

**The economic benefits of prescribed burning across Australia John
O'Donnell 30 June 2026**

Contents

1	Introduction	3
2	Economic benefits of prescribed burning treatment.....	3
2.1	Economic saving of effective prescribed burning programs and avoided bushfire benefits in Australia	3
2.2	Economic saving of effective prescribed burning programs and avoided bushfire benefits in the USA and Australia	4
2.3	Benefits of enhanced initial ecosystem services in the US and Australia	6
2.4	Budget saving benefits from prescribed burning and avoided bushfires	7
2.5	Improved economic efficiencies in fire management.....	8
2.6	Improved bushfire suppression efficiency, safety and cost effectiveness	9
2.7	Savings for consumers reduced consumer costs through increased mitigation	10
2.8	Multiple and cumulative economic benefits	11
3	Conclusions	11
	References	12

1 Introduction

Prescribed burning delivers substantial and well documented economic benefits across Australia by reducing the severity, extent and cost of bushfires. Severe bushfires impose enormous economic costs that far exceed the cost of prescribed burning and the evidence consistently shows that proactive fuel management is one of the most cost-effective disaster-mitigation strategies available. The Productivity Commission has highlighted that 97% of disaster expenditure in Australia occurs after events, with only 3% invested in mitigation, an imbalance that contributes to escalating suppression costs, repeat disasters, rising insurance premiums and long-term budget volatility.

This review also considers economic benefits in relation to prescribed burning in the USA.

This report synthesises national and international evidence demonstrating that prescribed burning reduces suppression expenditure, protects infrastructure and communities, stabilises government budgets, supports forestry and agricultural productivity and lowers health and environmental costs. It also outlines the cumulative and compounding benefits of mitigation, including improved suppression efficiency, reduced disaster recovery needs and enhanced ecosystem resilience. The review highlights the urgent need for a major shift from reactive disaster spending to proactive, landscape scale mitigation programs that deliver enduring economic, social and environmental returns.

2 Economic benefits of prescribed burning treatment

Benefits of prescribed burning are outlined in Sections 2.1 to 2.8 below.

In a number of cases, the benefits of prescribed burning are not being fully attained due to the small rates of mitigation, including prescribed burning, in many areas.

In a number of discussion areas, the impacts of prescribed burning are assessed against the impacts of bushfires, especially major bushfires.

2.1 Economic saving of effective prescribed burning programs and avoided bushfire benefits in Australia

Prescribed burning delivers major economic benefits by reducing suppression costs, protecting property and infrastructure, supporting agriculture and forestry, maintaining tourism, reducing health impacts, protecting water catchments and stabilising carbon budgets.

Severe bushfires impose enormous economic costs that far exceed the cost of prescribed burning. The economic case for prescribed burning is strong, as well as the many other benefits.

O'Donnell (2025 a) highlights that the underinvestment in disaster resilience and adaptation in Australia. It's been estimated by the Productivity Commission that 97 per cent of all-natural disaster funding in Australia is spent after an event, with just 3 per cent invested prior to an event to reduce the impact of future disasters. There is inadequate funding of bushfire mitigation in Australia, including prescribed burning and other fuel management measures.

The 2019/ 20 bushfires were very costly, estimated by AccWeather to be \$110 billion in terms of total damage and economic loss. <https://www.accuweather.com/en/business/australia-wildfire-economic-damages-and-losses-to-reach-110-billion/657235> The estimate is based on an analysis incorporating independent methods to evaluate all direct and indirect impacts of the fires based on a variety of sources. It is noted that other estimates are lower than this, estimated damage from the bushfires in another case was estimated at a \$20 billion impact to the Australian economy. Still, it is noted that the costs are huge.

The costs of repeat disasters of Australian bushfires are very costly. There are large numbers of repeat bushfire disasters across Australia, many intense and costly. Under current approaches, these are allowed to continue. In relation to flooding, Lismore and north coast flooding highlights other

examples of repeat disasters, where broadscale mitigation is hardly actioned and the current mitigation problems and opportunities remain unaddressed.

