

Re: Federal Government's response to the drought, and the adequacy and appropriateness of policies and measures to support farmers, regional communities and the Australian economy

Droughts in Australia are not uncommon nor are they unexpected. However the severity of these droughts has been increasing in recent times. The cause of these increasing temperatures and lower rainfall patterns have been heavily studied by researchers. It is necessary for governments to act on the best scientific knowledge available to ensure we act smart and efficiently. There are a number of researchers who have studied the impacts of these events and provide recommendations to reduce the risks to a manageable level.

In specific reference to part f - preparedness for the current drought and the capacity of the Australian Government to prepare for future drought - i would like to draw the committees attention to the wealth of scientific knowledge on what I believe are significant factors involved.

All scientific evidence points to the importance of maintaining a strong biosphere of native vegetation. The maintenance and expansion of our native areas helps ensure a consistent water cycle throughout the country, improving rainfall patterns and sequestering carbon emissions. It is estimated that land clearing has significantly devastating effects on local biodiversity, soil erosion, land salinity and topsoil nutrient depletion. It is therefore summarised that the short term benefits of creating farmland for profit come at the long term sustainability of those same regions. There is a physical limit on how much land can be cleared for farming purposes before the cumulative negative consequences make that same land inhospitable and unsuitable for farming purposes.

"An organisation checked the impacts on climate extremes and droughts by analysing daily rainfall and surface temperature output from the Mark 3 GCM...Demonstrated an increase in the number of dry days (<1mm rainfall) and hot days (maximum temperature >35 °C), a decrease in daily rainfall intensity and cumulative rainfall on rain days, and an increase in duration of droughts under modified land-cover conditions. These changes were statistically significant for all years across eastern Australia and especially pronounced during strong El Niño events."

"The clearing of native vegetation has made recent Australian droughts hotter. Scientists applied the CSIRO Mark 3 climate model, satellite data and a supercomputer, and showed that 150 years of land clearing added significantly to the warming and drying of eastern Australia. "  
(<https://www.sciencedaily.com/releases/2007/10/071027180556.htm>)

It is of paramount importance to the longevity of Australian farmers that the government consider significantly boosting resources focussed on preserving and expanding native vegetation areas. It is estimated that over 90% of native vegetation and 50% of native rainforests have already been removed or cleared (<https://www.bushheritage.org.au/who-we-are/our-challenge/land-clearing>). It is of no surprise that we continue to experience record breaking

temperatures and droughts on a regular basis. From a scientific perspective record breaking events should reduce in frequency over time, unless the base conditions that influence them are getting worse.

There is almost nothing that the Australian government can do to have any lasting effect while we continue to clear the natural landscape. The Australian Government must make significant efforts to restore the natural biospheres if we want any chance at returning to 'normal' conditions. This is one of the greatest influencers in maintaining a healthy and viable industry in Australia, and the degradation of land for short term profits is having and will continue to have lasting long term negative impacts upon all rural communities.

The Australian government must make a serious commitment to restoring our natural biospheres. First and foremost we must significantly reduce the current land clearing rates of all states. Secondly we must follow the footsteps of many other countries such as India, Canda and Ireland and commit to many annual reforestation projects. We must be converting as much unused and unsuitable cleared land back to its natural state if we want any chance of lessening the impacts and longevity of future drought conditions. We must have a strong target, such as Indias pledge to have trees cover one-third of its land area, Canada's pledge to plant 2 billion trees, and Ireland pledging to plant 440 million trees.

For the good of all rural communities, we must protect and preserve as much of the natural country as possible.