

## Summary of CAR's reach in bushfire inquiries

January 2021

This table summarises the main findings of the various bushfire inquiries that CAR or members of CAR contributed to in 2020. It aims to identify the potential impact that CAR's submissions or evidence had on inquiry reports and in turn potential policy decisions. It will be the basis of an impact case study for CAR.

Inquiry	Date, link and leading Dep	CAR response	CAR recommendations/main msg	Inquiry findings aligning with CAR	Commentary
Health impacts of exposure to poor levels of air quality resulting from bushfires and drought	<ul style="list-style-type: none"> <li>13 March 2020, <a href="https://www.parliament.nsw.gov.au/committees/inquiries/Pages/inquiry-details.aspx?pk=2580#tab-members">https://www.parliament.nsw.gov.au/committees/inquiries/Pages/inquiry-details.aspx?pk=2580#tab-members</a>.</li> <li>NSW Portfolio Committee No. 2 Health impacts of exposure to poor levels of air quality resulting from bushfires and drought</li> </ul>	<p>Submission: <a href="https://8a9fccf2-785f-43a0-af75-f07582c6bf73.files.usr.com/ugd/d8be6e_72c28004aa3749b4a2dd5b6185d5c862.pdf">https://8a9fccf2-785f-43a0-af75-f07582c6bf73.files.usr.com/ugd/d8be6e_72c28004aa3749b4a2dd5b6185d5c862.pdf</a></p> <ul style="list-style-type: none"> <li>Guy and Fay attended hearing 12 June</li> <li>Fay attended on behalf of UTAS</li> </ul>	<ul style="list-style-type: none"> <li>Exposure to bushfire smoke is associated with increased illness and deaths. Bushfire smoke affects the respiratory, cardiovascular and immune systems and alters some metabolic functions</li> <li>Certain groups are more at risk than others. For example, bushfire smoke exacerbates respiratory conditions such as asthma and chronic obstructive pulmonary disease (COPD). Additional vulnerable groups include pregnant women, children, those with cardiovascular disease and the elderly</li> <li>The long-term effects of bushfire smoke are largely unknown. There is also limited research into the effects of long-term exposure to bushfire smoke (e.g. weeks and months versus days).</li> <li>The 2019-20 bushfire season saw several recommended strategies to minimise the community's exposure to bushfire smoke. All have limitations and further research is required to investigate the most suitable for 'real-world' applications</li> <li>A key strategy to reduce the community's exposure to bushfire smoke is to reduce the severity and frequency of bushfires. Tackling climate change is essential</li> <li>CAR is proposing a comprehensive suite of research work which will address many of the questions proposed in the committee's terms of reference</li> </ul> <p>In the body of the submission we also recommended:</p> <ul style="list-style-type: none"> <li>National consistency in air quality reporting to improve public awareness and emphasis on PM2.5 instead of AQI</li> </ul>	<ul style="list-style-type: none"> <li>Report released 16<sup>th</sup> September 2020</li> <li><a href="https://www.parliament.nsw.gov.au/lcdocs/inquiries/2580/Report%20no%2054%20-%20PC%20-%20Health%20impacts%20of%20poor%20air%20quality.pdf">https://www.parliament.nsw.gov.au/lcdocs/inquiries/2580/Report%20no%2054%20-%20PC%20-%20Health%20impacts%20of%20poor%20air%20quality.pdf</a></li> </ul> <p>Recommendations:</p> <p><b>Recommendation 1</b> That the NSW Government continue to <b>expand its Air Quality Monitoring Network</b>, and consider:</p> <ul style="list-style-type: none"> <li>the placement of additional permanent monitoring sensors in locations known to have emission producing industries and those likely to experience air pollution events, including Lake Macquarie and Lithgow</li> <li>the enhanced use of mobile sensors, including unmanned aerial vehicles, that can be rapidly deployed and relocated as required</li> <li>the use of low cost sensors if necessary, in order to ensure the measurement of air quality in as many localities as possible.