2.2 Economic saving of effective prescribed burning programs and avoided bushfire benefits in the USA and Australia

Hjerpe et al. (2024) provide tabulation in Table 1 across 120 observations from 16 primary studies, the meta-analysis shows that forest-restoration benefits are dominated by avoided wildfire costs, especially in the built environment, ecosystem services, and suppression-cost reductions. Large multi-category studies highlight property-value gains, non-use values, water-yield improvements and woody-biomass benefits. Overall, avoided-cost categories account for the majority of observations (64 of 120), confirming that restoration and fuel-reduction treatments generate substantial economic returns through reduced damages, improved ecosystem services and lower future suppression expenditure.

Hjerpe et al. (2026) note that fuel treatments provide multiple benefits and assess these in their Table 1 covering 25 benefit areas with fuel treatment. They note that fuel-treatment benefits span enhanced ecosystem services, avoided direct wildfire damages, and avoided indirect post-fire losses, covering both market and non-market values. Treatments can increase biomass access, water yield, recreation, non-use values, property values and non-timber forest products while strengthening forests against drought and beetles. They also avoid major direct wildfire costs by reducing fatalities, smoke-related health impacts, structural and infrastructure losses, carbon emissions, timber damage, species and habitat loss, recreation impacts, cultural site damage, rehabilitation costs and suppression expenditures. Indirectly, treatments reduce post-wildfire flood damages to homes, infrastructure, water systems and human safety while lowering community worry and disruption. Together, these benefits demonstrate that fuel treatments generate broad economic, environmental, cultural and social returns across landscapes.

The avoided wildfire costs (AWC) direct component of the US table includes the following information in relation to benefit types (further detail on benefits of enhanced ecosystem services is outlined in Section 2.3) :

Avoided wildfire costs direct:

Human health:

8. Fatalities and injuries. Avoided or reduced wildfire-caused fatalities and injuries to firefighters and the public;

9. Air quality (Smoke). Avoided or reduced health damages from wildfire smoke;

10. Well-being. Avoided or reduced mental anguish caused by fire risk worry, evacuations or financial loss due to wildfire;

Built:

11. Structures. Avoided or reduced wildfire damages to houses, commercial buildings and other structures;

12. Infrastructure. Avoided or reduced wildfire damages to utility, transportation and communication infrastructure;

Ecosystem services:

13. Carbon. Avoided or reduced wildfire caused CO₂ emissions;

14. Timber. Avoided or reduced wildfire-caused timber losses;

15. Species. Avoided or reduced wildfire damages to flora and fauna and associated habitat;

16. Recreation. Avoided or reduced wildfire damages to outdoor recreation areas;

17. Archeological. Avoided or reduced wildfire damages to archeological and cultural sites and artifacts;

18. Viewshed and esthetics. Avoided or reduced wildfire damages to resident and community esthetics

19. Rehabilitation. Avoided or reduced rehabilitation costs due to wildfire such as Burned Area Emergency Response (BAER);

Suppression:

20. Suppression expenditures. Avoided or reduced wildfire suppression costs in the future;

Avoided wildfire costs indirect:

Built:

21. Structures. Avoided or reduced post-wildfire flood damages to houses and buildings na;

22. Infrastructure. Avoided or reduced post-wildfire flood damages to transportation and utility infrastructure;

23. Water infrastructure. Avoided or reduced post-wildfire flood damages related to clogging and degrading drinking water sources and infrastructure;

Human health:

24. Fatalities and injuries. Avoided or reduced fatalities and injuries from post-wildfire floods, mudslides, etc; and

25. Well-being. Avoided or reduced worry and averting behavior about post-wildfire flood damages to life and property.

This list of direct and indirect avoided wildfire costs is extensive and highlights the benefits of prescribed burning and thinning. The economic savings are huge.

