

APPENDIXES



APPENDIX A – ESTIMATED COSTS OF THE FIRES

The bushfires of late January and February 2009 had a devastating impact on Victoria. Apart from the loss of life, public hospitals provided emergency care to more than 800 people and admitted more than 130 people with a fire-related injury or illness.¹ The fires also destroyed or damaged privately and publicly owned property and infrastructure, national parks, livestock and wild animals.

MEASURING THE COSTS

The Commission sought to gain a broad estimate of the economic costs specifically associated with the January–February 2009 fires. It recognises that debate about a suitable methodology for costing bushfires and major data shortages preclude a definitive estimate of the costs. In particular, it notes the State’s concerns about the methodology used in preparing the estimate and the data limitations raised by the Commonwealth. Because of these difficulties, it proposes that there be further research into the development of a methodology for costing bushfires (see Chapter 11 in Volume II for further discussion of this). The Commission presents this appendix as a starting point for this work and to stimulate further debate.

The costs the Commission was interested in did not include the costs incurred by the community in anticipation of fires, and response costs were included only to the extent that the fires resulted in costs additional to those that would normally be incurred in maintaining regular firefighting capacity.

Where possible, the Commission used estimated economic cost to measure losses. An economic cost involves a loss of resources to the economy as a whole. Financial losses incurred by individuals or businesses in the bushfire-affected areas might not always count as an economic cost for the larger Victorian or Australian economy. For example, retailers in a bushfire-affected area might lose business as a result of a bushfire, but if consumers redirect their purchases to competitors elsewhere in the economy the total level of economic activity remains unchanged.

The Commission took two steps to ensure the integrity of its approach. First, the methodology used to estimate costs was subject to peer review by the Centre for International Economics. Second, the Commission provided a draft of a research paper to the parties and sought their comments. This appendix incorporates feedback from these processes.

ADDITIONAL RESPONSE COSTS

The State provided supplementary funding of \$593 million towards the fire suppression effort. This included funding for additional aircraft and flying time (including *Elvis* the Erikson air crane), project firefighters, construction of fuel breaks and containment lines, and the costs of services provided by international and interstate firefighters.² The State advised the Commission of a potential overlap of this figure with expenditure by the Victorian Bushfire Reconstruction and Recovery Authority to date, which is accounted for separately in Table A.1.³

Personnel additional to regular firefighting capacity were used to fight the January–February fires and in the fires’ immediate aftermath. On 7 February some 12,000 CFA personnel were actively engaged in firefighting⁴, the great majority of them being volunteers. The contribution of the CFA volunteers and that of several other groups—among them volunteers from community organisations, individuals, personnel from the Department of Sustainability and Environment and the Networked Emergency Organisation, the Australian Defence Force, Victoria State Emergency Service, the Metropolitan Fire and Emergency Services Board, the State Coroner’s Office and Victoria Police, and private contractors used by VicForests and DSE—cannot be valued with any reasonable precision.

COSTS DIRECTLY ATTRIBUTABLE TO THE FIRES

DEATH AND INJURY

The Commission applied the method of valuing life accepted by Commonwealth and Victorian government agencies for a variety of purposes to the 173 lives lost in the January–February bushfires.⁵ That approach values those lives at \$645 million.

As noted, the fires caused many injuries. The Commission is unable to make an accurate assessment of the costs of injuries sustained during the fires since this would require data on hospitalisation costs together with an estimate of the costs of long-term treatment and the value of time lost from the workplace by those affected.

PROPERTY DAMAGE

The Insurance Council of Australia has reported claims of approximately \$1.2 billion, of which 84 per cent are property or contents claims and 16 per cent motor vehicle claims.⁶ The extent to which this figure represents an accurate estimate of property losses is not clear. About 13 per cent of destroyed residential properties might have been without insurance cover.⁷ In addition, there is ample evidence of under-insurance, when that is defined as a situation in which the sum insured is below the rebuilding cost.^{8,9} This evidence, however, does not necessarily imply that the sum insured was less than the actual value of the destroyed property. On the other hand, people with full replacement cover could find that their insurance payment exceeds their loss since full replacement would usually mean the construction of a new home of higher value than the property destroyed.