</li> </ul> <p><b>Recommendation 2</b> That the NSW Government work with the Australian Nuclear Science and Technology Organisation (ANSTO) to expand the sampling of particulate matter in the air statewide.</p> <p><b>Recommendation 3</b> That the NSW Government prioritise working with other jurisdictions to achieve <b>nationally consistent air quality measurement and reporting, including ensuring that PM2.5 is reported separately and hourly.</b></p> <p><b>Recommendation 4</b> That the NSW Government commission a review on <b>how effective air quality information and health advice is communicated to and comprehended by the public</b>, with the review and any findings to be published.</p> <p><b>Recommendation 5</b></p>	<ul style="list-style-type: none"> <li>Government response due <b>16 March 2021</b>. Will be emailed to CAR inbox</li> <li>CAR's <b>input mentioned substantially in report -CAR specifically quoted in report 36 times (mainly re health impacts) including both referencing statements and quoting straight from our submission</b></li> <li><b>Guy</b> (from hearings) was <b>quoted 12 times</b> and <b>Fay 26 times</b></li> <li>Recommendation <b>3 ,4 and 10</b> strongly align with our submission input</li> <li><b>Recommendation 1</b> (low costs sensors) aligns with Guy's commentary in hearing -see p 29 of inquiry report and Fay's commentary p23.</li> <li><b>Recommendation 4 and 8</b> fits in with Guy's commentary -see p38</li> <li><b>Recommendation 10</b> (more research) aligns with Fay's commentary p74</li> <li><b>Nico and Fay's paper</b> (Unprecedented smoke-related health burden associated with the 2019–20 bushfires in eastern Australia', ) was quoted on p6 and p64</li> </ul>

				<p>That the NSW Government develop an <b>air-smart public education campaign</b>, and identify and implement other strategies that will enhance public awareness and education in relation to managing and interpreting the health risks associated with exposure to poor air quality.</p> <p><b>Recommendation 6</b> That the NSW Government provide additional resources to ensure that the <b>air-smart public education</b> campaign is widely advertised, particularly to vulnerable and at-risk groups.</p> <p><b>Recommendation 7</b> That SafeWork NSW engage with Unions NSW, unions, employers and other stakeholders to <b>identify and develop policy and regulatory reforms that will improve the protection of workers</b> from the harmful health effects of being exposed to poor air quality. In completing such work consultation will take place with <b>medical and health experts, including thoracic specialists</b>.</p> <p><b>Recommendation 8</b> That all NSW Government departments and agencies with a role in responding to bushfire events continue to develop and implement strategies to coordinate, collaborate and communicate more effectively on the management of air quality, to ensure optimal planning for and responses during future bushfire events.</p> <p><b>Recommendation 9</b> That the Department of Planning, Industry and Environment ensure that it completes and releases the Clean Air for NSW Strategy by early 2021. Further, that the strategy:</p> <ul style="list-style-type: none"> <li>• incorporate a strong framework for regulation of air pollution from industry, vehicles and wood heaters</li> <li>• link to a comprehensive plan for air quality monitoring across the state</li> <li>• be supported by adequate resourcing of the agency responsible for implementation.</li> </ul> <p><b>Recommendation 10</b> That the NSW Government support <b>data collection and research on air quality in general, and in particular, the health effects of poor air quality and the most effective ways to mitigate those effects</b>.</p>	