Considering this issue for Australia and only for prescribed burning, a list of direct and indirect avoided wildfire costs is postulated below:

Avoided wildfire costs direct:

Human health:

8. Fatalities and injuries. Avoided or reduced wildfire-caused fatalities and injuries to firefighters and the public;

9. Air quality (Smoke). Avoided or reduced health damages from wildfire smoke;

10. Well-being. Avoided or reduced mental anguish caused by fire risk worry, evacuations or financial loss due to wildfire;

Built:

11. Structures. Avoided or reduced wildfire damages to houses, commercial buildings and other structures;

12. Infrastructure. Avoided or reduced wildfire damages to utility, transportation and communication infrastructure;

Ecosystem services:

13. Carbon. Avoided or reduced wildfire caused CO2 emissions;

14. Timber. Avoided or reduced wildfire-caused timber losses;

15. Species. Avoided or reduced wildfire damages to flora and fauna and associated habitat;
16. Recreation. Avoided or reduced wildfire damages to outdoor recreation areas;
17. Archeological. Avoided or reduced wildfire damages to archeological and cultural sites and artifacts;
18. Viewshed and esthetics. Avoided or reduced wildfire damages to resident and community esthetics;
19. Rehabilitation. Avoided or reduced rehabilitation costs due to wildfire;

Suppression:

20. Suppression expenditures. Avoided or reduced wildfire suppression costs in the future;

Avoided wildfire costs indirect:

Built:

21. Structures. Avoided or reduced post-wildfire flood damages to houses and buildings;
22. Infrastructure. Avoided or reduced post-wildfire flood damages to transportation and utility infrastructure;
23. Water infrastructure. Avoided or reduced post-wildfire flood damages related to clogging and degrading drinking water sources and infrastructure;

Human health:

24. Fatalities and injuries. Avoided or reduced fatalities and injuries from post-wildfire floods, mudslides, etc; and
25. Well-being. Avoided.

The list is very similar for Australia in terms of avoided bushfire/ wildfire cost benefits. The avoided bushfire/ wildfire cost benefits are large based on this list.

2.3 Benefits of enhanced initial ecosystem services in the US and Australia

Hjerpe et al. (2026) outline 7 enhanced ecosystem services in the US, noting this includes thinning and prescribed fire.

Enhanced initial ecosystem services (EIES):

1. Woody biomass Stumpage value for access to thinned sawlogs and slash;
2. Water yield Value of increased water yield downstream from treatment sites;
3. Use values Increased use values for recreational and subsistence activities in and near the treated forest;
4. Nonuse values Increased passive use values such as existence, option and bequest values;
5. Property values Increased house and property values in neighborhoods adjacent to fuel treatments;
6. Non-timber forest products Increase in plant collections and harvests, such as mushrooms, after prescribed fire na; and
7. Disturbance buffer Increased resistance to beetle infestations and drought.

In relation to prescribed fire in Australia using the above list, the benefits of prescribed fire in relation to enhanced initial ecosystem services include the following:

1. Reduced woody biomass in thick dense forests;
2. Small water yield increase;
3. Catchment protection, including from intense bushfires;
4. Increased property values Increased house and property values in neighbourhoods adjacent to fuel treatments;

5. Reduced insurance costs; and
6. Healthier forests.

2.4 Budget saving benefits from prescribed burning and avoided bushfires

Prescribed burning reduces long-term suppression costs, protects timber assets and supports rural economies by preventing catastrophic wildfire losses. Thinning and burning projects also sustain local contractors, stewardship crews and prescribed burn associations.

Governments and fire agencies are missing opportunities for coordinated prescribed burning programs across all land tenures to achieve economies of scale and resilient landscapes, not necessarily in single areas.

Floreac and Pannell (2016) outline key issues in relation to mitigation, noting there are additional fire mitigation opportunities across all land tenures. There are large government expenditure savings to be made through increasing mitigation expenditure to reducing natural disaster response costs, including bushfires. This information highlights the huge importance of increasing pre disaster fire mitigation in Australia, opportunities to progress this, taking a long term view and providing budget savings. The low funding spent on mitigation, including prescribed burning and removal of fuels/ thinning, is an issue of national importance and needs urgent attention from all governments, federal, state and local.

