

Bushfires: Survey reveals catastrophic damage to productive land



Brian and Elizabeth Blakeman inspect the bushfire damage to their property in Wairewa, Victoria, on Sunday. Picture: Getty Images

EAN HIGGINS | NATIONAL RURAL REPORTER

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Nearly a million hectares of prime agricultural land has been damaged by bushfires, along with more than 1.6 million hectares of logging forests and tree plantations, according to the first scientific study matching fire zones to land use.

The analysis by private satellite mapping consultants Digital Agriculture Services shows almost as much productive land has been caught up in the infernos as national

parks and other conservation zones, 3.2 million hectares of which are in the bushfire areas defined by four states.

The DAS study records the biggest proportional impact of the fires in national parks and forestry, particularly in NSW, where official bushfire boundaries cover 25 per cent of conservation areas and 30 per cent of native production forests and tree plantations.

It shows nearly 50,000 structures are within the fire zones, though it is not known how many of those have been destroyed and how many were saved.

The maps show where state fire authorities say land is burnt out, burning, or still in danger.

The DAS study provides an initial taste of what is likely to be a significant adverse impact on the agriculture and forestry sectors, which will expand until the still-spreading bushfires around the nation are brought under control.

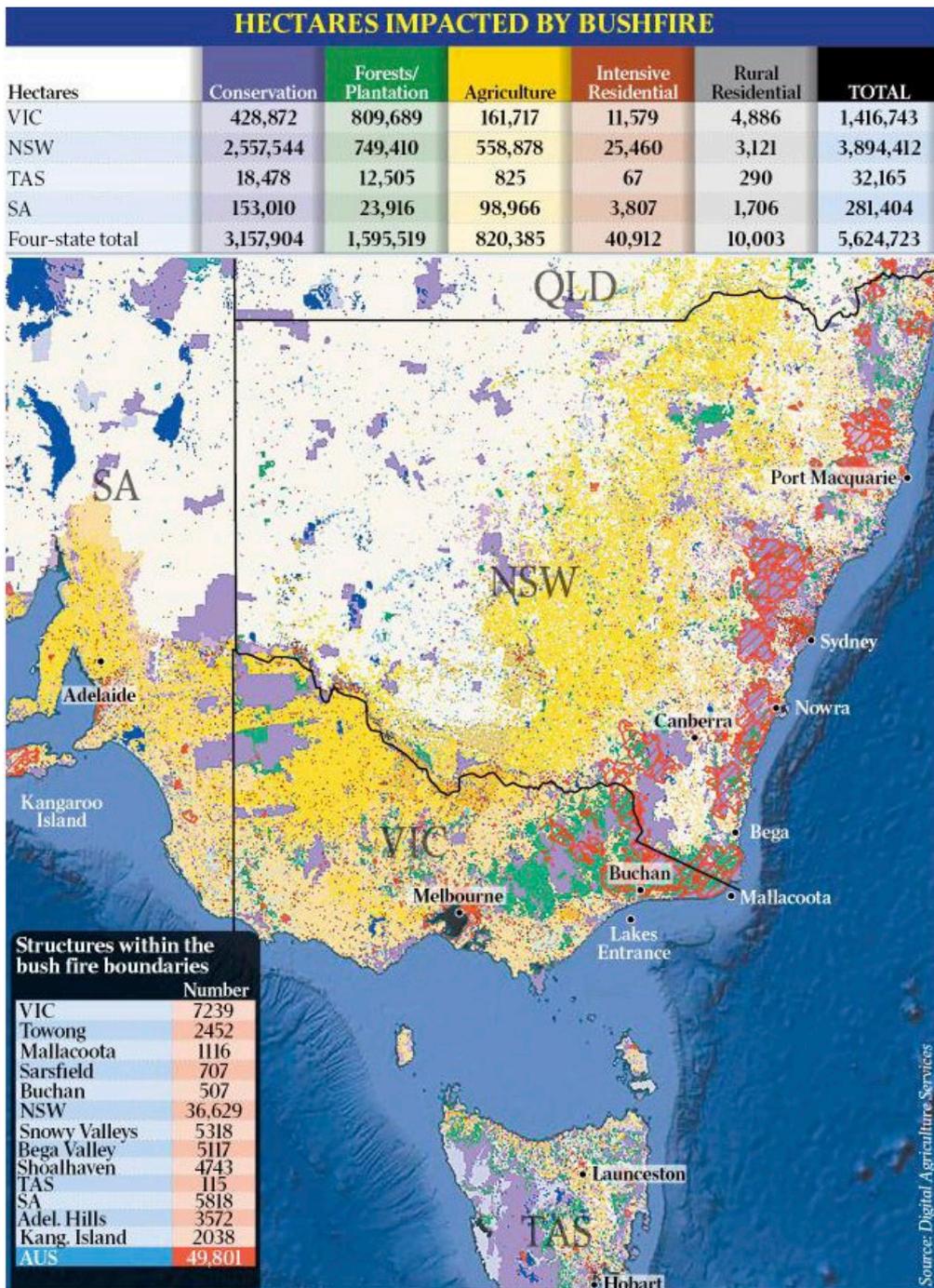
It comes amid warnings of a spike in food and dairy prices, and could signal the risk of job losses in both forestry and farming.

