Disaster and economic resilience in Small Regional Communities: The case of Toodyay

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Research

- Estimate economic impact of natural disasters
- Optimise and inform a sustainable disaster recovery model
Measuring the impact

- Difference-in-difference model
Black Saturday bushfires

Individual income losses by demographic group
Black Saturday bushfires

Individual income losses by sectors of employment

-31% Agriculture, forestry and fishing
-30% Transport, postal and warehousing
-19% Professional, scientific and technical services
-13% Retail trade
-12% Accommodation and food services
+8% Healthcare and special assistance
Toodyay bushfires
Modelling hampered by small sample size
Toodyay bushfires
Demographic profiling uncovered valuable insights

- Hours to bring fire under control: 14
- % Toodyay SA2 burnt: 2%
- Employed residents work outside of Toodyay: 60%
- Public assistance distributed within first three months: 29%
Utilisation

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End-users

Commonwealth
- Emergency Management Australia

Queensland
- Queensland Reconstruction Authority

South Australia
- Department of Environment, Water and Natural Resources

Victoria
- Department of Environment, Land, Water and Planning
- Inspector General of Emergency Management Victoria

Western Australia
- Office of Bushfire Risk Management, Department of Fire and Emergency Services
Utilisation

Factors affecting long-term community recovery

Ten years of emergency management reform

Black Saturday: the economic cost

Black Saturday: counting the cost
Utilisation

• Pre- and post-disaster funding should better reflect the long-term nature of social impacts

• A collaborative approach needed to address the medium- and long-term economic costs of the social impacts of natural disasters

• Further research must be done into ways of quantifying these costs
Utilisation

Small towns like Toodyay form 9.7% of Australia’s population.