

EXPLORING MANAGEMENT ACTIONS TO REDUCE FIRE RISK TO NASEBY, NEW ZEALAND

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Introduction

Naseby is a small town in Central Otago, New Zealand, surrounded by a commercial forest, agricultural and conservation land. It faces a high fire risk due to the abundance of vegetation within and surrounding the town.



We conducted an integrated assessment of several potential changes to the management of fire risk within the town and on surrounding land.

Methods

Within the region, the project team conducted workshops with stakeholders, including representatives from National Rural Fire Authority, Department of Conservation, regulatory agencies and farmers. A detailed model was constructed, integrating information about: the values of at-risk assets; frequencies of fires and of weather conditions; fire severity; fire spread; and the costs and effectiveness of management actions.



Management actions

Management actions to reduce fire risk are simulated in each land use zone surrounding Naseby, and within the town itself.

- Incentive payments to farmers or regulation to cease land clearing burns.
- Logistical support to farmers for burns.
- Education and training of farmers and community members.
- Fire breaks around the commercial forest or conservation land.
- Prescribed burning on conservation land.



Key findings

The most cost-effective options for reducing fire risk in Naseby include:

- Education program for Naseby residents to improve fire-risk awareness
- Regulating against fires lit within the town
- Training farmers to improve burning practices
- A fire break around the commercial forest