“What we know is that some of our most productive land is on the east coast of Australia and in the fire zones,” DAS chief executive Anthony Willmott told *The Australian* on Tuesday.

The DAS report also shows that the bushfires are concentrated in areas of severe drought, and demonstrates a high correlation between current fires and known topographical and fuel load risks.

For years, DAS has used satellite imagery and state and federal government data on land use to make precise assessments of agricultural activity and resources on individual rural properties.

The satellite data is of such a high resolution that it can distinguish between wheat and barley, and can gauge crop productivity.



The DAS property assessments are sought by banks and insurance companies to value properties and assess risk, but DAS also makes the material available to farmers.

“At the moment, we estimate the productivity of every paddock in Australia, looking at the biomass growth on those properties,” Mr Willmott said.

The official bushfire boundary maps for NSW, Victoria, South Australia and Tasmania were developed by the Emergency Management Spatial Information Network Australia, with the assistance of Geoscience Australia.

DAS matched its own data on land use with the fire zone maps.

“Now we know where the fire is, we asked, what type of land is it?” Mr Willmott said.

Queensland and Western Australia have yet to release their bushfire boundary maps, so the DAS analysis only covers the four states with declared fire zones totalling 5.6 million hectares, compared with other national estimates including Queensland and Western Australia, closer to seven million hectares. The DAS assessment of 820,000ha of agricultural land in the fire zones in four states is, as a result, not a national total. That would be closer to one million hectares.

NSW has borne the brunt of the damage, with 560,000ha of agricultural land in the fire zones, while Victoria had more logging forests and tree plantations in the blazes — 810,000ha, compared with 750,000ha in NSW.

NSW also accounted for the lion’s share of the fires in national parks and other conservation zones, at 2.6 million hectares out of a four-state total of 3.2 million hectares. And of the nearly 50,000 structures that were in the fire zones, 37,000 were in NSW.

The DAS study found 86 per cent of the fire-affected areas in the four states are suffering a one-in-10-year rainfall deficit, and 63 per cent are experiencing a one-in-20-year rainfall deficit.

The analysis shows how work DAS had done with the CSIRO in 2018 to create a “fire risk score” for all rural properties based on topography and fuel load was a very effective predictor. Those properties in the fire zones had a mean fire risk score near the top.

“We have found that the mean fire risk index for properties that fell within the fire boundaries was 0.93 (with a maximum of 1),” DAS said. “That is, the highest-risk index values are where crown fires are likely to occur in forests and firestorms will develop. The lowest (-risk) index values are where a fire would struggle to stay alight.”

Survey reveals catastrophic damage to productive land

EXCLUSIVE

IAN HIGGINS
NATIONAL RURAL REPORTER

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The analysis by private satellite mapping consultants Digital Agriculture Services shows almost as much productive land has been caught up in the infernos as national parks and other conservation zones. 32 million hectares of which are in the bushfire areas defined by four states.

The DAS study records the biggest proportional impact of the fires in national parks and forestry, particularly in NSW, where official bushfire boundaries cover 25 per cent of conservation areas and 30 per cent of native production forests and tree plantations.

It shows nearly 50,000 structures are within the fire zones, though it is not known how many of those have been destroyed and how many were saved.

The maps show where state fire authorities say land is burnt, or burning, or still in danger.

The DAS study provides an initial taste of what is likely to be a significant adverse impact on the agriculture and forestry sectors, which will expand until the still-spreading bushfires around the nation are brought under control.

