

Response to Victoria's Air Quality Statement:

The problem of industrial logging burns in state forests

By Dr Chris Taylor

The Air Quality Statement by the Victorian Government aims for specific approaches that monitor and manage air quality over the next decade. It hopes to empower Victorians to reduce the occurrence of air pollution and tackle emerging air quality challenges (DELWP 2018). The statement lists a range of pollution sources, including the burning of fuels (e.g. driving motor vehicles, running factories and/or other industries, generating electricity using coal or gas), burning wood for home heating, bushfires and planned burning to reduce bushfire risk. However, the absence of a major source of smoke pollution emanating from industrial logging burns in state forests is concerning, because of the amplified impact that this smoke has on the air-shed of Melbourne and regional areas (Figure 1). It needs to be addressed as a key part of the Statement.



Figure 1. Smoke Haze over Mooroolbark and Melbourne's eastern suburbs on Tuesday 1 May 2018. Photo: Chris Taylor

Industrial logging burns are when downed forest debris, resulting from the clear-fell logging of state forests, is consumed in a high intensity 'planned burn' (Flint and Fagg 2007). Burn coverage is usually between 90-100% of the site and large volumes of biomass, in the form of tree heads, branches, bark and downed understorey vegetation following logging, are consumed. The amount of biomass consumed in planned logging burns can be between 140 t/ha (Raison and Squire 2008) and 450 t/ha (Slijepcevic 2001) (Figures 2 and 3). This is in contrast with Fuel Reduction burns, which are intended to be low intensity 'planned burns' (K. Tolhurst 2003), consuming only around 9 t/ha (Tolhurst and Cheney 1999) and featuring a burn coverage of between 50-70% across the site (DELWP 2018) (Figure 4).



Figure 2. Large volumes of forest biomass are left on the ground following clearfell logging in the Mount Disappointment State Forest with the Melbourne City Skyline in the background, August 2010. Photo. Chris Taylor.



Figure 3. High intensity logging burns and the resulting smoke plume near Mount Baw Baw, April 2018 Photo Chris Taylor.



Figure 4. Surface and understorey “fine fuels” targeted in a recent low intensity burn near Mt Dandenong in April 2018 (Photo: Chris Taylor)

The list of planned burns on Forest Fire Management (FFM) Victoria’s website showed at the beginning of May that 77 of the 119 fires either lit or planned to be lit across the region were on logging coupes (Forest Fire Management Victoria 2018). Although planned logging burns cover a much smaller in area compared with the area treated with Fuel Reduction burns, the very large volumes of biomass they consume makes them a significant contributor to the overall smoke pollution. There were days where industrial logging burns made up the majority of planned burns lit, thereby contributing the bulk of pollution. An example of this occurred on the 20 April 2018, where ten out of twelve planned burns observed lit were on logging coupes (Figure 5) (Taylor and Lindenmayer 2018).

Legend

Planned Burns 20 April 2018

Fire Type

- Bushfire Management
- Logging

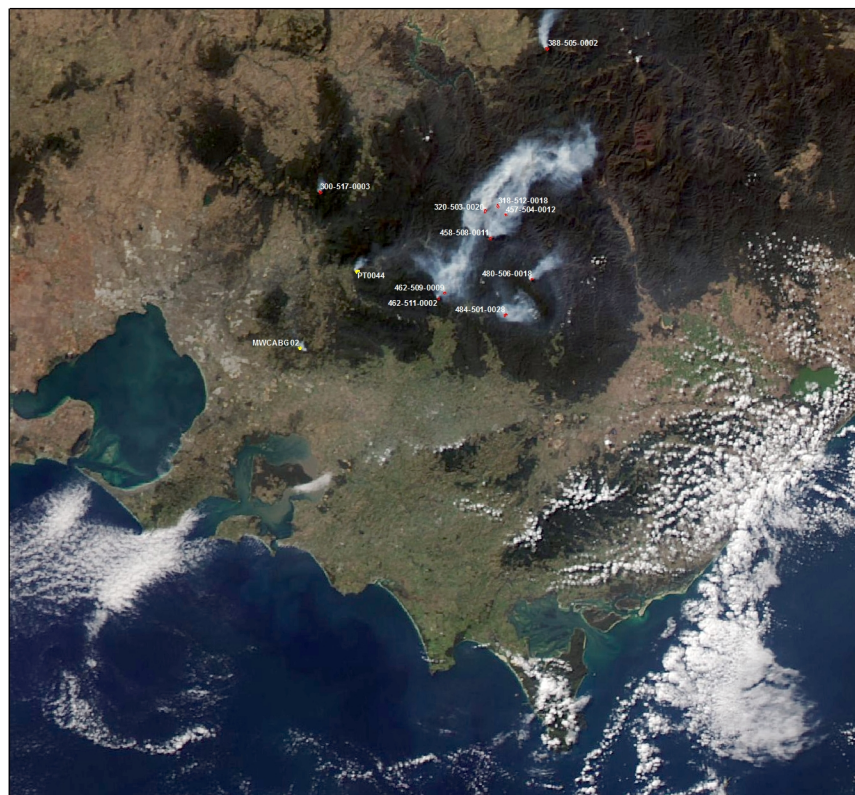
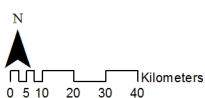


Figure 5. MODIS Rapid Response Terra Satellite image taken 20 April 2018 showing the smoke intensity of the logging burns (NASA 2018)

The key issue here is that not all 'planned burns' are equivalent. Fuel reduction burns are intended to reduce bushfire risk to people's lives and property. In contrast, logging burns are part of an industrial process for extracting pulplogs and sawlogs for commercial sale to private enterprise. They play no part in reducing bushfire risk to life and property. These industrial logging burns would not be needed (and a substantial amount of associated smoke not generated) if the forest had not been logged in the first place (Taylor and Lindenmayer 2018).

In terms of addressing the questions raised in the Victorian Government's Air Quality Statement, the Victorian Government must address the significant problems associated with industrial logging burns. They are part of Forest Fire Management Victoria's planned burn program (Forest Fire Management Victoria 2018) and therefore apply to the Statement. There are several actions that need to be addressed in relation to industrial logging burns and the Air Quality Statement:

- The government must be transparent in relation to the source of smoke pollution. If the smoke source is originating from industrial logging burns, then it must be identified as such and the corresponding volumes of smoke defined;
- Industrial logging burns must no longer be confused with 'fuel reduction burns' or ecological burns'. They are implemented solely for the benefit of private commercial enterprise and NOT community safety;
- The government must expand its air quality monitoring capabilities from just being focused on urban centres to regional and rural areas. The lack of monitoring close to industrial logging burns hides the immediate impact that this pollution has on regional communities; and
- The Victorian Government must prevent large scale pollutions events resulting from industrial logging burns in state forests by bringing a cessation to the practice. They impose a heavy cost on the community, not only in financial terms, but also in the overall degradation of air quality and the environment more broadly.

The cessation of industrial logging burns will reduce the volume of smoke pollution across Victoria every Autumn. This will be a zero-cost measure, along the environmental benefits associated with keeping state forests intact. It will also free up resources allowing state government agencies, such as Forest Fire Management Victoria, to devote more resources in protecting life, property and the environment from dangerous bushfires.

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