that in some towns and cities in NSW, around 30% of total annual emissions of fine particulate matter ($PM_{2.5}$) are emitted from wood-burning heaters. On a winter weekend, wood-burning heaters may be responsible for more than 60% of fine particle pollution. There is good evidence that long-term exposure to particulate matter decreases lung function and increases the risk of developing heart and lung diseases like angina and chronic bronchitis (Chronic Obstructive Pulmonary Disease). Short-term exposure (over hours or days) to high levels of wood smoke may cause eye and respiratory tract irritation, aggravate asthma or worsen heart disease. “

And this from the NSW Environment and Protection Authority website:

EPA -why is woodsmoke a problem?

Smoke from wood heaters is a major cause of air pollution. In fact, during winter, wood heaters can produce up to seven times as much particle pollution as cars.
Woodsmoke contains a number of noxious gases (including carbon monoxide, oxides of nitrogen, and a range of organic compounds, some of which are toxic or carcinogenic) and fine particles, which go deep into the lungs Contribution of woodsmoke to air particle pollution
In winter, there is more particle pollution caused by woodsmoke than any other single source. In Sydney, domestic solid fuel combustion contributes 19% and 29% of annual PM_{10} and $PM_{2.5}$ particle pollution, respectively. On a winter weekend day, the contribution of PM_{10} and $PM_{2.5}$ particle pollution can be as high as 48% and 60%, respectively.
Influence of topography and the weather
Weather patterns during the winter months, together with the increase in woodsmoke, influence air quality.
The topography of the Sydney Basin (and to a lesser degree that of the Illawarra and the lower Hunter) can also affect the dispersion of pollutants Community concern
OEH community research has consistently found air quality is the second most important environmental issue to NSW residents, following water issues.
Woodsmoke pollution from neighboring chimneys is the source of many complaints to local councils throughout NSW.

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Allowing firewood merchants to log native forests for the sole purpose of commercial firewood ? Setting a precedent for all such areas in NSW and the promotion of new sources for firewood to be supplied to cities goes against all meaningful concerns for greenhouse gas emissions, wood smoke health impacts and biodiversity protection.
The NSW PNF COP is a farce.

I hope the Senate enquiry takes these issues into consideration when looking at the source of air quality in Australia and some of the perverse outcomes being delivered under current NSW legislation.

Regards
Mark Selmes

Mount Rae Forest –EEC and TS habitat –December 2012 – just some of the firewood drying for 2013 winter sale .