NSW Independent bushfire enquiry	<ul style="list-style-type: none"> <li>• 27 March, <a href="https://www.nsw.gov.au/improving-nsw/projects-and-">https://www.nsw.gov.au/improving-nsw/projects-and-</a></li> </ul>	Submission: <a href="https://8a9fccf2-785f-43a0-af75-f07582c6bf73.files.usr.com/ugd/d8be">https://8a9fccf2-785f-43a0-af75-f07582c6bf73.files.usr.com/ugd/d8be</a>	<ul style="list-style-type: none"> <li>• The indirect health effects of bushfires on Australians are just as important as the direct ones. Smoke from the 2019-20 bushfire season on the east coast is</li> </ul>	Report released 25 <sup>th</sup> August <a href="https://www.dpc.nsw.gov.au/assets/dpc-nsw-gov-au/publications/NSW-Bushfire-Inquiry-1630/Final-Report-of-the-NSW-Bushfire-Inquiry.pdf">https://www.dpc.nsw.gov.au/assets/dpc-nsw-gov-au/publications/NSW-Bushfire-Inquiry-1630/Final-Report-of-the-NSW-Bushfire-Inquiry.pdf</a>	<ul style="list-style-type: none"> <li>• Recommendations accepted by NSW gov 'in principle'</li> </ul>

	<p>initiatives/make-a-submission-to-the-bushfire-inquiry/</p> <ul style="list-style-type: none"> <li>NSW premier</li> </ul>	<p><a href="#">6e_7a7712c13b6b4adf9aeeb3ac442709cd.pdf</a></p>	<p>estimated to have resulted in 400 deaths and over 3,000 hospital admissions for respiratory and cardiovascular conditions.</p> <ul style="list-style-type: none"> <li>Climate change will lead to an increase in fire risk around the world. Tackling climate change is essential to reduce the frequency and ferocity of bushfires.</li> <li>The short-term health impacts of bushfire smoke are wide-ranging and lead to increased morbidity and mortality. The long-term impacts of exposure to bushfire smoke are unclear</li> <li>Australian houses are typically leaky to outdoor smoke and building standards may need to change</li> <li>The effect of bushfire smoke on the health and safety of firefighters as first respondents needs to be further investigated</li> <li>Public communication and advice systems around air quality and public health advice should be improved</li> </ul>	<p>Main recommendations aligning with our work:</p> <p><b>Recommendation 34</b> That, in order to capture and understand the impacts of bush fire smoke better, Government invest in operational air quality forecasting and alert systems, and <b>public health research</b> and policy development. This would involve investment to:</p> <ul style="list-style-type: none"> <li>develop a comprehensive system of forecasting and alerts for air quality incidents and all pollutants of concern, including but not limited to bush fire smoke, ozone and dust, and which is ideally nationally consistent</li> <li><b>investigate further the health impacts of bush fire smoke, based on improved data collection and including research on the long-term health impacts of poor air quality as a result of sustained exposure to severe bush fire smoke, particularly for vulnerable and at-risk segments of the community (children, elderly, firefighters, etc).</b></li> </ul> <p><b>Recommendation 35</b> That, in order to improve the provision of evidence-based public health messaging about air quality during bush fire events, Government develop a <b>public education campaign</b> and supporting systems before the next bush fire season. This should include:</p> <ul style="list-style-type: none"> <li>a <b>public education campaign (like sun exposure)</b>, to help people make their own decisions about exposure to bush fire smoke</li> <li>tailored messaging to target: <ul style="list-style-type: none"> <li>smoke-vulnerable cohorts of the community</li> <li>general practitioners, particularly in rural and regional areas, so they can advise patients with relevant, susceptible comorbidities</li> <li>employers, to support development of appropriate workplace health and safety guidance for outdoor workers</li> </ul> </li> <li>an <b>improved air quality alert system such as an enhanced Air Rater app.