# COST EFFECTIVE SUPPRESSION ON CAMPAIGN FIRES

**Heather Simpson[1],**

[1] Centre for Environmental Risk Management of Bushfires, University of Wollongong, NSW

**THIS PROJECT SEEKS TO DETERMINE WHAT TYPE AND LEVEL OF SUPPRESSION RESOURCES ARE REQUIRED FOR SUCCESSFUL CONTAINMENT OF CAMPAIGN FIRES UNDER A GIVEN SET OF FIRE WEATHER, FUEL AND TOPOGRAPHIC CONDITIONS.**

## WHAT IS THE PROBLEM?

Campaign fires consume thousands of hectares of Australian forests and grasslands annually, threatening lives and property.

Bushfire response agencies expend significant resources and sums of money on suppression operations for which there is little formal quantification of effectiveness.

In an era of evidence based management, additional tools are essential to provide capacity predictions of suppression efforts on campaign fires.

## HOW ARE WE GOING TO SOLVE IT?

By working with agencies to develop a practical model of bushfire operations, with the aim to:

- Quantify the effectiveness of different suppression resources and resource levels on campaign fires.
- Provide information regarding the cost effectiveness of variable resource types.
- Define the most cost-effective activities, resource types or resource combinations that will yield relatively high levels of effectiveness across differing environmental conditions.
- Integrate results into existing fire simulation modelling.

## PREDICTED OUTCOMES

- Tools to evaluate the feasibility of suppression strategies.
- Determine if there are economies of scale to be gained by matching different types of resources (e.g. task force configurations).
- Tools to predict time to containment or final fire size for a given set of resources and fire behaviour conditions.
- Increase responder safety by providing estimates of resource adequacy for a given set of conditions.
- Provide empirical evidence for future resource investments.

The ultimate aims of this research is to provide tools and guidelines that will increase the effectiveness and reduce the cost of suppression activities on campaign fires.

Australian Government Department of Industry and Science | Business Cooperative Research Centres Programme