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Economic Impact of Bushfires on the Community





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Pulication: Economic Impact Of Bushfires On The Community

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Prepared for the

**Forest & Wood Products
Research & Development Corporation**

by

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ECONOMIC IMPACT OF BUSHFIRES ON THE COMMUNITY

The following paper, developed as part of the FWPRDC project "Monitoring Australian and international timber and building regulations and standards", discusses the economic impact of bushfires on the community over the last 36 years.

Natural Disasters

In today's value, the insurance damage due to bushfires over the last 36 years exceeds \$1059 million¹. The insurance damage includes domestic buildings and their contents, commercial and industrial buildings, motor vehicles and farm losses. The 2002/2003 Canberra and NSW fires alone accounted for more than one third of the entire cost of insured bushfire damage in the last 36 years.

Comparing bushfire damage over the last 36 years to damage due to other natural disasters such as cyclones, earthquakes, floods, hail and storms, bushfire losses equate to only 11 percent of all damage. Hail represents approximately 35 percent, more than 3 times the value of bushfires, and cyclones represent 24 percent, twice as much. The one hailstorm event in Sydney in 1999 had more economic impact than all bushfire damage recorded in this period. Earthquakes, floods and storm damage are on par with bushfires at approximately \$1 billion each. Details are provided in Figure 1.

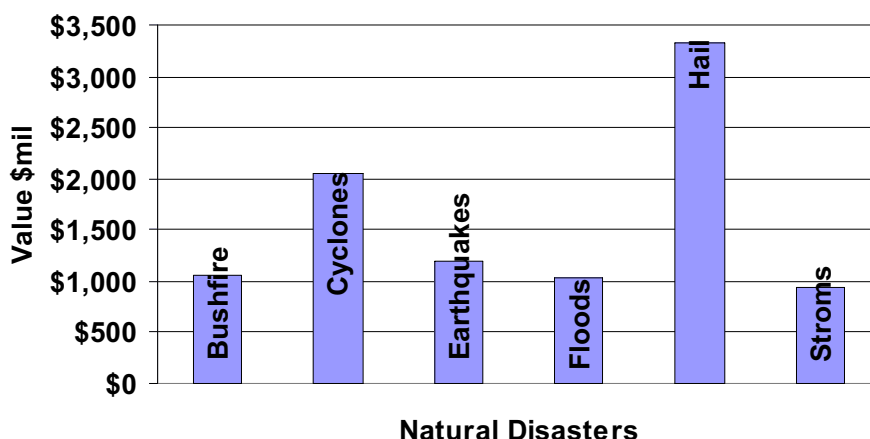


FIGURE 1: COST OF NATURAL DISASTERS SINCE 1967

The frequency of bushfires is less common and less catastrophic than that of other natural disasters such as cyclones, earthquakes and hailstorms. For instance, Figure 2 shows spikes in damage value represented by Cyclone Tracey (1974), the Newcastle earthquake (1989) and the Sydney hailstorm (1999).

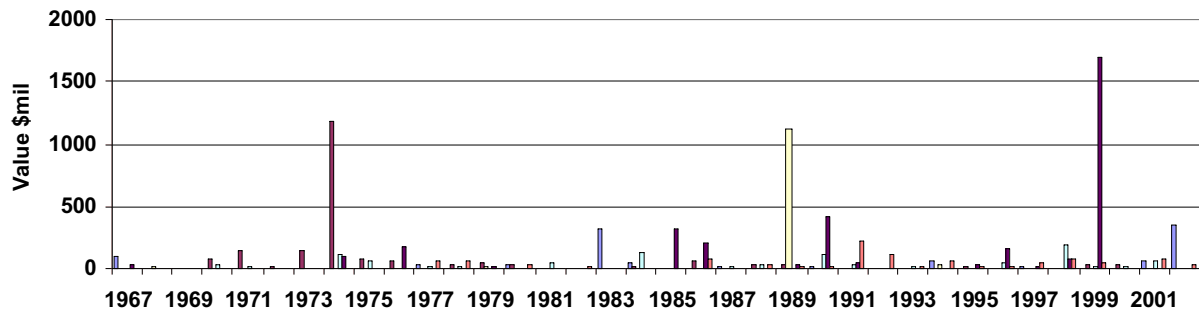


FIGURE 2: VALUE OF NATURAL DISASTERS FROM 1967 TO 2003

Time intervals of 10 years or more for major bushfires, show how seldom these events occur. This is shown in Figure 3.

