Media Release

Chiefs of Staff, News Directors

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New insights into reducing bushfire risk gained through major simulation study

For the first time, researchers at the University of Tasmania have modelled how effective certain types of prescribed burning scenarios are in reducing wildfire risk at a regional scale.

In the largest simulation study of its kind, the effectiveness of a range of hypothetical prescribed burning treatments was evaluated across Tasmania over a five-year period.

The study resulted from more than 60,000 individual fire simulations under 62 prescribed burning scenarios. These were analysed for effectiveness in reducing fire activity.

The study was initiated by the Tasmania Fire Service and supported by the Bushfire and Natural Hazards CRC.

"Prescribed burning is a widely accepted wildfire hazard reduction technique; however knowledge of its effectiveness remains limited," School of Biological Sciences PhD student, and report co-author, James Furlaud said.

Of all the scenarios, researchers found those with intensive amounts of prescribed burning were the most effective, suggesting it is imperative to carry out targeted strategies on a local scale.

"We've concluded from analysing the data the most effective risk reduction when using planned burning is having a more targeted approach, undertaken on a local scale," Mr Furlaud said.

The targeted, local-scale approach involves prescribed burning in and around urban, built-up areas.

Professor in Environmental Change Biology David Bowman said out of all the scenarios, the local-scale approach is the hardest to carry out as it involves a number of considerations including impact on local community and cost.

"This study has certainly raised the bar in terms of what is the best approach to reduce fire risk in and around urban areas, and we're still learning on how best to carry this out."

Professor Bowman said the published study is globally significant given the complexity of the modelling, the geographic area covered, and the diversity of vegetation involved.

"To find the best options and strategies that you need to manage the global fire crisis you need to do modelling," he said.

"Tasmania has such an incredibly diverse ecosystem so it is an ideal setting for conducting modelling studies to determine the best approach in using burning to reduce fire hazard. It is not possible to tackle this issue with case studies or experiments, modelling is the only way to capture the complexity of this question.

"I knew all along our computer simulations had created huge intellectual scientific wealth akin to a pile of scientific 'bitcoins'; this trove can be directed towards solving the deadly serious problem of bushfire disasters.

"The results from the study are an important stepping stone to a much better understanding of options and building adaptive capacity for the fire crisis we are now in.

"This crisis is evident when you look at what's happening in California.

"We need to explore what options we have in response to the dangerous flammable landscapes that are unfortunately found in Tasmania, and particularly around the hinterlands of Hobart."

The study, *Simulating the effectiveness of prescribed burning at altering wildfire behaviour in Tasmania, Australia,* was authored by James Furlaud, Dr Grant Williamson and Professor David Bowman.

It was published today in the *International Journal of Wildland Fire*, and will be available online from 11am at https://doi.org/10.1071/WF17061

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