Key information in Menzies Research Centre (2020) outline mitigation spending of \$5.3 billion between 2020 and 2050 could deliver very large fiscal returns, with projected government budget savings of \$12.2 billion across all jurisdictions (or \$9.8 billion for the Commonwealth alone). If implemented at scale, this investment could cut disaster-response expenditure by more than 50% by 2050, demonstrating the strong economic case for proactive disaster-mitigation policy over reactive spending.

Many of the multiple benefits outlined in Section 2.2 reduce costs and provide budget savings to government, businesses, organisations and individuals.

Australian Government funding of \$200 Million annual mitigation funding to state and territory governments, is in reality is extremely low, resulting in small scattered mitigation across different disaster types.

This approach is never going to resolve current mitigation inadequacies. It will never capture much budget savings, if in doubt, consider the extent of current disasters and repeat disasters and assess if much progress is being made over long periods.

There should be a total revamp of disaster funding from a recovery focus to a mitigation focus reducing recovery needs; dramatically increasing funding for increased mitigation; accept the fact in most current disaster scenarios that mitigation benefits that accrue over a short-time horizon (considering the actual costs of disasters, repeat disasters and the efficiency benefits of disaster mitigation); and totally review current inadequate disaster risk based approaches.

It is readily apparent that budget impacts of megafires will continue way into the future, unless governments start seriously addressing disaster funding and mitigation.

There are large government savings to be made through increasing expenditure on mitigation and so reducing the costs of responding to bushfires. Savings in bushfire suppression expenditure, recovery expenditure, bureaucracy expenditure and efficiencies can be extracted, while at the same time increasing employment in mitigation and forest resilience programs.

Noting the increased initial budget costs, it is considered that much larger government expenditure and budget savings would be made through dramatically increasing mitigation expenditure than outlined by the Productivity Commission (current annual mitigation funding it provides to state and territory governments of \$200 million) if the following factors are considered:

- the actual community, firefighter and ecosystem impact costs of intense bushfires;
- increases in bushfire preparedness funding reduces suppression costs;

- the positive return on investment in mitigation funding;
- quicker mitigation treatment results in reduced disasters down the track;
- the huge climate impacts of intense bushfires;
- the consequent wetter year impacts post intense bushfires as outlined by Fasullo et al (2023);
- rising insurance costs are considered as well as more accurate estimates of the actual costs of disasters; and
- production of products from bushfire/ dense forest thinning and funding of this type of work is likely better than provision of grants and funding by governments with unknown outcomes.

2.5 Improved economic efficiencies in fire management

Improved economic efficiencies in fire management are outlined in subsections below.

2.5.1 *Utilising economic efficiency advantages and efficiencies Australia*

O'Donnell (2025 a) outlines that there is disaster funding and efficiency detail provided in Menzies Research Centre (2020), noting Australia's natural disaster funding has long been criticised as inefficient and overly focused on recovery rather than mitigation, with the Productivity Commission noting that political incentives favour short-term responses over long-term risk reduction. It found mitigation received only about 3% of what was spent on post-disaster recovery, creating dependency and weakening individual responsibility. Menzies Research Centre (2020) note that economic modelling for the Australian Business Roundtable showed that \$5.3 billion invested in mitigation by 2050 could save governments \$12.2 billion, with potential to cut disaster-related expenditure by more than half. Overall, evidence consistently shows that every dollar spent on mitigation saves at least two dollars in recovery, highlighting both the current inefficiencies and the governance opportunities for smarter, proactive investment.

Menzies Research Centre (2020) note that generally, one dollar spent on mitigation can save at least two dollars in recovery costs.

