

# THE VALUE OF OUR BUSHFIRE CRC

## A LAND MANAGEMENT AGENCY PERSPECTIVE

A standout issue over coming decades will be the rapid change, escalation and uncertainty in the impacts of fire on ecosystems and the community. The changes are likely to overwhelm existing capability to foresee, diagnose and respond to them. Critical to managing these impacts will be research - research that addresses the big questions of broad scales, integration, and system resilience.

A major driver of change will be climate, which will soon have a major impact on the distribution and survival of native species and cause:

- More drought and extreme fire danger
- More fires - bigger and more severe. Changed 'fire regimes'
- More vegetation available to fires
- More threat of damage and loss.

Moreover, the changes will put pressure on the profound and complex interactions between climate, ecosystems, fire regimes and human communities, with significant but unknown effects. For example, the changes in fire regime may accelerate climate change (through lowering carbon storage capacity). Unlike in the past, many changes will be too fast for the system to adjust and be managed readily.

Land managers have the most obvious link with the many projects in **Program B - the Role of Fire in the Landscape**.

But key Bushfire CRC research in other areas includes:

**Program A** - fuel classification and availability; evaluation of suppression techniques and guidelines; and fire weather, fire danger.

**Program D** - building and occupant protection; fire fighter health and safety; air toxics exposure and management; safe behaviour and decision making; and incident management teams.

Community needs, expectations and values will change, in ways that may become difficult to predict. Land managers will be expected both to respond to and inform those changes. Invariably, this will involve conflicts and dilemmas, arising from the need to assess short-term and long-term risks and make trade-offs. Communities will need to better understand the choices and limitations to

what can and cannot be achieved, become more involved in decision making, and adapt to the conflicts and limitations. The decisions will need to be based on evidence - science, management expertise, local knowledge and community values.

The community focussed research underway in **Program C** is providing a vital framework and a body of knowledge for land management agencies. Specifically, projects C1 Understanding Communities, C4 Effective Risk Communication, C5 Bushfire Economic Costs, and C6 Evaluating Stay or Go, are examples that land managers are drawing on to educate and engage the public and help shape future options for management.

The rate of change is likely to outstrip the rate of knowledge capture through traditional research approaches, not least in relation to ecology. Therefore the community needs research that provides the best available knowledge to support:

- predicting likely changes (environmental, social, economic)
- decision making to deal with risks and trade offs - short v long term - the impacts of what we do or don't do now compared with future scenarios and how these are influenced by our action or inaction
- negotiating management principles, objectives and outcomes with government, stakeholders and communities

- monitoring the changes and impacts of decision making
- implementing an adaptive management framework.

More specifically, fire management will in future need to understand changes in our risk environment, management options and opportunities, and how these impact on:

- ecological responses and requirements of flora and fauna;
- timber harvesting and other production commitments;
- water yield and quality requirements;
- asset protection and risk reduction requirements; and
- other ecosystem services such as carbon, tourism, etc.

Bushfires move across the landscape, and must be managed at a landscape level. Research needs to support management at that level and provide evidence that helps assess, compare and integrate social, economic and environmental imperatives.

*With input from the Department of Sustainability and Environment, Victoria.*

*September 2007*