The Commission considers that, on balance, the level of insurance claims is likely to underestimate the true extent of property losses, but it is unable to calculate the extent of this underestimation.

Fencing was often not insured. In November 2009 the Victorian Bushfire Reconstruction and Recovery Authority estimated that the Victorian Farmers Federation volunteer program had coordinated 14,740 volunteer-days to repair damaged fences.¹⁰ The Commission acknowledges the value of this program, but it lacks sufficient information to place a value on the labour and materials involved.

LOSS OF NATIVE ANIMALS, LIVESTOCK AND CROPS

The RSPCA estimates that more than 1 million animals died in the fires.¹¹ The RSPCA Bushfire Appeal raised over \$4.1 million to support its emergency relief efforts. The organisation also contributed a ‘considerable amount’ of its own funds, personnel and equipment towards the bushfire relief effort.¹² In addition, many wildlife carers volunteered their time¹³, but the Commission did not attempt to place a dollar value on their services.

Stock losses are estimated at more than 11,800, including more than 4,500 sheep, 4,000 cattle and 200 horses.¹⁴ In the absence of information about the value of the animals concerned, the Commission cannot estimate the dollar loss for these animals; nor can it estimate the losses resulting from premature slaughter or agistment of animals from the affected areas.

No estimate is available of the value of all crop losses in 2009 or of those that might occur in future as a result of the 2009 fires. Three per cent of the Yarra Valley’s vineyard area was burnt¹⁵; the cost of smoke taint (which can occur in vineyards distant from the source of smoke) might need to be added to this loss. Among other output losses was the destruction of trout farms: some 220 tonnes of trout were lost.¹⁶

FOREST DESTRUCTION

VicForests reported that the fires severely burnt about 10,000 hectares of the mountain ash forest available for timber harvesting—that is, about 10 per cent of the ash resource in the central highlands area.¹⁷ The Victorian Association of Forest Industries reported that VicForests conservatively estimated the ‘mill door’ value of the standing timber burnt at approximately \$600 million.¹⁸ The State approved funding of up to \$18 million to cover the incremental cost of salvage-harvesting damaged timber.¹⁹ VicForests has said it will do modelling to estimate the long-term impact of the 2009 fires.

Hancock Victorian Plantations estimated the cost of replanting the affected areas of its estate at \$40 million but did not estimate the value of the lost timber.²⁰

Within the Parks Victoria estate 98,932 hectares were affected, 90 per cent of this being national park. A detailed program of remedial action has been initiated, but figures for its cost are not publicly available.²¹

RECOVERY

Expenditure on recovery can be seen as a broad proxy for losses in that it is an amount contributed by the wider population to help affected communities return to their pre-fire state. By October 2009 the Victorian Bushfire Reconstruction and Recovery Authority had spent \$867 million, and it foreshadowed further expenditure of \$193 million.²²

VBRRA is a channel for Commonwealth and Victorian funds and also administers expenditure from donations.²³ The Commonwealth provided more than \$465 million and other resources through various agencies to immediately respond to the bushfires and assist with the recovery effort in affected communities.²⁴ Costs incurred by Commonwealth agencies and absorbed by the core budgets of the relevant agencies are not included in this figure.²⁵ The Commonwealth has made available a summary table showing details of its expenditure and further commitments as at 30 April 2010.²⁶ The Victorian Budget for 2009–10 provided for approximately \$269 million for rehabilitation and recovery projects, including establishing VBRRA, funding case managers to support people affected by the fires, providing tourism and business support packages, and resourcing a clean-up and demolition program.²⁷

CARBON RELEASE

The Department of Sustainability and Environment's preliminary modelling shows that the carbon dioxide emissions from the January–February bushfires on public land were in excess of 8.5 million tonnes.²⁸ Forest regrowth will ultimately restore the carbon balance²⁹ and, since Victoria's stock of native forest is not expected to change significantly in the future³⁰, a cost item for carbon release from native forests is not included. This accords with international rules on carbon accounting, which do not report carbon released from 'wildfire'.³¹ Similarly, carbon stock in forest plantations increased between 1989 and 2004, so it seems reasonable to assume that the cost of carbon losses from private plantations is likely to be offset by replanting.³²