</b></li> </ul>	<ul style="list-style-type: none"> <li>Report out 25th August. <b>CAR referenced only 3 times</b> (but for our submission to the health impacts inquiry -above-rather than this inquiry). P233, p238</li> <li>This sentence pretty much copied verbatim from our above submission but not referenced as such <i>“In the 2019-20 bush fire season, communities did not have adequate access to information and/or received messaging which was inconsistent and not sufficiently detailed or nuanced for different community groups”</i> p237</li> <li>Re health impacts, <b>Fay quoted 5 times</b> (mainly re evidence of health impacts of bushfire smoke)</li> <li>Mention of joint <b>Dep Health + CAR bushfire smoke project</b> -p233</li> <li><b>Recommendations 34 and 35</b> align with CAR's submission (this one and the above submission which seems they mainly relied on)- see p233</li> <li>Josh's paper (Health burden associated with fire smoke in Sydney, 2001–2013 ) quoted on p231</li> </ul>
<p>Royal Commission into bushfires</p>	<ul style="list-style-type: none"> <li>17 April, <a href="#">Royal Commission into National Natural Disaster Arrangements   Royal Commission into National Natural Disaster Arrangements</a></li> <li>Royal Commission</li> </ul>	<p>Submission: <a href="https://8a9fccf2-785f-43a0-af75-f07582c6bf73.files.usr.com/ugd/d8be6e_f9cf8a0d49884">https://8a9fccf2-785f-43a0-af75-f07582c6bf73.files.usr.com/ugd/d8be6e_f9cf8a0d49884</a></p>	<ul style="list-style-type: none"> <li>The indirect health effects of bushfires on the community are significant. Smoke from the 2019-20 bushfire season on the east coast is estimated to have resulted in over 400 premature deaths and over 3,000 hospital</li> </ul>	<p>Report released 30 October <a href="#">The Royal Commission into National Natural Disaster Arrangements Report   Royal Commission into National Natural Disaster Arrangements</a></p> <p>Main recommendations aligning with our work:</p>	<ul style="list-style-type: none"> <li><b>CAR mentioned once</b> (p316) re removal of AQI in chapter on air quality (Chapter 14).</li> <li><b>Recommendation 14.1</b> fits in with our submission on nationally</li> </ul>

		<a href="#">aa099ca714730776b74.pdf</a> <ul style="list-style-type: none"> <li>Fay provided witness statement 23 May 2020 (on behalf of UTAS and Dep Health)</li> </ul>	admissions for respiratory and cardiovascular conditions <ul style="list-style-type: none"> <li>The short-term health impacts of bushfire smoke are wide-ranging and lead to increased illness and death. The long-term impacts of exposure to bushfire smoke are unclear</li> <li>Clear air quality information and public health advice should now be a focus to prepare for the 2020-21 bushfire season</li> <li>Tackling climate change is essential to reduce the frequency and ferocity of bushfires and in turn protect the health of our communities</li> </ul>	<b>Recommendation 14.1</b> <b>Nationally consistent air quality information, health advice and interventions</b> Australian, state and territory governments should: <ol style="list-style-type: none"> <li>develop close to <b>real-time, nationally consistent air quality information, including consistent categorisation and public health advice</b></li> <li>greater <b>community education and guidance</b>, and</li> <li>targeted <b>health advice</b> to vulnerable groups.</li> </ol>	consistent reporting and public education. Also fits in with what we provided to the commission in the later “Royal Commission Issues paper” see below <ul style="list-style-type: none"> <li>Fay quoted-from witness statement- <b>approx 26 times</b> (all for Chapter 14 on air quality)</li> <li><b>Nico and Fay’s paper quoted</b> on p313</li> </ul>
Royal Commission Issues paper	<ul style="list-style-type: none"> <li>26<sup>th</sup> June</li> <li>Not publicly available- by invitation call out</li> <li>Royal Commission</li> </ul>	Submission <a href="https://8a9fccf2-785f-43a0-af75-f07582c6bf73.files.usr.com/ugd/d8be6e_e7669fbf786b478ab24eb3b149cb502a.pdf">https://8a9fccf2-785f-43a0-af75-f07582c6bf73.files.usr.com/ugd/d8be6e_e7669fbf786b478ab24eb3b149cb502a.pdf</a>	<ol style="list-style-type: none"> <li>Standardise reporting of air quality by adhering to set reporting requirements:             <ul style="list-style-type: none"> <li>Negotiated across jurisdictions through cross governmental bodies with inclusion of experts in air pollution, bushfires and public health research translation.