



# Verisk Bushfire Model for Australia

Australia is among the most wildfire-prone countries in the world—and has been for millennia. Its climate and vegetation are conducive to the ignition and spread of potentially damaging bushfires, with strong geographic variation in seasonality, frequency, size, and intensity.

The 2019-2020 Black Summer bushfires were among the most devastating in Australia's history, causing widespread damage, loss of life, and billions of dollars in insured losses in New South Wales, Victoria, South Australia, and elsewhere. The frequency and intensity of Australian bushfires are extremely dynamic, and these events differ widely in size and timing due to the country's variable climate and diverse landscapes.

Urban expansion is increasing property exposure in areas of significant historical bushfire activity. All this presents a growing challenge for insurers and reinsurers. Robust and skillful risk assessment models are essential to understand the potential impacts of bushfire events and manage exposure effectively.

### Why did we update our model, and what does it mean for your portfolio?

Released in 2025, our recently updated Bushfire Model for Australia views these trends and factors holistically. By incorporating the latest research, data, and innovation, our model provides a more comprehensive risk assessment that can lead to a more consistently profitable portfolio. This results in outputs aligned with real-world outcomes to support:



Underwriting and pricing



Capital optimization



Regulatory, rating agency, and internal capital adequacy assessments



Structuring reinsurance programs and evaluating insurance-linked securities



>98%

The model covers over 98% of the insurable exposure across all six states (New South Wales, Victoria, Queensland, Western Australia, South Australia, and Tasmania), as well as Northern Territory and Australian Capital Territory.

### What makes Verisk the cat modeling leader that's trusted worldwide?

**More than 400** organizations, including top-tier and regional insurers and reinsurers, trust Verisk's cost-efficient, scalable models for granular, by-peril data and insights. We provide responsive, personalized support to ensure that our clients gain the maximum benefit from our solutions.

### What sets Verisk's Australia Bushfire Model apart?

Our model incorporates the latest loss data for this peril, proven methodologies from Verisk's Wildfire Model for the United States, and research from the U.S. based Institute for Business and Home Safety and the Verisk Climate Council. Meanwhile, our next-generation financial module supports a more sophisticated and accurate view of portfolio risk across all our catastrophe peril models for a consistent framework, regardless of region or peril.

Verisk's industry-leading Australia Bushfire Model can help insurers and reinsurers make confident, data-driven decisions in assessing and managing bushfire risk across Australia. By integrating advanced fire science, high-resolution hazard data reflecting near-present climate conditions, and detailed engineering insights, carriers can effectively assess portfolios, refine underwriting and pricing strategies, and proactively mitigate risks.

The model provides unparalleled insight into bushfire risk nationally with detailed modeling of bushfire ignition location and date, physics of fire spread, ember generation and spread, and urban conflagration—plus support for 128 construction and 110 occupancy classes, including specialized risk types. This can help you pursue growth opportunities with assurance while promoting a more resilient Australia.





## What's in the model to help drive your business forward?

### **Comprehensive modeling parameters**

The model provides granular, location-specific risk analysis, considering factors such as near-present climate, construction type, vegetation (fire fuel type and amount), and defensible space. This allows insurers to accurately price premiums based on the true risk for each asset, improving fairness and reducing financial instability.

### **Detailed vulnerability analysis**

The model's vulnerability module evaluates structural and nonstructural assets, providing detailed insights into the susceptibility of various building types, infrastructure, and population segments. Structure-level simulations, fragility curves, and loss functions enable stakeholders to target mitigation strategies toward high-risk concentrations.

### **Stochastic catalog generation**

The model generates millions of bushfire events, covering a broad range of probable scenarios. This probabilistic approach provides a robust foundation for estimating average annual loss (AAL), probable maximum loss (PML), and other critical financial metrics to help ensure regulatory compliance.

### **Alerts during catastrophe events**

Verisk's ALERT services provide updates on major bushfire events, which can be used to gain a more accurate view of the event's potential impacts.

### **Support for specialty risks**

Refined assessments include residential structures and contents, agricultural structures, industrial and commercial facilities, automobile, and marine lines.

## Let's talk—schedule a discovery call.

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