2.5.2 *Economic efficiency advantages and efficiencies Western Australia*

Bushfire Front (2026 web undated) Fact sheet "Cost/Benefit of Prescribed burning" note bushfire suppression costs rise sharply when high-intensity fires require expensive measures such as water-bombing aircraft, making fuel-load reduction a key strategy for lowering expenses. Economic studies supported by the BFF show that comparing mitigation and suppression costs is essential for choosing the most cost-effective fire-management approach. Bushfire Front outline a 2016 University of Western Australia assessment which found that in the Perth Hills, the best value came from planning measures that reduced the area exposed to high fire hazards, supported by prescribed burning. In contrast, in the South West, where forest cover is much greater, expanding prescribed burning delivered the strongest economic benefit.

2.5.3 *USA economic efficiency case studies*

As O'Donnell (2025 a) notes, in 2024, US Chamber of Commerce noted research by the U.S. Chamber of Commerce and Allstate found each \$1 invested in disaster preparation saves \$13 on average in economic costs and reduced damage and cleanup after a disaster. Porter et al. (2021) note mitigation benefits in Canada are also higher than Australian estimates. Some of the key lessons of this impact analysis are New houses built to satisfy Guide recommendations can save 30:1; Retrofitting saves up to 14:1; Communities save up to 14:1 and National use saves up to 4:1.

Strabo et al. (2026) review over 300 wildfires in W USA in 11 states between 2017 and 2023 and outline fuel-reduction treatments have become increasingly important as wildfires grow more frequent and destructive and new evidence shows they deliver substantial economic and environmental benefits. Strabo et al. found that these treatments significantly reduce wildfire spread and severity, preventing an estimated \$2.8 billion in damages across the Western United States. Their analysis shows that every dollar invested yields \$3.73 in expected benefits through avoided structure loss, reduced carbon emissions and lower PM2.5 exposure. The study concludes that large-scale adoption of fuel treatments will require bold policy reforms and strategic incentives to expand their use.

UC Davis (2026) add to the Strabo et al. (2026) paper and note that fuel treatments are critically underfunded, and when agencies lack resources, the public ends up bearing more of the economic burden of wildfires. Research shows that treatments, especially prescribed burning and large scale projects, significantly reduce wildfire spread and high-severity fire, cutting burned area by up to 35%. Overall, fuel treatments reduced total burned area by 36%, prevented thousands of building losses, and avoided major emissions and health impacts including CO2 reductions and fewer premature deaths.

Strabo and Reime (2026) outline that fuel-reduction treatments deliver high economic returns, with studies across western U.S. national forests showing that each dollar invested yields \$3.73–\$6 in avoided suppression costs, smoke-related damages and property loss. Treatments implemented between 2017 and 2023 prevented an estimated \$2.8 billion in wildfire-related damages, confirming their value as a public-good intervention whose benefits extend far beyond treated lands. By lowering suppression expenditures, fuel treatments free agency budgets for restoration work such as road and trail maintenance, habitat improvement and long-term forest resilience projects. Evidence shows that landscape-scale treatments and prescribed burning provide the greatest returns, suggesting a need to revisit regulatory constraints that limit project size or burn approvals. Because treatment effectiveness varies widely, strategic prioritisation and continuous evaluation are essential to maximise both economic and ecological outcomes.

Hjerpe et al. (2024) note that overall, 17 individual benefit types were aggregated to show that in the most valuable and at-risk watersheds, every dollar invested in forest restoration can provide up to seven dollars of return in the form of benefits and provide a return-on-investment of 600%.

2.6 Improved bushfire suppression efficiency, safety and cost effectiveness

Improved bushfire suppression efficiency, safety and cost effectiveness are outlined in subsections below.

2.6.1 *Bushfire suppression cost reduction benefits*

Where there is limited fire mitigation, this results in longer and more difficult suppression operations.

O'Donnell (2025 b) outlines case examples where mitigation has assisted in suppression and lowered suppression costs. These case studies cover suppression case studies across Victoria, WA, NSW and the ACT.