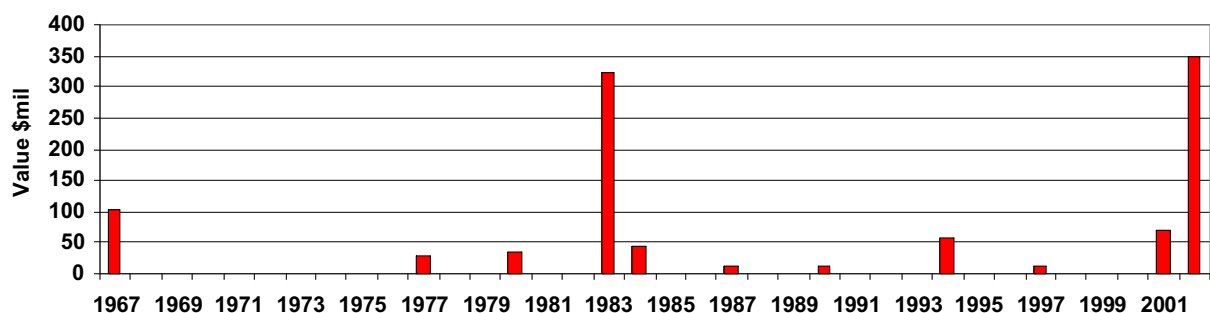


FIGURE 3: MAJOR BUSHFIRES AND THEIR INSURED LOSS SINCE 1967

In trying to put all this in perspective, the previously mentioned insurance cost from bushfires for all insured lost averages out to \$29.4 million/year. In dissecting this figure further, Sydney insurance figures for the 2001 and 2002 bushfires resulted in 57% of paid claims being for domestic buildings and their contents². Arguably, the value of contents is one third while the buildings' value is two thirds. Therefore an estimate of insured damage loss for domestic buildings per year is approximately \$11.1 million/year.

To get closer to true economic loss, this value needs to be increased to cover uninsured or under insured domestic buildings. The Insurance Disaster Response Organization indicates that 1 in 4 victims of 2001³ bushfires had no insurance or were under insured. On this basis it seems fair to increase the previously value by one third, making it \$15.0 million/year. This now provides an objective basis for quantifying the economic cost of bushfire damage to domestic buildings, relative to the cost of increased building regulations aimed at preventing the effects of bushfires.

Costs of Complying with AS 3959 – Construction in Bushfire Prone Areas Standard

ABCB's Regulatory Impact Statement - Building in Bushfire-prone Areas⁴ estimated 15 percent of all houses were constructed in bushfire prone areas. Of this, 56 percent of new homes were required to comply with the Standard equating to 22,600 houses based on an average of 150,000 residences per year over the last ten years. It is estimated by the author that the new site assessment method proposed in the public comment draft of AS 3959 – 2003 Construction in Bushfire Prone Areas⁵ will increase the number of houses affected by an order of 2 or 3 times, therefore doubling the current number of houses affected to 25,000 that will need to conform to the Construction in Bushfire Prone Area Standard. This increase is already occurring in NSW due to the Planning for Bushfire Protection⁶ requirements.

Dividing the total loss of domestic building by the number of houses affected results in an average of \$600 per house. This \$600 represents the cost that can be spent on each house before the economic impact of the damage is exceeded by increased construction costs. Unfortunately, anecdotal evidence of construction costs suggests that the amount imposed by regulations is much higher. Ranges have been suggested between \$1000 and \$10,000 per house. In some cases \$30,000 is required when concrete decks and toughen glass windows are required. If the house renovation market is considered, costs will gravitate towards the upper end of the range.

LOST OPPORTUNITY

In addition to the community cost of complying with the Construction in Bushfire Area Standard and Planning for Bushfire Protection is the lost opportunity or reduction in yield from scarce land supplies. The Timber Development Association is currently completing a survey of building professionals to identify the impact the Rural Fire Act has had on building development industry in NSW. The work is not yet complete but initial findings indicate there has been more than \$100 million lost to the NSW economy since the Act's introduction in August 2002.

Additional is the impact on individual livelihoods. Anecdotal stories being collected during the survey indicated individuals, businesses and livelihoods are affected. Examples include deck and fence builders who can no longer build using timber, log homebuilders able to build log homes through to retirees who cannot build on land that was purchased many years ago for their retirement.

CONCLUSION

The cost of regulations from recent bushfire damage on the community far out weigh the economic loss experienced. A change is required to balance the cost against the impact of bushfires. A balanced partnership between planning controls, ember proofing buildings, community education as well as improvements in fire suppression techniques would have less economic impact on the community and better effect than regulatory changes brought about by recent bushfire damage.

REFERENCES

1. Insurance Disaster Response Organization - Major Disasters Since June 1967 - Revised To January 2003
2. Insurance Disaster Response Organization – Bushfires – Sydney NSW 2001 and 2002 – Claims Survey
3. Insurance Disaster Response Organization – Natural Disasters Costs Continue to Climb – March 2003
4. ABCB's Regulatory Impact Statement - Building in Bushfire-prone Areas - Aug 1999
5. Draft for Public Comment – Construction of Building in Bushfire Prone Areas – DR 03182
6. Planning for Bushfire Protection – Planning NSW 2001
7. Construction in Bushfire Prone Areas – 1999