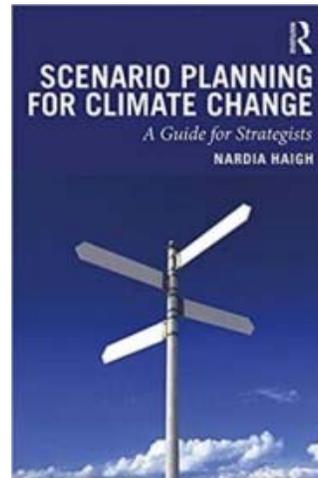


Summary of Potential Climate Change Impacts: Wildfires

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This summary of current and potential future climate change impacts accompanies the book *Scenario Planning for Climate Change: A Guide for Strategists*, available online from [Amazon](#).



Overview

The world is burning. While Californian and Australian wildfires historically have been normal during dry spells, their frequency and severity is increasing. The 2018-2019 fire season illustrates this trend, as both countries experienced some of their worst fires ever—The Camp Fire in California alone is responsible for 85 deaths, over ten thousand destroyed homes, and damages estimated in excess of U.S. \$7.5 billion.¹

More surprisingly, severe wildfires have spread north of the Arctic Circle in Scandinavia and Russia, and these massive fire events are being attributed to climate change. Polar regions are warming faster than the rest of the world and are especially vulnerable to wildfire. As resources for combatting fires in Scandinavia are limited,² firefighting planes and equipment were dispatched from Italy, France, and Norway to combat over 80 fires occurring simultaneously across 20,000 hectares in Sweden alone. By comparison, only 448 hectares burned in Sweden in between 2008 and 2017³.

Additionally, Yosemite Valley was closed for weeks in the summer of 2018 due to fires and heavy smoke, only three years after devastating fires raged in and around Yosemite's Tuolumne River Valley; and in January, 2019, devastating brushfires spread across southeastern Australia in Victoria, covering tens of thousands of hectares during a time in which Australia was experiencing record-breaking and exceptional dryness and heat.⁴ Researchers have concluded that

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anthropocentric, or human-caused, climate change is responsible for 4.2 million more hectares of forest lost to fire in the western United States between 1984 and 2015⁵.

How Are Wildfires Affecting Businesses Now?

The California wine-growing regions of Napa and Sonoma counties provide a good example of wildfire impact on business. At the time of writing, residents and business owners in northern California are just beginning to recover from deadly fires that burned through Sonoma, Napa, and Yuba counties.⁶ At least 41 people died in the blazes, which covered over 200,000 acres, and displaced over 100,000 residents.⁷ Famous for its wineries, Napa and Sonoma Valleys grow the state's most expensive grapes, and while 80% of the year's crops had already been picked, vineyards such as Signorello Estate Winery and Paradise Ridge were lost and will take years to recover. Replanting lost vineyards can cost anywhere between U.S. \$15,000 to \$25,000 per acre, a cost primarily borne by the wineries.⁸

A report on bushfires in southeastern Australia explains in detail the environmental, economic, and social impacts that communities experience. After the Alpine Fires in eastern Victoria in 2003, businesses in the once-picturesque area recorded downturns as high as 50-100% during and immediately after the fires from loss of tourism.⁹ Retail and commercial losses of the fires ultimately cost AUD \$48 million. Because Napa and Sonoma also rely heavily on wine tourism,¹⁰ businesses will need to restore their wineries and infrastructure to the condition that existed prior to the fires. However, doing so comes with significant short-term risk even to the wineries that survived the fire. A 2003 study on the Alpine Fires determined that vineyards lost AUD \$5-8 million from "smoke taint" that ruined the grapes.¹¹ Small retail stores, whitewater rafting operations, hotels and businesses in and around Yosemite that are part of the region's extensive tourism industry will also take a financial hit as tourists avoid the fire and smoke-ravaged region.

How Could Wildfires Affect Businesses 25 Years from Now?

The U.S. Forest Service predicts that some areas of the country may experience fire seasons as long as 300 days in the coming decades:¹²

*The frequency of western U.S. wildfires has already increased by 400% since 1970. California, Colorado, Arizona, and New Mexico experience the worst damage. These fires have burned six times the land area as before and last five times longer. Their fierce temperatures consume all nutrients and vegetation, leaving little to grow back.*¹³

In addition to the greater risk to tourism, agriculture, viticulture and other industries, along with impacts to daily operations of businesses that exist within fire-prone areas, businesses outside these regions can be affected by the economic, environmental, and social repercussions of wildfires. In 2018, California alone lost U.S. \$400 billion due to wildfires, and California fire departments spent U.S. \$1 billion fighting fires across the State.¹⁴

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In January 2019, PG&E filed for bankruptcy after being found responsible for the November, 2018 Camp Fire.¹⁵ More of these kinds of bankruptcies could emerge in future. The insurance industry could respond by increasing homeowner and business insurance premiums in fire-prone regions and within the regions where fires are expected to spread due to accelerating climate change.¹⁶ Incidences of energy insecurity may also increase, given that in response to PG&E's liability in the Camp Fire, the company announced it would likely cut off power to homes and businesses during times of high fire risk to prevent fires caused by power line sparks. The future impact of such decisions could be significant,¹⁷ since it indicates that increasing fire risk could prompt an era of rolling blackouts.

In twenty-five years, more significant impacts could also be felt elsewhere. If wildfires can spread north of the Arctic Circle on a large scale, they can spread anywhere. As the planet warms, as weather patterns change, more regions are subject to higher temperature, extreme temperatures, drought, forests and grasslands that dry out and become tinder boxes.¹⁸ These conditions make combatting forest fires harder. More fires, covering more area could threaten more homes and businesses. More fires could continue to threaten agricultural production as already seen in fire-affected wineries. Businesses could lose manufacturing plants, key production inputs, and experience disrupted transportation networks and supply chains. Past experience suggests that some of the hardest hit businesses could be small businesses that depend on tourism, such as at Yosemite National Park.

Wildfires may also displace people and their jobs. If people lose their homes to wildfire and leave fire prone areas, business disruption may be exacerbated by market and employee displacement.

If you would like to learn how to use scenario planning to develop strategic responses to climate change issues such as this, order *Scenario Planning for Climate Change: A Guide for Strategists*.

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