The advantages of prescribed burning identified in the case studies outlined by O'Donnell (2025 b) include many suppression and economic benefits:

- Stops bushfires in many cases;
- Slows bushfires to allow improved opportunities for bushfire attack;
- Provides options for control strategies, tactics and areas to attack or not attack;
- Provides options for linking areas previously treated;
- Reduces speed of firebrands/ spotting rate of spread;
- Allows greater opportunities to save houses;
- Allows in a number of cases has reduced suppression force needs; and
- Allows flexibility in managing firefighting resources when large numbers of lightning strikes occur.

The advantages of prescribed burning identified in the case studies outlined by O'Donnell (2025 b) also include many suppression safety and associated economic benefits:

- Provides anchor points for safer backburning;
- Allows personnel to work from tracks with lower threats to their safety.
- Provides safer zones for firefighters as refuge;

The above list highlights reduction in suppression costs through quicker control, shorter period bushfires, reduced force needs, improved opportunities for bushfire attack and provision of options for

control strategies, tactics and areas to attack or not attack. They also highlight the critical safety advantages that prescribed burning provides.

The Howitt Society (2026 web) outline that although Fuel Reduction Burning (FRB) cannot stop all fires, it makes inevitable wildfires far easier to control and less destructive.

Strabo and Reime (2026) note that fuel treatments are cost-effective, across western U.S. Forest Service lands, treatments such as prescribed burns and mechanical thinning reduce fire suppression costs, property loss and smoke exposure. In the Pacific Northwest, we find that each dollar invested in fuel treatments in national forests yields between \$5 and \$6 in reduced federal firefighting expenditures. Fuel-reduction treatments deliver high economic returns, with studies across western U.S. national forests showing that each dollar invested yields \$3.73–\$6 in avoided suppression costs, smoke-related damages and property loss. By reducing suppression costs, proactive treatments free Forest Service budgets for critical restoration work, including road and trail maintenance, habitat improvement, and forest resilience projects, allowing managers to reinvest in the long-term health of national forests.

2.6.2 Suppression benefits in the US

As O'Donnell (2025 b) notes, in the US, minimising prescribed burning and adaptive management can increase suppression time considerably, equipment needs, personnel risks and costs of bushfire suppression.

As O'Donnell (2025 b) further notes, in relation to the US 2021 Dixie Fire at Chester, this was readily apparent. As noted by Lunder (2022) nearly \$700 million was spent on suppression of the USA Dixie Fire, it was noted that they could have spent a fraction of that to thin and burn and tend land around Quincy, Greenville and Chester. And Lunder (2022) also noted that when these fires happen, they won't be victims that are terrorized for months waiting to see whether or not our towns are going to burn down.

Strabo and Reime (2026) note that fuel treatments are cost-effective, across western U.S. Forest Service lands, treatments such as prescribed burns and mechanical thinning reduce fire suppression costs, property loss and smoke exposure. In the Pacific Northwest, we find that each dollar invested in fuel treatments in national forests yields between \$5 and \$6 in reduced federal firefighting expenditures. Fuel-reduction treatments deliver high economic returns, with studies across western U.S. national forests showing that each dollar invested yields \$3.73–\$6 in avoided suppression costs, smoke-related damages and property loss. By reducing suppression costs, proactive treatments free Forest Service budgets for critical restoration work— including road and trail maintenance, habitat improvement and forest resilience projects, allowing managers to reinvest in the long-term health of national forests.

2.7 Savings for consumers reduced consumer costs through increased mitigation

Savings for consumers reduced consumer costs through increased mitigation are outlined in subsections below.

2.7.1 Reducing insurance costs

The costs of Australian insurance costs are rapidly rising as a result of increasing bushfire, flood and other disasters. This has become a massive issue of concern in the community and business.

There are inadequate measures in place and limited accountability in relation to addressing rising bushfire and other disaster insurance costs, emergency services levy (ESL) and stamp duty costs across regions of Australia.

There is a need to urgently address these high and rising bushfire (and flood) disaster costs via increased preparedness and mitigation funding and programs, as highlighted in this review and at adequate levels.

A 2019 USA example of an effective approach to better manage insurance in the community is outlined by the Insurance Information Institute (2019) who note that insurers are helping at-risk communities adapt to catastrophic wildfires by educating residents, supporting resilient community design and developing innovative products to better underwrite and transfer wildfire risk, strengthening overall preparedness and resilience.

