

## **Submission to the Senate Extreme Weather Inquiry**

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Thankyou for the opportunity to make a submission on this issue of great concern.

### **Introduction**

I have lived at Charleys Forest, north-east of Braidwood, since early 1986, and in SE NSW since 1978. During that time and especially in the last 27 years, I have closely observed the weather, for a variety of reasons. The primary reason is related to day-to-day living and the growing of food for personal use, but I have also had cause to take note of conditions in the wider region in my role as local government councillor for eight and a quarter years and candidate in the state and federal electorates of Monaro and Eden-Monaro on several occasions.

My location has its own micro-climate, due to the proximity of the Budawang Range to the east. The mountains play a role in modifying the climate and this has always meant that temperatures are somewhat lower in winter than they are in Braidwood, 27km south-west, and the rainfall is generally also higher. But this is changing, and it was probably in 2003 during the Canberra bushfires that marked the beginning of this change.

While some of this submission refers to weather in the wider region, most of the observations relate to the micro-climate of Charleys Forest.

### **Wind + Heat**

When I first moved here in 1986 from a rural area outside Queanbeyan, my experience and that of those who had lived here for generations before me was that the strongest winds occurred in spring and autumn. In the last couple of years but in particular this summer, we have experienced some of the most ferocious winds in memory. In the past twelve months there has been evidence of very unusual, localised willy-willy type events in close proximity (five km away) where limbs and whole trees have been brought down in a very localised area. I have also seen evidence of very similar events along the Kings Highway near Kowen Forest, and on the Braidwood Road to Goulburn, south of Tarago.

Along with the wind has come much higher temperatures than we are used to. It was once unusual for it to be hotter than the low to mid 30s at any time in summer in this micro-climate, but this summer we have seen temperatures go well beyond that. And so it has been the wind together with the heat this summer that has changed the landscape and our attitude to living in it. In the past we have felt reasonably equipped to fight fires and have done so on a couple of occasions. But had similar fires started in the last fortnight, there is no possibility that we would have been able to defend any of the structures that we have created here, and nor would we have been able to escape. This has meant that for the first time ever, we have felt extremely unsafe living here and as a result felt we had no option but to leave during the "catastrophic" period, attempting to be reconciled to the fact that if any of the fires in the region spread to the extent that they had in other places, we would lose everything.

As I finalise this submission, temperatures in Sydney and elsewhere are breaking past records and more fires are breaking out around the country.

### **Frosts**

It was common knowledge that the only month you would not experience a frost here was February, but as of the last year, we can no longer say that, and have observed frosts in every month of the year now.

## **Snow**

Snow often used to fall once every year or two years in August. That happens less frequently now, but lately we have seen snow or sleet in late spring or early summer.

## **Storms**

It is not uncommon for thunder and lightning to accompany most storms now, whereas in the past, it was more unusual for this to happen. On a number of occasions in the recent past we have witnessed rain, hail and snow during the one storm.

## **Rainfall**

One could always expect to receive most of the annual rainfall in winter, but the opposite has been the case during the two summers preceding this one, with La Nina probably largely responsible for moderating conditions. This could be one beneficial effect of climate change, however thunder and lightning storms are not always accompanied by rain, evidenced to a greater degree than ever this summer, so in those circumstances the fire risk will be even greater.

## **Preparedness**

As mentioned, we no longer feel that we could do much to prepare for the sorts of fire-storms that are becoming frighteningly common. Whereas once we planted trees, we now feel that we need to clear them, because although this area is moister than some in the region, trees growing anywhere near buildings now pose a serious threat. This is somewhat of a paradox given that the trees are so important for retaining moisture in the soil and providing habitat for birds and other wildlife, as well as assisting in air purification and mitigating against climate change, and clearing them will result in more opportunities for wind tunnels, drying out the landscape even further.

These conditions have put huge pressure on local emergency bushfire brigades. I am a member of my local brigade, but if I need to evacuate because of catastrophic conditions as I did last week, I am of no use whatsoever to the brigade, and this situation is not uncommon amongst other members living in areas like mine. The fact that state governments are expecting brigades to do more with less and local governments are often unable to meet the shortfalls does not bode well for the ability of communities in future to deal with fire events. In any case, had a fire started in this area in the catastrophic conditions of last week, there would simply not have been enough trucks, or people, to extinguish more than one fire in any one place at any one time in the locality, and doing so would have put our volunteers at huge risk to themselves.

In short, the impacts of climate trends mean that we need to rethink our whole existence in what once felt like a safe, cool-ish bushland area, and reconcile ourselves to the fact that if the area is unlucky enough to be struck by fire, we will inevitably lose everything as a result of the intensity of fire-storms in this new, climate-changed world.

## **Industry**

As was demonstrated in the 2003 Canberra bushfires, widespread pine plantations increase the threat to life and property due to their high flammability. In Eden-Monaro there are many such plantations, and many pines used in wind-breaks, and any fire will completely destroy them just as they did in the ACT. With extreme conditions such as the ones we are experiencing and will experience on a more and more regular basis, we need to rethink our attitude to where and even if we plant pine plantations. This is unfortunate to say the least, given the role they can play in building and pulp production.

Agricultural activities take place in much of this part of Palerang shire. The soil is not suited to crop-growing, so much of the production is related to sheep and cattle, though there are various boutique activities that have begun to spring up. As has been the case with other areas affected by

fire, the impacts on all the industries in this area would be devastating.

### **Biodiversity**

A good indication of changing climate/seasons is the behaviour of plants and animals. Flora and fauna biodiversity is rich in this area, but we are noticing plants flowering and birds visiting at odd times. For example, the Monga waratah has always flowered earlier in spring, but this year it flowered in November for the first time. Swallows are also visible for most of the year, whereas not long ago they would disappear over winter to return in spring.

### **Where to from here?**

While the terms of reference to this Inquiry most likely do not extend to opinions about what is causing these extreme weather events, I am taking the opportunity to put forward some thoughts.

It has been evident to thinking, caring Australians and global citizens in general that human-induced climate change is most likely the reason for the extreme weather events that we have been seeing around the world. Yet governments have consistently been resistant to change and clearly remain in the thrall of the fossil-fuel industry.

We have gone way beyond the time when we can hesitate about what must be done. It is likely that it is already too late. But whether or not that is the case, it is the responsibility of governments to act NOW to address climate change in a real and effective way. Governments must put an end to fossil fuel subsidies and stop going soft on mining corporations who are not only contributing to massive greenhouse gas emissions, but destroying valuable farmland and depleting vital water supplies in the process. The Mineral Resources Rent Tax is completely inadequate as has been demonstrated by the way big profit-making corporations have avoided paying it. Governments need to rethink carbon trading. How are we addressing climate change when those countries who pollute are able to continue to do so by buying credits from those who do not? We need to stop carbon pollution fullstop.

Coal is currently the biggest villain in all this. We need to put an end to the exploitation of coal resources immediately. While we are already up there with the biggest carbon polluters as a result of burning coal here, Australian coal is contributing huge amounts to carbon pollution when it is burnt in other countries and Australian governments, state and federal, must recognise this. The cost of ending the coal industry will be dwarfed by the cost of not acting on climate change further down the track.

A big mind-shift is required, but if the political will is there, together with the right legislative instruments and the sort of leadership that will carry the general public, it is possible that we can do something to reverse some of the damage we have created to the Earth and its systems, its biodiversity and its peoples. With the knowledge that we have, it would be immoral in the extreme not to act immediately.

Catherine Moore  
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