

## **Submission to Senate Enquiry on Extreme Weather, trends and preparedness.**

I make this submission as a member of WATCH ( Wodonga Albury Towards Climate Health), and will focus on the issues which are most likely to affect the economic and social health of our region. This includes the valleys and mountains of the Upper Murray catchment, as well as the plains and irrigation areas of the associated areas of the Murray basin.

I would first like to make a general comment about the nature and objectives of the inquiry.

The Climate Commission focusses on ‘The Critical Decade’, with the next ten years as the make-or-break period for effective action. Such bodies must concentrate on programs for mitigation rather than adaptation as their *raison d’etre*, and so are loath to admit that – in many people’s view - the ‘Critical Decade’ has already passed. While this new inquiry is certainly important to have in view of the deteriorating climatic conditions, I think it should be acknowledged at the outset that it is ‘the enquiry we didn’t have to have’. Consequently also we should acknowledge the regrettable and reprehensible failure of our governments to take any effective action to mitigate climate change, and indeed to also pursue policies which have ensured that the rate and scale of this change continues to increase.

Neither is this merely an ‘apology’ to be later forgotten; as we plan and take action to try to adapt to extreme weather events and climatic instability, our job is made harder by the continued existence and expansion of emissions producing activities; a simple response to this paradoxical situation would surely be ‘producer pays’, where a major share of the cost of climate change adaptation is borne by those industries profiting at our expense and that of the environment on which we all depend. Today’s news that the main mining companies liable under the new mining tax have failed to pay ANY tax in the first six months of its operation illustrates how far we still have to go.

In view of this ongoing failure to restrain our emissions and the companies who are responsible for them, it now seems almost futile to talk about any local efforts to limit global emissions in a meaningful way. Recent changes in the Arctic suggest that a tipping point may have already been passed, and positive feedbacks may result in accelerating warming even if all global CO<sub>2</sub> emissions were to cease today. It is a huge irony that we are now consequently restricted to efforts to adapt to climate change – the very course advocated for years by the people who have fought against any controls on emissions, and have thereby been largely responsible for bringing us to this lamentable situation. Not only have these people – in government, business, and in the media – poured fuel on the fire by promoting and encouraging fossil fuel extraction and combustion; they have also worked against the expansion in use of renewable energy sources. In addition they have funded and promoted the corrupt cause of the so-called ‘sceptics’ such that Australia is fast becoming a bastion of climate change deniers even as its climate changes radically and attracts world wide attention.

So it is in this light that I make the following short submission on some of the possible changes and implications of extreme weather events in our region.

The effects of what appear to be climate changes have certainly been felt in our region in the last decade. Most notably, following some years of general drought, the Murray effectively dried up, with both major storages below 10% full. The complete absence of irrigation water had significant consequences for communities further down the Murray, and in some cases water deliveries were necessary for town supplies as well. Despite this being a long-record breaking drought, it proved not to be a sign of times to come in the short term; two years of well above average rainfall saw long-dry springs flowing again, and a return of some perennial pasture species like white clover which we had seen the last of in the nineties.

While these changes are dismissed by some farmers who see everything as cyclical, and accept the losses and gains they might incur, for others on the land the extreme variation is hard or impossible to cope with. Although perverse economic conditions have often been equally responsible, the years of drought forced many dairy farmers to sell up in areas without irrigation or where such water was no longer available. The return of a favourable climate for dairying however did not bring them back, even with the encouragement of better prices for their milk – such enterprises require long-term planning, and some predictability. And where finance is needed there is now an added problem of greater perceived risk.

Although severe droughts and floods have the most serious effects on agriculture, the less reported effects of ill-timed frosts, and periods of humid weather, can have disastrous effects on some crops, and both of these climatic effects may become more common. The effects are felt for instance by wine-growers, where a late frost kills the flowers; the same is true for wheat growers, who may also suffer huge losses from ‘unseasonal’ rain and humidity at harvest time.

While it would certainly be true that a continuation and exacerbation of the drought and heat of the mid 2000s would make ‘traditional’ agriculture difficult in our area, it is arguable that stability around any ‘norm’ is preferable to instability and chronic unpredictability.

We currently seem to be going through just such a period, where the short term predictions for this spring-summer period were of little use to anyone on the land trying to decide which strategy to follow, or what crop to sow. These predictions merely reflected what appears to be the global situation, where ocean currents and patterns of heat transfer are constantly changing. It is hard to see how this new ‘climate’ in our region may stabilise into any particular regime, such as ‘warmer and wetter’ or ‘hotter and drier’, or whether it may become chronically unstable. With accelerating changes in the Arctic currently affecting most of the Northern Hemisphere beyond the tropic, global instability and unpredictability look likely to follow.

On the basis merely of my own observations of weather over the last thirty years, the most notable pattern is of the huge influence of atmospheric and oceanic currents, and the consequent prevailing wind direction. The simplistic idea that global warming will bring us hotter and drier conditions is shown to be false by the experience of the last two years;

even though the average temperature may have followed the continuing upward trend, and the weather pattern itself was a result of high sea surface temperature in the Indian Ocean, the two wet and humid summers with no extreme heat were a remarkable change. The fall in electricity demand that accompanied this different weather illustrated another aspect of it, and was highlighted by the huge resurgence in demand with the recent heatwave, as people turned on their rusting air conditioners.

The increasing occurrence of extreme weather events has just been reported on in a survey by the Potsdam Institute, looking at 131 years of records over 12,000 sites across the globe. The fivefold increase in these record breakers cannot be dismissed or ignored any longer, and the predicted continuation of the trend should force us to dramatically expand our planning and research on the consequences.

This senate enquiry is a good and overdue beginning.

David Macilwain,