Bushfire Resilience Inc. Webinar 5 2022. Panel Session

Understand your bushfire risk

Chair: Malcolm Hackett OAM

Panel members: Dr Kevin Tolhurst AM

Dr Justin Leonard

Dr Ian Bennetts

Jeff Emmerton

Chair

I'd like to welcome Jeff Emmerton who's going to join Kevin, Justin and Ian for our panel discussion.

Going back to where you started Kevin. Knowing our country, knowing where we live and not just looking from the backdoor is the takeaway message I got.

I need to do more in my piece of country to understand the threats around me. I thought you've made that clear.

Does anyone else want to comment on what they took out of that theme of knowing your country?

Justin Leonard

That's fundamental to getting a sense of understanding. You have to be connected to what's happening around you, how that ebbs and flows through the seasons and how it translates to your own risk. It's really hard to have any conversation at all unless that's established as the basis of everyone's understanding.

Kevin Tolhurst

One of my experiences from Ash Wednesday in 1983: the people of Marysville were quite concerned they might be impacted by the fire. And at the time we said "look the fire is not going to reach as far as Marysville" under the conditions that were prevailing, and it didn't. But there was a lot of smoke and people were quite concerned about it at the time. And then when it came to 2009 I think Marysville had almost felt a bit complacent because the previous fire didn't reach them. Often there's an expectation that history will continue to repeat itself. But the reality was it was quite a different set of conditions.

People in Marysville didn't think Marysville was all that fire prone because it was down in a valley. And yet we saw because of the scale of the fire and the nature of the terrain, some of those places in valleys were in fact some of the most fire prone areas, which is something that doesn't come out when you just look at a local assessment of a location. So, I think we've got to be quite careful looking at our landscape context as well as our local context. So that was something that struck me I guess from the 2009 fires in Victoria, and probably people in Tathra in New South Wales for example living on the coast thinking that they were fairly safe because they're on the coast, or Mallacoota for example. So not really appreciating how the surrounding area might play out in terms of the scale and the nature of the fire that might impact them.

Chair

Kevin you showed a slide of the road with the trees on each side. That happens to be the road that leads into Strathewen near where I live. You were 100% right, massive trees came down and blocked that road. So you can be thinking about the wider landscape and then forget about some of the specifics. What are the things close by that are going to have an immediate and catastrophic effect?

Kevin Tolhurst

I guess even finer scale, one of the things that Ian was talking about was having areas where embers collect and using his blower to blow leaves off. If you've got leaves and material collecting in gutters or in corners around your house that's exactly the same spot all the embers are going to land as well. So, you get a bit of forewarning in a sense by just seeing where leaves and bark and twigs normally collect. The same thing is going to happen with embers when you've got ember filled air. I think some of the points that Ian was making can be visualized just from normal experience if you like as well, just put embers into the equation.

Chair

Jeff are there any comments you'd like to add to that about the house construction and risks associated?

Jeff Emmerton

As Ian alluded to the Bushfire Building Council of Australia are currently engaged by the Federal Government to build an app based on some of the modelling that Ian described. And of course, also relying on the datasets to give us the perspective of how dangerous the environment is. That should be a great tool for general home users to use to get at least some insights into their level of risk. Also we've used the term hardening about the home but I think more recently we're using the term resilience - resilience against bushfires in particular in this topic but against other changes that are happening.

And what we're hoping is that people will use the app and they'll end up getting some targeted recommendations of what they need to do to make their home potentially more resilient. Ian has said that level of risk, whilst not perfectly accurate, does give you relativity. "What is my home currently like? And if I made these changes how much better could I potentially make the chance of surviving a bushfire event and predominantly an ember attack?"

Chair

When would we anticipate getting access to those tools?

Jeff Emmerton

We have a hard deadline of March 2023. The tool is currently in trial. What we're doing right now is comparing the expert assessment which is done on Excel spreadsheets and a bit of back of envelope calculations using the model inputs and then comparing that to what we're getting by using the home user app once we get our standard results working for us. We've done around 30 homes predominantly in the proactive local government area supporting us. We're also looking to do a number of homes from volunteers in Victoria as well in the coming months to validate the model and to validate the app is usable by a general home user as opposed to relying on experts.

Chair

That sounds incredibly useful to me. If you've got a pretty good idea of what your risk might be you have to work out well which things am I going to work on first? Or what will be the triggers to take some action in particular circumstances? Do you have any comments on that Kevin?

Kevin Tolhurst

One of the things that is interesting here is when you're doing the assessment. You really need to be thinking about what the fuels and the area looks like in the middle of a drought. So doing an assessment at the moment when you've got green grass and water everywhere isn't going to give you a good reflection on what the bushfire risk really is. You need to think about what this might look like in a drought.

It's interesting also a number of our big fire events have been preceded by other unusual weather events. In 2009 we basically had five days of heat wave activity which actually burnt off a lot of green vegetation. And in Ash Wednesday in 1983 we had really severe frosts which burned off a lot of vegetation. We've had preceding storm damage where we get a lot of woody material and branch material down on the ground. There's a lot of other conditions. When the five-star

assessment's being made you need to be thinking about how bad the fuels might look in this landscape.

So that takes a little bit of getting your head around and if you've only lived in an area for perhaps five or 10 years you may not have experienced that range of conditions. I'd be saying to people try to take a longer view of what might this look like under the worst conditions that a bushfire might occur in rather than necessarily what's a more typical or current.

Chair

If people talk to one another you'll find people who've lived there for a fair while or they understand a bit more about their landscape or even the history. And if you have some of those neighbourhood talks you'll get a greater understanding of what it might be like during a drought and so on.

Justin, the tool you talked about sounds like there's the chance of getting a tool which is going to tell us across the whole of Australia what the risks of particular locations are. And then if we combine that with the building council tool we've got one that's going to be able to tell us something about the nature of our risks related on the sort of building and the circumstances of it. Is that how you see those things coming together so ordinary people can make decisions?

Justin Leonard

Yes that's right. To be clear, the mapping and systems will provide the fire severity which we call the hazard. It qualifies the hazard and that becomes a key input into the star rating system that then looks to see will the adequacy of the structure if it has the intensity the ember attack delivers. What you can't see in these national mapping products is the detail around the structures and specifics around house design. That becomes part of the localized assessment. But at least you can bring in some of the key aspects which is how nasty the weather gets and how does that translate to a big nasty fire if it gets proximal to the structure? So, what have I got to put up with in that larger context? And then we can get on with the smaller detail, responding to it and then looking for those small vulnerabilities and details that I think Kevin answered very well, and Ian covered in the house design context.

Chair

Is there anything we haven't talked about that anyone would want to raise?

Kevin Tolhurst

One of the things I think we need to think about is acceptable risk and that's a personal thing that we need to consider. At what point do we make decisions to leave the district or move out on a day of extreme fire danger, or what fire danger rating am I going to use as my trigger for taking certain actions and so on. So there's a lot of personalizing that has to go on. All these tools that we're been talking about provide this general picture but then no one can tell us exactly what our level of vulnerability and our acceptance of risk is.

We need to be looking realistically at those risks and dealing with them so that we're not hit by a surprise in terms of the impact and therefore, we become a lot more vulnerable and less resilient to a bushfire event. So really working through the process. And I guess people who have joined this webinar are already doing that thinking process but we really need more people in the community actively thinking about these things. Working out what their triggers are and at what point will they make critical decisions based on the amount of risk they're prepared to take and understand that they're exposing themselves to.