



ECONOMIC ANALYSIS OF PRESCRIBED BURNING FOR WILDFIRE MANAGEMENT IN WESTERN AUSTRALIA

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Prescribed-burning: a bushfire management tool

Prescribed-burning is used to reduce bushfire risk to communities, water catchments, conservation areas and other at-risk zones. Australia has a long history of prescribed-burning.

The Problem

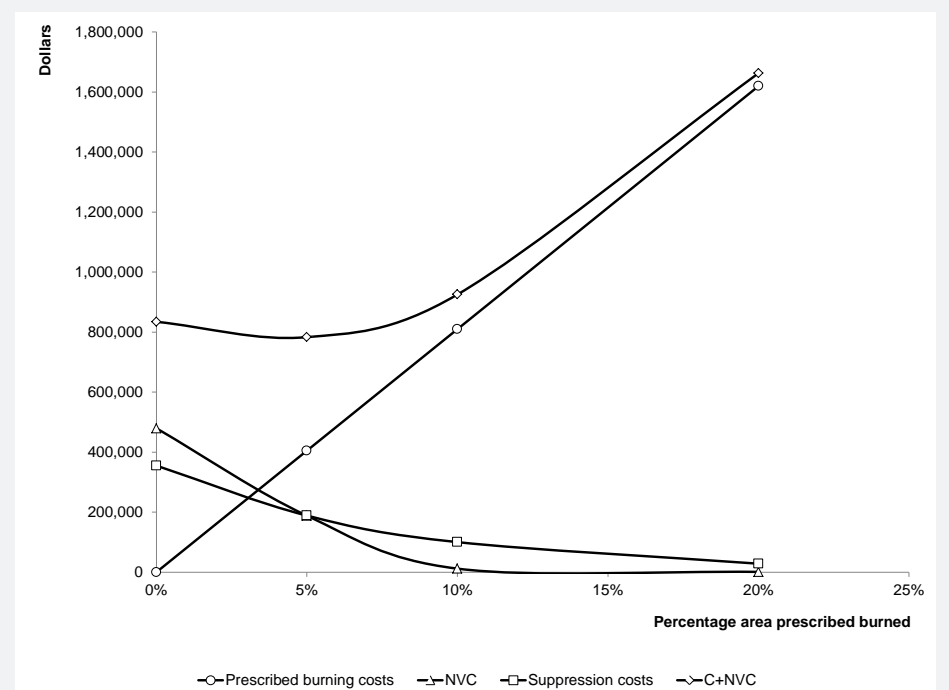
Prescribed burning may reduce bushfire intensity and/or size, but it is uncertain whether the benefits of prescribed burning offset the costs.



photo: abc.net.au

Results

The most economically efficient level of prescribed burning corresponds to a strategy where 5% of the simulated landscape is prescribe-burned per year.



Our results are sensitive to changes in prescribed burning costs (in average dollars per hectare) the probabilities of fire occurrence, urban area values (in average dollars per hectare) and suppression costs.

Applying economics to prescribed burning

We applied the cost plus net value change (C+NVC) model to a synthetic landscape of 100,000 ha, representative of the northern jarrah forest of the south west of Western Australia.

We conducted a sensitivity analysis to evaluate the robustness of the results and determine which parameter values most affect the results.



photo courtesy of Dr. S. Setterfield, Charles Darwin University