

The costs and benefits of bushfire management & research

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Economics research in the CRC

- One of the CRC's 34 Projects;
- Essential to work with our overseas colleagues;

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Projects & results

- Aerial suppression
- North-east Victoria fires
- Total costs of fire
- The value of Bushfire research
- Canberra fire
- Prescribed burns

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Aerial suppression

STUDY:

- **Economic efficiency of aerial fire suppression** using cost plus loss approach – within data limits;
- Comparison requires a simulated fire spread model – based on rate of fire line construction;

RESULTS:

- Aircraft for initial attack, with follow-up ground resources produces the best outcome;
- Aircraft alone are economically justified when ground resources are slow to arrive (30mins v 4 hours)

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Aerial suppression 2

- Large fixed wing aircraft are at a cost disadvantage – esp. if fires are small & drop accuracy is required. Their operational requirements are limiting.

Conditions:

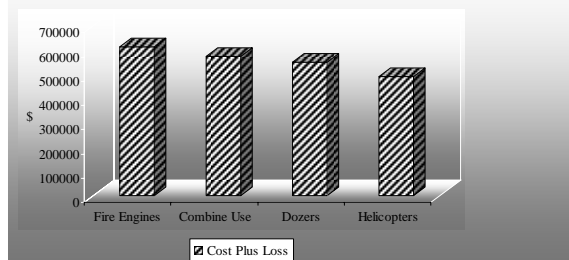
- Rapid deployment of aerials is key
- The critical condition is the ability of aircraft to knock down a fire before ground crews arrive - buys time. This advantage is much greater in inaccessible terrain.

PHASE 2:

- Use of aerials for asset protection, and possible environmental benefits of aerials.

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Economic Efficiency of Suppression Strategies (30 min & 4 hr response time for helicopters and other resources respectively)



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North-east Victoria fires

- An analysis of the net economic impact of the 02-03 fires.
- Depending on assumptions about the future, the net loss of income from timber is about \$184 million.

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The value of Bushfire research

Bushfire costs:

- Tangible losses (eg. loss of houses, timber resources, economic disruption)
- Intangible losses (eg. loss of scenic beauty of environment, 223 deaths and 4,185 injuries during 1967 – 1999)

Cost of suppression:

- eg. \$251 million across Australia during 2002/03 fire season

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The value of Bushfire research 2

Research outcomes can

- Reduce bushfire impacts and the
 - Cost of managing bushfires
- Through fire & land management & community education.

Key factor:

- user involvement helps implementation of appropriate innovations

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The value = 60:1

Resources for CRC research:

- 120 million over 7 years

Value of expected benefits over 30 years:

- 5600 million (discounted at 6 per cent interest rate)
- For every dollar invested in the CRC we expect a return of about \$60.

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