2.7.2 Reducing emergency services levy (ESL) and stamp duty costs

The costs of Australian emergency services levy (ESL) and stamp duty costs are rapidly rising as a result of increasing bushfire, flood and other disasters. This has become a massive issue of concern in the community and business.

There are inadequate measures in place and limited accountability in relation to addressing rising bushfire and other disaster insurance costs, emergency services levy (ESL) and stamp duty costs across regions of Australia.

2.7.3 Other benefits

There are opportunities such as implementation of cost effective opportunities as identified by Deloitte Access Economics (2013). They note that building more resilient housing in high risk bushfire areas generates a Benefit to Cost Ratio (BCR) of around 1.4; improved vegetation management (around houses) a BCR of around 1.3 and undergrounding electricity wires results in a BCR of up to 3.1.

2.8 Multiple and cumulative economic benefits

As outlined by the Australian Fire and Emergency Services Authorities Council (2021), prescribed burning is recognised by AFAC and FFMG as a vital land-management tool that delivers multiple ecological, cultural, social and risk-reduction benefits and it supports ecosystem health by influencing regeneration, fauna responses, weed dynamics, erosion, water yields and forest production, while also protecting lives, homes, infrastructure and cultural and environmental assets. Because bushfires cannot be eliminated, prescribed burning helps reduce their intensity and impacts by lowering fuel hazards and improving suppression effectiveness.

Hjerpe et al. (2026) note that fuel treatments provide multiple benefits and assess these in their Table 1 covering 25 benefit areas with fuel treatment. They note that fuel-treatment benefits span enhanced ecosystem services, avoided direct wildfire damages and avoided indirect post-fire losses, covering both market and non-market values, noting treatments can increase biomass access, water yield, recreation, non-use values, property values and non-timber forest products while strengthening forests against drought and beetles. They also avoid major direct wildfire costs by reducing fatalities, smoke-related health impacts, structural and infrastructure losses, carbon emissions, timber damage, species and habitat loss, recreation impacts, cultural site damage, rehabilitation costs and suppression expenditures. Indirectly, treatments reduce post-wildfire flood damages to homes, infrastructure, water systems and human safety while lowering community worry and disruption. Together, these benefits demonstrate that fuel treatments generate broad economic, environmental, cultural and social returns across landscapes.

Many of the multiple benefits outlined in Section 2.2 reduce costs and provide budget savings to government, businesses, organisations and individuals.

3 Conclusions

The evidence presented in this report demonstrates that prescribed burning provides major economic, operational and societal benefits, with avoided losses far exceeding the cost of treatment. Increased mitigation reduces suppression expenditure, lowers disaster-recovery costs, stabilises government budgets and reduces insurance and consumer impacts. International studies reinforce the Australian findings: every dollar invested in mitigation returns between 2:1 and 14:1 and in some cases more.

Many of the multiple benefits outlined in Section 2.2 reduce costs and provide budget savings to government, businesses, organisations and individuals.

Underinvestment in mitigation remains a critical national weakness. Current funding levels remain insufficient to address escalating bushfire risk, rising insurance costs and the growing burden of repeat disasters. A substantial shift toward proactive, broad scale prescribed burning and fuel management programs is required to capture the full economic benefits identified in this review.

Prescribed burning is not a standalone solution, but it is a foundational one. When integrated with thinning, cultural burning, community preparedness and strategic land-use planning, it delivers multiple and cumulative benefits that improve suppression effectiveness, protect communities and enhance long-term landscape resilience. Strengthening accountability, increasing investment and adopting a whole-of-landscape approach is essential to reversing current trends and securing a safer, more economically sustainable future.

