

'Black Summer' bushfires wiped \$2.8 billion from tourism supply chains, finds study

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A first-of-its-kind study of the 2019-2020 "Black Summer" bushfires in Australia has revealed that the tourism industry nationwide took an immediate hit of \$2.8 billion in total output to its broader supply chains

and almost 7,300 jobs disappearing nationwide.

The fires four years ago triggered widespread tourism shutdowns in many parts of the country in the lead up to the peak Christmas and New Year season, resulting in \$1.7 billion in direct losses to the tourism industry, which triggered the larger drop in supply chain output.

"These results are an illustration of what can be expected in the future not only in Australia, but in other nations that are vulnerable to climate-change driven disasters," said Vivienne Reiner, a Ph.D. student with the Centre for Integrated Sustainability Analysis in the Faculty of Science and lead author of the study, [published](#) in *Economics of Disasters and Climate Change*.

"It's important to note that our study, which measured tourism's losses through Australian supply chains, did not quantify other [economic costs](#), such as the supply-chain impacts of losses from agriculture or forestry, which were also substantially impacted by the fires," she said.

While the fires had the biggest impact on Australia's east coast, the impact from tourism losses was national and felt across the economy, the researchers found.

"Tourism is a vital Australian industry. Before the fires that started in 2019, statistics showed that in [rural areas](#) 8 percent, or almost one in 12 people, were employed in jobs connected to the [tourism industry](#)," Reiner said. "As well, tourism is a top export, with travel services responsible for more export income than [natural gas](#) in 2018-19."

Associate Professor Arunima Malik, a co-author who heads the Centre for Integrated Sustainability Analysis and is also affiliated with the Business School, said, "With bushfires increasing compared to other [natural disasters](#) and expected to intensify due to climate change, it is

important for countries such as Australia to quantify their economic impact as part of routine practice, including supply-chain spillovers."

Co-author Professor Manfred Lenzen, also with ISA in the School of Physics, said, "Although the losses we calculated only represented a small fraction of the nation's economic output, Australia's reputation as a pristine destination could become permanently damaged under global warming, with fewer people traveling within and to Australia in our peak holiday season."

The research showed varied impact nationwide across the supply chain, including in job losses:

- New South Wales: 3,171 jobs
- Victoria: 1,430 jobs
- Queensland: 1,499 jobs
- South Australia: 516 jobs
- Western Australia: 479 jobs
- Tasmania: 13 jobs
- Australian Capital Territory: 110 jobs
- Northern Territory: 75 jobs

The researchers warn that the Australian economy could face further losses as the effects from climate change increase.

Reiner said, "As part of the Asia Pacific—the world's most disaster-prone region—Australian tourism has a lot to gain from [climate-change](#) mitigation. In terms of responses, studies such as ours also help indicate hotspots in supply chains where rebuilding may be required in communities and industries.

"By including the entire supply chain in our research, using input-output analysis, we calculated total output losses of \$2.8 billion, which is a 61

percent increase on direct damages identified."

More information: Vivienne Reiner et al, Wish You Were Here? The Economic Impact of the Tourism Shutdown from Australia's 2019-20 'Black Summer' Bushfires, *Economics of Disasters and Climate Change* (2024). [DOI: 10.1007/s41885-024-00142-8](https://doi.org/10.1007/s41885-024-00142-8)

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