# Working with us

ARI scientists have extensive experience collaborating with government agencies, Traditional Owners, universities, NGOs and community groups.

We have the capacity to bring disparate groups together to form a shared understanding of the challenges facing biodiversity and the tools available to address those challenges.

We hold a vast library of biodiversity data, specialised expertise in Victoria's species and ecosystems, and advanced analytical skills and systems. These can be harnessed for project design, on-ground data collection, complex data interpretation, and policy advice.

Our team has extensive experience in fire ecology and management. We can help develop the evidence base and tools needed to protect Victoria's biodiversity into an uncertain future.

# Contact

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Sign up to our ARI updates mailing lists

This research was undertaken on Wurundjeri Country, for application across all Country intersecting with Victoria.

Photo by Justin Cally

# FAME

## The Fire Analysis Module for Ecological values

Arthur Rylah Institute for Environmental Research
ari.vic.gov.au

ARI Arthur Rylah Institute

VICTORIA State Government

## In short

- Bushfire and planned burns have lasting impacts on biodiversity, as well as on human life, property and other values
- ARI has developed FAME software to help predict the impacts of bushfires and planned burns on biodiversity, one species at a time
- FAME has won the international INFORMS award for Decision Analysis Practice

*FAME software helps DEECA staff bring biodiversity into the planning of fire management*

*ARI Director James Todd speaks at a bushfire recovery workshop*

## Context

Fire response and planning impacts human lives, property, biodiversity and cultural heritage. Managers are faced with difficult trade-offs and need clear lines of evidence that describe these impacts.

Impacts of fire on biodiversity are complex, with each species having its own unique habitat preferences and sensitivity to fire, both in the fire's immediate aftermath and in its continuing effect on vegetation.

## Who we are

ARI scientists develop the research and tools that support DEECA Bushfire and Forest Services in their fire management planning:

*ARI decision scientists and facilitators* gather together policy and planning staff and ecological experts, applying structured participatory methods to build a decision-making framework that integrates social values and preferences with ecological process models.

*ARI data analysts* curate biodiversity data and build modelling frameworks to describe the impact of planned burns and bushfire on biodiversity across Victoria.

*ARI software developers* create tools that collate disparate data sources and enable DEECA Bushfire and Forest Services staff to conduct fire management scenario testing in support of their planning responsibilities.

## What we can do

ARI decision science helps unpack difficult, multi-faceted problems to build a structure that represents diverse interests and lines of evidence, with a focus on effective decision-making.

ARI draws on its vast library of biodiversity data to model the habitat preferences of hundreds of animal species, including their response to planned burns and bushfire.

ARI's FAME software enables DEECA staff to:

- collate up-to-date fire information across Victoria,
- select animal species of concern, supplying an understanding of their habitat preferences and sensitivity to fire, and
- project the impacts of planned burns and bushfires on the selected species.

## What's at stake

Climate change is causing increasing frequency, severity and extent of fires globally with potential for catastrophic impacts to people, nature and economies around the world.

Fire management commonly focuses on threats to human life and property while other values such as biodiversity and cultural heritage are often overlooked or poorly incorporated.

To bring these diverse values together for fire management and planning that serves the whole community, we need discussion across many disciplines supported by a clear evidence base.

Photo by Peter Menkhorst


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