References

Australian Fire and Emergency Services Authorities Council (2021) National Position on Prescribed burning (AFAC publication No. 2036) East Melbourne Vic Australia AFAC Ltd
https://knowledge.aidr.org.au/media/9206/national_position_prescribed_burning_2021.pdf

Bushfire Front (2026 web undated) Cost/Benefit of Prescribed burning
<https://bushfirefront.org.au/prescribed-burning/what-happens-in-a-prescribed-burn/costbenefit-of-prescribed-burning/>

Deloitte Access Economics (2013), “Building Our Nation’s Resilience to Natural Disasters” for the Australian Business Roundtable for Disaster Resilience and Safer Communities.

Florece and Pannell (2016) Economic assessment of bushfire risk management options in Western Australia: case studies in the Perth Hills and in the south-west of Western Australia. Report Prepared for the State Emergency Management Committee Secretariat, June.

Hjerpe EE, Colavito MM, Waltz AEM and Sánchez Meador A (2024) Return on Investments in Restoration and Fuel Treatments in Frequent-Fire Forests of the American West: A Meta-Analysis. *Ecological Economics*, 223:108244, September 2024. ISSN 0921-8009. doi: 10.1016/j.ecolecon.2024.108244.

Hjerpe EE, Champ PA, Evans SG, Sánchez JJ, Jones KW, Loomis J. Holmes TP, Aldrich G, Buckley M, Colavito MM and Sánchez Meador A (2026) *Economic efficiency of fuel treatments in western US forests: a methodological framework*. *International Journal of Wildland Fire*, 35(1), WF25060.
<https://doi.org/10.1071/WF25060>

Insurance Information Institute (2019) Fighting wildfires with innovation November 2019
https://www.iii.org/sites/default/files/docs/pdf/fighting_wildfires_with_innovation_wp_112619.pdf

Lunder Z (2022) Dixie Fire Stories Interview March 8, 2022 by Zeke Lunder the Lookout
<https://thelookout.org/2022/03/08/dixie-fire-stories-interview/>

Menzies Research Centre (2020) Strengthening Resilience: Managing natural disasters after the 2019-20 bushfire season.

O'Donnell J (2025 a) Identifying and actioning key bushfire disaster economic, efficiency and accountability lessons and insights from across Australia VFFA web 7 February 2025
<https://volunteerfirefighters.org.au/identifying-and-actioning-key-bushfire-disaster-economic-efficiency-and-accountability-lessons-and-insights-from-across-australia-john-odonnell-7-february-2025>

O'Donnell J (2025 b) Town and city bushfire protection case studies from Australia and the US: John O'Donnell ARRN 4 June 2025. Town and city bushfire protection case studies where prescribed burning and other adaptive management and mitigation have assisted in restricting bushfire impacts on communities across Australia and the US <https://arr.news/2025/06/04/town-and-city-bushfire-protection-case-studies-from-australia-and-the-us-john-odonnell/>

Porter KA, Scawthorn CR and Sandink D (2021) An Impact Analysis for Mitigating Wildland-Urban Interface Fires – Overview. For the National Research Council of Canada. Institute for Catastrophic Loss Reduction, Toronto, ON, 5 p.

Strabo F, Bryan C and Reimer MN (2026) Wildfire damages and the cost-effective role of forest fuel treatments Science 7 May 2026 Vol 392, Issue 6798 pp. 629-635 DOI: 10.1126/science.aea6463 <https://doi.org/10.1126/science.aea6463>

Strabo F and Reime M (2026) Beyond Wildfire Research in Brief May 2026 Suppression The economic case for fuel treatments on national forests https://www.perc.org/wp-content/uploads/2026/05/PERC26_BeyondWildfireSuppression.pdf

The Howitt Society (2026 web) The Role of Fuel Reduction Burning in Fire Management <https://thehowittsociety.com/2021/06/26/the-role-of-fuel-reduction-burning-in-fire-management/>

UC Davis (2026) dollar spent on forest fuel treatments saves \$3.75 in wildfire damages, study finds by UC Davis edited by Sadie Harley, reviewed by Robert Egan 7 May 2026 <https://phys.org/news/2026-05-dollar-spent-forest-fuel-treatments.html>