It comes amid warnings of a spike in food and dairy prices, and could signal the risk of job losses in both forestry and farming.

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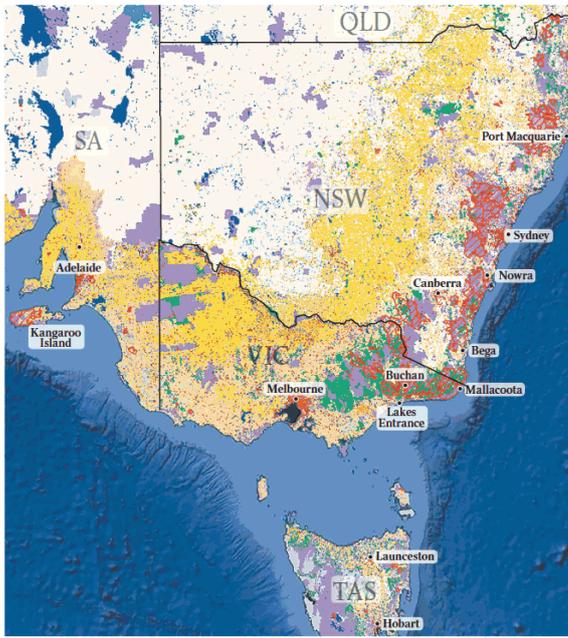
The DAS report also shows that the bushfires are concentrated in areas of severe drought, and demonstrates a high correlation between current fires and known topographical and fuel load risks.

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STRUCTURES WITHIN THE BUSHFIRE BOUNDARIES

VIC	7239	NSW	36,629	SA	5818
Tasmania	2452	Snowy Valleys	5318	Adel. Hills	3572
Mallacoota	1116	Bega Valley	5117	Kang. Island	2038
Sarsfield	707	Shoalhaven	4743	TAS	115
Buchan	307				

AUS TOTAL
49,801

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ANTHONY WILLMOTT
DAS CHIEF EXECUTIVE

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with 750,000ha in NSW. NSW also accounted for the lion's share of the fires in national parks and other conservation zones, at 2.6

"We have found that the mean fire risk index for properties that fell within the fire boundaries was 0.93 (with a maximum of 1)," DAS said. "That is, the highest-risk index values are where crown fires are likely to occur in forests and firestorms will develop. The lowest (risk) index values are where a fire would struggle to stay alight."

million hectares out of a four-state total of 3.2 million hectares. And of the nearly 50,000 structures that were in the fire zones, 37,000 were in NSW.

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HECTARES IMPACTED BY BUSHFIRE

Hectares Conservation	
VIC	428,872
NSW	2,557,544
TAS	18,478
SA	153,010
TOTAL	3,157,904

Hectares Forest/Plantation	
VIC	809,689
NSW	749,410
TAS	12,505
SA	23,916
TOTAL	1,595,519

Hectares Agriculture	
VIC	161,717
NSW	558,878
TAS	825
SA	98,966
TOTAL	820,385

Hectares Intensive Residential	
VIC	11,579
NSW	25,460
TAS	67
SA	3,807
TOTAL	40,912

Hectares Rural Residential	
VIC	4,886
NSW	3,121
TAS	290
SA	1,706
TOTAL	10,003

Hectares TOTAL	
VIC	1,416,743
NSW	3,894,412
TAS	32,165
SA	281,404
TOTAL	5,624,723

State review 'not in conflict' with PM's

INQUIRY

RACHEL BAXENDALE
VICTORIAN POLITICAL REPORTER

Scott Morrison says an independent investigation announced by the Andrews government into Victoria's bushfires will not conflict with his planned federal royal commission, which will examine preparation and response to fires, resilience and adaptation at a national level.

Premier Daniel Andrews on Tuesday announced the terms of reference for Victoria's inquiry, which will be led by Inspector General for Emergency Management Tony Pearce.

The NSW government has promised an inquiry into how land management in national parks may have affected the fire season in that state.

The Prime Minister said it had always been his understanding that states would undertake their own bushfire reviews.

"In Victoria there is actually a statutory requirement for one to be done in response to bushfires after Black Saturday, so that's understood, and the same will happen in NSW," he said.

"Any suggestion that these two are somehow in conflict is just completely false. The ambit and scope of what the federal government will look to pursue is to look at... the preparation and response to these terrible fire events as they've extended across many state borders; secondly, to look at the whole issue of resilience; and, thirdly, adaptation going forward in the recognition of longer, hotter, drier seasons."