INFRASTRUCTURE DAMAGE

The Victorian Managed Insurance Agency insures community assets and services such as roads, parklands, schools and community infrastructure. The agency informed the Commission that the estimated total amount of claims for lost or damaged assets and infrastructure is \$76.7 million, the majority of the losses sustained being associated with the Kilmore East and Murrindindi fires.³³

Telstra has spent \$15 million restoring and upgrading communications infrastructure destroyed or damaged by the February bushfires. It also waived service charges to affected customers and provided equipment and services to members of the public as part of the relief effort. Telstra estimates its total bushfire-related costs at almost \$20 million.³⁴ Damage to Powercor assets was estimated at approximately \$729,000.³⁵

Fires in catchment areas have both immediate and long-term impacts on water supply, and about one-third of Melbourne's water catchments were burnt.³⁶ Melbourne Water has estimated that the Black Saturday bushfires caused \$5 million of damage to Melbourne Water's natural and built assets.³⁷ In conjunction with the University of Melbourne, Melbourne Water has been doing modelling to assess the fires' long-term impact on water yield. The results of this research are yet to be published.³⁸

ROYAL COMMISSION AND VBRRA COSTS

The State budgeted \$40 million to fund the 2009 Victorian Bushfires Royal Commission.³⁹ This figure does not, however, capture the significant additional costs incurred by individuals and organisations in preparing submissions and otherwise responding to the Commission. For example, one party, Powercor, incurred costs of about \$735,000 for preparation and the participation of its staff in the Commission.⁴⁰ The Victorian Managed Insurance Agency extends indemnity to state-insured agencies under a policy of liability insurance for legal costs incurred in representation before the Commission. This includes the cost of the Victorian Government Solicitors Office in representing the State. The VMIA estimates the total cost of such representation to be in the vicinity of \$50 million.⁴¹

CONCLUSION

Notwithstanding the measurement difficulties encountered and the gaps in the available information, the Commission estimates the total cost of the January–February 2009 fires to be more than \$4 billion and considers this a conservative estimate. Table A.1 summarises the estimated economic costs incurred as a result of the fires.

Table A.1 Estimated major economic costs of Victoria's January–February 2009 bushfires: a summary

Item	Cost (\$ million)	Source
RESPONSE COSTS		
Victorian Government—supplementary funding for fighting 2009 fires	593	Victorian Government Green Paper on the fire services levy
Value of CFA and other volunteer time plus additional costs incurred by the MFB, ADF, Victoria Police, SES, State Coroner's Office, NEO and DSE as a result of the fires	Not estimated	
DAMAGE COSTS		
General insurance claims paid	1,200	Insurance Council of Australia
Loss and damage to public infrastructure	77	Victorian Managed Insurance Agency
VBRRA—establishment costs, expenditure to date and projected further expenditure	1,081	VBRRA: <i>Rebuilding Together</i> . Includes VBRRA disbursements and planned disbursements from the Victorian Bushfire Appeal Fund and from other donors
Valuation of lives lost	645	Commission estimate
Loss of livestock and agricultural output	Not estimated	
Timber—value of destroyed timber, replanting costs for private plantations and salvage costs	658	Victorian Association of Forest Industries submission quoting VicForests
Asset damage and other costs incurred by Telstra and Melbourne Water. (Long-term impact on water supply was not estimated.)	25	Information from Telstra; Melbourne Water annual report for 2008–09
Cost of 2009 Victorian Bushfires Royal Commission, including costs incurred by state agencies in responding to the Commission	90	Victoria's 2009–10 Budget; Victorian Managed Insurance Agency
Total	4,369	

Note: Figures should be viewed in the context of the qualifications expressed in this appendix.

