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Murray Barlow, Rustenberg Wines

ANALYSIS



# A world on fire

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Climate change has contributed to a terrifying number of wildfires worldwide. **James Bayley** looks at the human, economic and environmental cost of the devastation

**IN 2022 THERE** were 7,490 wildfires in California, according to the California Department of Forestry & Fire Protection. The total acreage burned was 362,455. However, this was well below the five-year average of 2.3 million acres. It is a sign of the times when 362,455 of scorched acreage is considered a 'quiet year' for wildfires in California.

Renowned wine regions across the world are increasingly seeing their grape-producing harvests defined by wildfires. The challenges are both economic and health-related – producers can lose an entire harvest in an instant and vineyard workers are being subjected to dangerous work environments.

A number of significant wildfires

burned in California in 2022. These include: the Oak Fire in Mariposa County, which burned more than 180 structures; the McKinney Fire in Siskiyou County, which caused four fatalities; and the Mosquito Fire in Placer and El Dorado counties, which was California's largest wildfire of the year. In total, California wildfires claimed nine lives in 2022.

The crisis is so bad that insurers are fleeing the state, leaving many wineries, commercial properties and local residents without insurance for their assets.

Meanwhile, according to the Australian Wine Research Institute, smoke events are estimated to have caused losses of more than A\$1.6bn in revenue to the Australian wine sector in the 20 years since 2003.



## ANALYSIS

In the significant bushfire season of 2020, the scale of farmgate sales losses to growers in North East Victoria alone was estimated to be A\$21.8m. However, this is small in comparison to the value of retail wine foregone, which was calculated at A\$141m (WIne Australia Report).



### MOST AFFECTED AREAS

There were reports of losses, rejection or positive smoke taint tests from 18 different regions, with the most affected (in terms of percentage crop reduction) being Hunter, Orange, Tumbarumba, Canberra District, Southern Highlands and Hilltops (NSW), Adelaide Hills and Kangaroo Island (South Australia), plus Alpine Valleys, Beechworth and Glenrowan (Victoria). Fortunately, most regions of Victoria and South Australia were unaffected, as were all the regions of Western Australia and Tasmania.

In Chile last month, in an interview with Chilean newspaper *La Tercera-Pulso*, president of Vinos de Chile, Aurelio Montes Baseden, estimated that in the 12 months of 2023 the historic Itata Valley will suffer a loss of 30-40% of the total annual production of the area due to wildfires. The damage is especially severe for small-scale producers, some of whom lost all their production this year.

He added that the vines that were rescued are likely not to produce again for two years, as a result of the heat to which they were exposed.

In the country's Bio Bío region, the local newspaper *El Sur* reported last month that 301 vintners had been affected by wildfires in the area. Baltazar Roa, a vintner from the Nacimiento commune, explained that it could take up to three years to recover what was lost from the fires in the region, costing approximately \$20m.

Official figures released by Chile's Ministry of Agriculture claimed that 300ha of old vines were lost in wildfires in February, the majority in the Itata Valley. The fires reportedly claimed the lives of 25 people and more than 16,800 animals.



## Deidre Taylor

SALES & MARKETING MANAGER  
KANONKOP WINES



## Murray Barlow

OWNER, RUSTENBERG WINES

Two experts from South Africa offer in-depth insight into how their businesses have been affected by the wildfires of recent years

### How have wildfires affected your wine output in the past 20 years?

**Deidre Taylor:** We have had two major vineyard fires in recent years, in 2000 and 2016. We lost about 6ha of vineyard in the 2000 fire and about 3ha of Merlot and Pinotage in 2016. The 2016 fire was shortly before harvest, so we lost all the fruit on those vines in that year, but by comparison [with others], our losses have been small.

**Murray Barlow:** Yes, in 2016. Prior to that, the last major fire was in the year 2000.

### Is smoke damage more or less of a concern than wildfires that could directly damage the vineyard?

**DT:** For us, smoke damage has a much bigger risk than ash. There is nothing you can do to mitigate smoke damage in the vineyard and on the fruit. The Aussies have done lots of research on this, but without any conclusive results on correcting the problem. For smoke damage within the winery, we have used ozone machines, that remove the smell/taint.

**MB:** Both are a concern. Smoke taint is largely out of one's control as its severity depends on the weather conditions impacting the density and duration that smoke is present in a vineyard.

A vineyard affected by smoke bounces right back in the following vintage with no further impact on the fruit quality. A burnt vineyard is considerably more terminal and the costs to replant are



significant and far-reaching. In many cases, if you can safely get into the vicinity of the vineyard to fight the fire you can lessen its direct impact on burning the vines.

**Have your winemakers ever been forced to reject fruit because there was smoke in the area? If so, why was this deemed necessary?**

**MB:** No, we have processed the fruit and if smoke taints have been found either sensorially or through laboratory testing, we have declassified the wines in question and sold them off in bulk. We have only experienced smoke taint in our own vineyards and not from bought-in fruit from the surrounding areas.

**Is it possible to calculate the financial cost caused to your estate because of smoke events?**

**MB:** Yes, fire damage cost the company 25% of its turnover in the 2016 vintage. The cost of replanting the 5ha of the burnt vineyard was considerable.

**Has vineyard worker safety ever been a concern due to wildfires, and, if so, what measures have you had to employ to ensure their safety?**

**DT:** There is a community WhatsApp group with spotters in various parts of the area who alert the farmers with fires that are first identified. Firefighters have access to farm dam water to use for putting out the blaze.

Our team have all undergone firefighting courses, and we use our tractors with their spray trailers to extinguish the flames.

**MB:** All our workers are trained to fight bushfires, we have the correct equipment to do so but lives are never put at risk. The primary tool we employ to fight fires threatening our vineyards is contracted water-bombing helicopters and we use our teams on the ground to mop up afterwards.

**What do producers need to do to help mitigate the impact of wildfires?**

**DT:** We have been quite fortunate not to have lost much in the past, but the risk remains.

We therefore take all the steps possible to manage this risk and to make sure we are in the best position to fight it.

Most importantly, we have removed all alien trees and vegetation in our surroundings – and this is something we need to work on annually.

Alien vegetation that grows in this area has high levels of oils in it, and they burn much hotter, literally adding fuel to the fire. By removing them you significantly reduce the risk of the fire being spread to vineyards and buildings. In contrast, our natural fynbos vegetation burns cooler and slower.

**MB:** Regionally we are already doing a huge amount. Early containment is our greatest tool and with the use of rapid communication platforms such as dedicated regional WhatsApp firefighting groups, government and private resources can be quickly and effectively deployed to stop fires before they spread.

More estates have firefighting insurance too, mitigating the cost of deploying helicopters if need be. ■

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**Deidre Taylor,  
Kanonkop Wines**



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