</li> <li>Reporting requirements should include:                 <ul style="list-style-type: none"> <li>Real-time (minimum of hourly) data</li> <li>Replacement of AQI with concentrations                     <ul style="list-style-type: none"> <li>Standardisation of ‘dangerous’ and ‘hazardous’ categories</li> </ul> </li> <li>Accessibility</li> <li>Visual, dashboard display</li> <li>Linked to public health messaging</li> <li>Consolidated to one website</li> </ul> </li> </ul> </li> <li>Improve public health messaging to be consistent and accessible:             <ul style="list-style-type: none"> <li>Public education campaign on air quality</li> <li>Research on effective public health communication during bushfire events and effective interventions</li> </ul> </li> <li>Prioritise research in the following areas regarding bushfire smoke             <ol style="list-style-type: none"> <li>Exposure</li> <li>Short-term effects</li> <li>Long-term effects</li> <li>Toxicological effects</li> <li>Interventions</li> <li>Public health response</li> </ol> </li> </ol>	Not public so public report not available- findings likely drove content of Royal Commission report above	Recommendation 14.1 and Chapter 14 in Royal Commission report above reflect much of what we advocated for in special issues paper even though we were only quoted once.  It is likely that content like ours influenced the chapter and recommendations (e.g. they say things like ‘we heard from many submissions that.....’ without specifically identifying them)
Inquiry into the 2019-20 Victorian Fire Season	<ul style="list-style-type: none"> <li>15 April</li> <li><a href="https://www.igem.vic.gov.au/vicfires-inquiry">https://www.igem.vic.gov.au/vicfires-inquiry</a></li> <li>Inspector General for Emergency Management</li> </ul>	Submission: <a href="https://8a9fccf2-785f-43a0-af75-f07582c6bf73.files.usr.com/ugd/d8be">https://8a9fccf2-785f-43a0-af75-f07582c6bf73.files.usr.com/ugd/d8be</a>	<ul style="list-style-type: none"> <li>The indirect health effects of bushfires on the community are significant. Smoke from the 2019-20 bushfire season on the east coast is estimated to have resulted in over 400 premature deaths</li> </ul>	Phase 1 report out 31 July 2021- “Phase 1 considers preparedness for and response to the events that occurred over the 2019–20 fire season of which this is the resulting report; Phase 2 will consider the progress and effectiveness of	<ul style="list-style-type: none"> <li><b>Nico and Fay’s paper quoted</b> on p274</li> <li>No other content related to smoke and health – maybe Phase 2 report due out later in the year?</li> </ul>

		6e_4298eabbed314f0d87261385d535070b.pdf	<p>and over 3,000 hospital admissions for respiratory and cardiovascular conditions</p> <ul style="list-style-type: none"> <li>• The short-term health impacts of bushfire smoke are wide-ranging and lead to increased illness and death. The long-term impacts of exposure to bushfire smoke are unclear</li> <li>• Clear air quality information and public health advice should now be a focus to prepare for the 2020-21 bushfire season</li> <li>• Tackling climate change is essential to reduce the frequency and ferocity of bushfires and in turn protect the health of our communities</li> </ul>	<p>Victoria's immediate relief and recovery arrangements with the final report to be delivered by 30 June 2021."</p> <p><a href="https://www.igem.vic.gov.au/sites/default/files/embridge_cache/emshare/original/public/users/202009/10/c2247f0cc/Inquiry%20into%20the%202019-20%20Victorian%20Fire%20Season.pdf">https://www.igem.vic.gov.au/sites/default/files/embridge_cache/emshare/original/public/users/202009/10/c2247f0cc/Inquiry%20into%20the%202019-20%20Victorian%20Fire%20Season.pdf</a></p> <p><b>Did not have any recommendations or content related to health and smoke</b></p>	
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