

Predicting the pollution level from smoke plumes

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Smoke pollution from landscape fires is a major health problem. Prescribed burning requires up to 3 hectares treatment for each hectare reduction in subsequent wildfire. This raises the question as to whether the smoke pollution from prescribed fires is substantially different compared to wildfires. We examined the wind speed, temperature, fire area, fire type, distance, and C-Haines from ~140 landscape fires in south-eastern Australia using the existing network of weather radars. Furthermore, we tested the sFRP and FFDI by using the data of MODIS for ~125 fires. Although prescribed fires plumes are smaller and lower in the atmosphere than wildfires, the long-term smoke exposure may be similar under fire regimes dominated by either type.

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