BUSINESS CASE: EXECUTIVE SUMMARY

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Current and potential future costs to Council of emergency response

Report prepared for Bass Coast Shire Council as part of the Financial Risk Adaptation Planning project

BASS COAST

SECCCA South East Councils Climate Change Alliance

State Government Victoria

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Executive summary

Introduction

Financial Risk Adaptation Planning (FRAP) is a series of case studies funded by the Victorian government. It aims to assist member councils of South East Councils Climate Change Alliance to assess the short, medium and longer term costs and benefits of alternative adaptation options in the context of a changing but uncertain future climate.

This case study examines current and potential future costs to the Bass Coast Shire Council of delivering the legislated emergency response, relief and recovery activities before, during and after natural disasters such as bushfires, floods and storms. This cost analysis considers both direct and indirect impacts on Council resources and discusses the implications for future contingency and emergency management planning.

Rationale for emergency preparedness

Although Bass Coast has been relatively free of major natural disasters in recent years, the Shire is exposed to some potentially significant natural threats. Furthermore, exposure could increase in the future with climate change. This exposure, combined with community and government expectations provides a rationale for Council preparedness.

The six Gippsland Councils have agreed to provide a coordinated approach to emergency management response, relief and recovery across the region. Two standard operating procedures have been prepared by the Gippsland group of Councils to provide a minimum standard of universal emergency management service delivery across the Gippsland Region: Gippsland Emergency Relief Centre Standard Operating Procedures and Gippsland Emergency Response and Recovery Standard Operating Procedures. These documents outline Bass Coast Shire Council's emergency management roles and responsibilities and have been used as a base for cost analysis throughout the business case.

Cost analysis

Description of scenarios

It is not possible to be precise about how an emergency event will play out in Bass Coast Shire and the impact that this will have on Council resources and its business continuity. To assess the costs of an emergency event therefore, three scenarios were constructed for analysis:

- **Scenario 1.** This emergency event impacts directly on a relatively small proportion of the community (e.g. <0.5%) and only moderately on Council assets.
- **Scenario 2.** This emergency event impacts directly on a significant proportion of the community (e.g. 0.5% -1%) and significantly on Council assets.
- **Scenario 3.** This emergency event impacts directly on a substantial proportion of the community (e.g. >1%) and substantially on Council assets.

Approach to the analysis

The cost analysis entails three components:

- An analysis of the direct costs of implementing the Standard Operating Procedures (SOPs) and associated response, relief and recovery roles.
- An analysis of the indirect costs to Council of deferred preventative maintenance expenditure as a result of delays in receiving Natural Disaster Financial Assistance (NDFA) payments.
- Modelling of the expected costs of emergency management over time, considering different probabilities of the three scenarios occurring.

Results

Direct costs

Direct costs are those costs required for implementing the standard operating procedures, and associated response, relief and recovery roles in Bass Coast Shire Council. Summary results for the three scenarios are:

- **Scenario 1** - response and recovery costs are estimated at approximately $103,000, comprising about $13,000 of response costs and $90,000 of recovery costs.
- **Scenario 2** - response and recovery costs increase to approximately $257,000, comprising about $42,000 of response costs and $215,000 of recovery costs.
- **Scenario 3** - response and recovery costs increase to approximately $535,000, comprising about $72,000 of response costs and $463,000 of recovery costs.

Modelling shows that costs increase substantially as the severity and impacts of the natural disaster/emergency event increases. This is to be expected.

When comparing response versus recovery costs, recovery costs represent about 85% of direct costs under all scenarios. Again, this is to be expected and reflects the time spent on recovery relative to response.

Indirect costs

Indirect costs are costs that are not directly linked to implementing the standard operating procedures, but could arise indirectly as a result of Council needing to respond to an emergency. The main indirect cost assessed was deferred preventative maintenance expenditure due to cost shifting as a result of delays in receiving payments for Natural Disaster Financial Assistance (NDFA). Maintenance deferral cost estimates range from $0.2 million under Scenario 1 to $2.7 million under Scenario 3. It should be noted that these results are sensitive to assumptions about the costs of damages to Council infrastructure, and the length time delays in receiving Natural Disaster Financial Assistance. The assumptions used for these variables are quite conservative. They include:

- damage costs to council assets of $ 1million, $3 million and $8 million under Scenarios 1, 2 and 3 respectively; and
- delays in receiving NDFA of 6 months for 50% of claim (Scenarios 1 and 2) and 9 months for 50% of claim (Scenario 3).

Expected costs over time

Note: The expected cost estimates identified here are not predictions but scenarios of costs that would be incurred by Council over 20 years given assumptions about the frequency and magnitude of natural disasters in Bass Coast Shire over that period. The estimates are therefore highly uncertain.

Under a 'without climate change scenario' (i.e. assuming historic climate conditions) and an average return period of 12.5 years for a Scenario 1 event, 25 years for a Scenario 2 event and 50 years for a Scenario 3 event, the cost of emergency events to Council would be approximately $126,000 per annum. This comprises $30,000 of direct costs (standard operating procedures) and $96,000 of indirect (deferred maintenance) costs. Over 20 years this represents a total cost of $1.3 million in present value terms.

Under a 'with climate change scenario' (i.e. assuming an increase in the frequency and magnitude of climate related emergency events after 2020, with a further increase after 2030). The predicted annual costs increase from an estimated $126,000 per annum, (current) to approximately $179,000 after 2020 and approximately $268,000 per annum after 2030. The annual cost after 2030 comprises $65,000 of direct costs (standard operating procedures) and $203,000 of indirect costs (deferred maintenance). Over 20 years this represents a total cost of $1.8 million in present value terms.

Conclusions

Results from analysing the three scenarios under this project have identified that:

- Natural disasters in Bass Coast were infrequent in the past, and are likely to remain infrequent in the future even under climate change scenarios.
- The costs to Council of implementing the Standard Operating Procedures under a 'without climate change scenario' could be an average of $30,000 per annum over the next 20 years. Under a 'with climate change scenario' – assuming an increase in the number of emergency events - this could increase to an average of $65,000 per annum.
- To better prepare for future emergency responses Bass Coast Shire Council should:
    - Include climate risks into its business continuity planning.
    - Consider an annual budget contingency for emergency response and recovery.
    - Improve processes relating to Council's claiming and administration of the NDFA.
    - Review current emergency management training and the business continuity plan to align with the Standard Operating Procedures.