Mr Andrews announced his government would provide Mr Pearce with an extra \$2.55m, some of which would be used to hire six staff, and require him to report on



A New Zealand air force helicopter crew conducts resupply missions in Victoria

Victoria's preparedness for the fire season and firefighting efforts by July 31 this year, and on relief and recovery efforts by June 30, 2021.

The Premier said Mr Pearce had 35 years' experience in security, intelligence and emergency management, and was the "right person" for the job.

"He has the right skills. With the additional funding and the capability he'll need for that dedicated focus, he'll move around communities, he'll speak to people who've been fire-affected, he'll speak to all of our emergency services," he said.

"We think that he can look at any and all matters, find the things that we can do better, but also confirm for us some of the other changes we've made over time, and just how effective they were in saving lives, saving property."

Mr Andrews said he had discussed Mr Morrison's plans for a bushfire royal commission with the Prime Minister at the weekend. "It's unclear to me — I am not making criticism — I don't think it has been settled exactly what a federal inquiry will look at, but I have a commitment from the Prime Minister for further consultation and trying to work together as best we can on that," he said.

Dive tank a lifeline

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"At that stage I just went angry. I was furious at the government," she said.

"We've been watching this place get dryer, trees ferns that have been there for years have died. We knew this was going to happen. I was just livid they haven't done anything about climate change."

With adrenaline pumping, she rang triple-0 when she could see the fire and urged the authorities to get there before it jumped the highway and reached Fishermans Paradise and Conjola Park — not realising it was already burning on the other side.

After the worst had passed, she circled the house again and again, putting out spot fires well into the afternoon, and jumping back in the pool to get air from the oxygen tank because of the smoke. Nearly 100 homes burnt around Conjola and three people died.

roof sprinkler system. The only damage was two cracked windows and melted bathroom vents.

Ms Kneeshaw may be the only Australian to have used her scuba diving gear and pool to survive the bushfires but she stressed it was part of her fire plan and she was well-prepared.

Her husband had gone to work before 8am on the day the fire hit, not knowing what was coming, while Manny had been dropped into town to stay with a friend and Darcy was volunteering.

A phone call from neighbour Bruce Shea at 10.30am alerted her to the need to get ready for the approaching fire.

Ms Kneeshaw started spraying around the house and wetting the decks while, across the highway, 30m-tall eucalypts were in flames.

Recovery boost to hit budget surplus

Continued from Page 1

and the public to inject cash into regional businesses as soon as possible. "What that means is that people who have cancelled their bookings to regional communities should roll over their booking, not ask for a refund. Don't just cancel but reschedule."

Mr Morrison said the government's \$50m package to support charities would "help stimulate bushfire-affected communities".

"For many people right now, it's the basics that count," he said. "We need to make sure everyone has food on the table and clothes on their backs. We will direct relief providers to team up with local businesses so this money can have a dual effect of helping families get back on their feet as well as boosting local economies."

Agriculture Minister Bridget McKenzie, who announced extra support for primary producers — providing up to \$75,000 in grants for farm, fish and forestry businesses — warned supermarket giants not to short-change bushfire and drought-affected farmers.

Senator McKenzie said they had to be upfront on prices because "farmers don't grow food for free" and needed to "make a living". She said Australians would have to pay more for their fruit and vegetables, meat and milk as a result of the bushfires and drought.

"The supermarkets... need to let the Australian public know that because of the bushfires and the drought, you will have to pay more for your milk. Processors are doing the right thing by farmers, by actually paying milk cheques when in many cases they're not getting the product," she said.

"Therefore, that's having an impact on their business. It's up to the supermarkets to not just talk about being the fresh food people, but get on with supporting in a very real and tangible way because farmers don't grow food for free. It's a business."

The two major supermarkets said while drought continued to be a major issue for suppliers, farmers and growers, they were yet to see any impact on their fresh food supply chains from the fires.

Mr Morrison said that as support funding ramped up: "These issues will be reconciled when the budget is brought down in May to assess the overall impact of where expenditure has come to on these issues between now and then."

"I've made it really clear that my focus is on delivering the recovery and the support and what is needed now, and paying the price and the costs that are needed to be met here and now and over... at least, the next two years."

ADDITIONAL REPORTING:
PATRICK HIGGINS,
IAN HIGGINS