

Law enforcement levels and bushfire arson rates

Bushfire arson imposes significant environmental and economic costs on Australia, but arsonists are difficult to catch and even more difficult to convict (Muller 2008). Two studies in the United States (US) sought to determine if an increase in the level of law enforcement intensity – more police officers per head of population – would help to reduce bushfire arson. In the first study, the relationship between arson and levels of law enforcement was analysed over 12 years in 27 US states (Donoghue & Main 1985). The effect of law enforcement on arson was greatest when it changed from very low to moderate levels of police. Changes from moderate to high levels had no effect. In the second study, a more sophisticated model involved the use of daily data to investigate relationships between number of bushfires, law enforcement, socioeconomic variables, fuels management, wildfire history, a drought index and El Niño status in five high-arson counties in Florida (Prestemon & Butry 2005). In two counties, an increase in the level of overall law enforcement numbers had a moderate effect in reducing arson rates, while there was no relationship for the other three counties.

Both studies suggest no clear evidence that increasing the overall number of police is an effective strategy to reduce bushfire arson. However, law enforcement is based on knowledge of crime patterns, particularly because crimes often recur in the same suburb. This knowledge allows police to best concentrate efforts to maximise law enforcement with available resources. The issue may not be one of the relationship between overall police numbers and arson, but rather how efficiently resources are targeted to deter arsonists and prevent arson.

The key issue is whether there are patterns in bushfire arson that may help police and other key service personnel to be in the right place at the right time. The Florida study suggested this is the case, with arson peaking on Saturdays in late spring (Prestemon & Butry 2005: 769), and a recent report on deliberate fire lighting in Australia indicated strong patterns in bushfire arson (Bryant 2008). In many urban areas, for example, bushfire arson peaks mid-afternoon on weekends in the first three weeks of the year (Bryant 2008: 63). While the US and Australian studies show patterns in arson and that predictive modelling may be possible, it seems clear that, at least in the Australian case, current data on bushfires nationally are not spatially or temporally detailed enough. However, the Australian Incident Reporting System, the national bushfire database, is being improved constantly, which may enable better targeting in the future.

References

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