1	Exhibit 139 – VBRRA 100 Day Report (TEN.046.001.0001) at 0009
2	Exhibit 777 – Statement of Monforte, Annexure 2 (WIT.3021.001.0156) at 0164–0165
3	Exhibit 989 – State Response to Estimated Costs of Fires Paper (DRSP.3000.001.0001) [9]
4	Rees T2628:5–T2628:6
5	Exhibit 989 – Best Practice Regulation Guidance Note (RSCH.040.001.0188) at 0189
6	Exhibit 139 – VBRRA 100 Day Report (TEN.046.001.0001) at 0021
7	Exhibit 777 – Statement of Monforte, Annexure 2 (WIT.3021.001.0156) at 0168
8	Exhibit 989 – Submission of Suncorp (SUBM.002.032.0008_R) at 0021_R–0022_R
9	Exhibit 989 – Bushfire Recovery Chief Highlights Underinsurance Burden (RSCH.040.001.0520)
10	Exhibit 838 – VBRRA Twelve Month Report (TEN.250.003.0001) at 0014
11	Exhibit 989 – RSPCA Annual Report (RSCH.040.001.0547) at 0573
12	Exhibit 989 – RSPCA Annual Report (RSCH.040.001.0547) at 0597
13	Exhibit 989 – RSPCA Annual Report (RSCH.040.001.0547) at 0573
14	Exhibit 989 – Submission of Victorian Association of Forest Industries (SUBM.002.028.0179_R) at 0189_R
15	Exhibit 989 – Bushfires Cost Wine and Tourism Industries (RSCH.040.001.0619) at 0619
16	Exhibit 989 – VBRRA Six Month Report (RSCH.040.001.0623) at 0628
17	Exhibit 989 – VicForests 2009 Annual Report (RSCH.040.001.0151) at 0158
18	Exhibit 989 – Submission of Victorian Association of Forest Industries (SUBM.002.028.0179_R) at 0190_R
19	Exhibit 989 – VicForests 2009 Annual Report (RSCH.040.001.0151) at 0161
20	Exhibit 989 – Submission of Hancock Victoria Plantations (SUBM.002.029.0136_R) at 0140_R
21	Exhibit 989 – Parks Victoria 2009 Annual Report (RSCH.040.001.0632) at 0643, 0645
22	Exhibit 843 – VBRRA Rebuilding Together (WIT.3003.001.0257) at 0262
23	Exhibit 843 – VBRRA Rebuilding Together (WIT.3003.001.0257) at 0262
24	Exhibit 989 – Estimated Costs Response of the Commonwealth (DRSP.6000.001.0001) at 0003
25	Exhibit 989 – Estimated Costs Response of the Commonwealth (DRSP.6000.001.0001) at 0002
26	Exhibit 989 – Estimated Costs Response of the Commonwealth (DRSP.6000.001.0001) at 0003
27	Exhibit 989 – Victorian Budget Overview (RSCH.007.001.0161) at 0163
28	Exhibit 989 – Vic LandCarbon (RSCH.040.001.0740) at 0740
29	Exhibit 989 – Vic LandCarbon (RSCH.040.001.0740) at 0741
30	Exhibit 989 – Australia’s State of the Forests Report – Five Yearly Report 2008 – Criterion 5 (RSCH.040.001.0870) at 0870
31	Exhibit 989 – Australia’s State of the Forests Report – Five Yearly Report 2008 – Criterion 5 (RSCH.040.001.0870) at 0872
32	Exhibit 989 – Australia’s State of the Forests Report – Five Yearly Report 2008 – Criterion 5 (RSCH.040.001.0870) at 0874
33	Exhibit 989 – VMIA Email re Costs of Fires (DRSP.7500.001.0001_R) at 0001_R
34	Exhibit 989 – Estimated Costs of Bushfires to Telstra (DRSP.5000.001.0001_R) at 0001_R–0002_R
35	Exhibit 989 – Powercor Estimated Costs of Fire (DRSP.7000.001.0001_R)
36	Exhibit 989 – Sustainability Report – Melbourne Water Annual Report 2008–09 – Bushfires (RSCH.040.001.1019) at 1024
37	Exhibit 989 – Sustainability Report – Melbourne Water Annual Report 2008–09 – Bushfires (RSCH.040.001.1019) at 1024
38	Exhibit 989 – Sustainability Report – Melbourne Water Annual Report 2008–09 – Bushfires (RSCH.040.001.1019) at 1024
39	Exhibit 989 – Victorian Budget Overview (RSCH.007.001.0161) at 0163
40	Exhibit 989 – Powercor Estimated Costs of Fire (DRSP.7000.001.0001_R)
41	Exhibit 989 – VMIA email re Costs of Fires (DRSP.7500.001.0001_R) at 0001_R–0002_R