

Protecting our forests this bushfire season

January 4 2016, by Cristy Burne, Sciencenetwork Wa



How old does a forest have to be to bounce back after fire? Credit: National Forest

This bushfire season, how can we best protect our forests—and the millions of dollars spent in recreating them?

The [destructive power](#) of bushfire can sometimes be tempered in the Australian bush, with many [native plants](#) re-sprouting from blackened branches, or relying on smoke to prompt [seed germination](#).

But what if the bush has been freshly rehabilitated? How old does a [forest](#) have to be to bounce back after fire?

Scientists at Kings Park are working to answer these questions in collaboration with South32 Worsley Alumina's bauxite mine in Boddington, where progressive rehabilitation and successful [restoration](#) of jarrah forest has occurred since the late 1980s.

Kings Park Director of Science Dr Ben Miller says good management and records keeping by the mine means his team can compare and contrast the effect of fire on rehabilitated forests of different ages.

"We have data on restoration and rehabilitation in that area going back to the 80s, so we can see how the forest looks across all those years," he says.

"Some rehabilitated areas have been burned, some haven't, but thanks to these records, we can now look at working out how resilient post-mining restoration is to fire."

Bouncing back after bushfire

Dr Miller says the goal of restoration in the Boddington area is to establish jarrah forest that is self-sustaining, and with fire an inevitable part of the WA summer, that means responding positively to bushfire.

"Resilience is a key function in a restored ecosystem...if a restored ecosystem can respond naturally to a fire, then that's a really positive sign," he says.

By combining the mine's decades of data with data gathered from field surveys this summer, Dr Miller's team hopes to determine which factors affect the ability of rehabilitated forest to thrive under fire.

"If it's freshly rehabilitated, it's probably not going to burn, but if it does burn it will probably be devastated," he says.

"If it's 15 or 20 years old, it probably will burn, and it probably will regenerate.

"So at what stage can the forest respond positively to being burnt? Is there an established seed bank? Are the jarrah trees old enough to resprout? These are the questions we're hoping to address."

Kings Park is looking to collaborate further with the mine as part of this important work.

This article first appeared on [ScienceNetwork Western Australia](#) a science news website based at Scitech.

Provided by Science Network WA

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