

Standing Committee on the Environment and Energy
Department of the House of Representatives
PO Box 6021
Parliament House
Canberra ACT 2600

27 November 2020

Climate Change (National Framework for Adaptation and Mitigation) Bill 2020 and Climate Change (National Framework for Adaptation and Mitigation) (Consequential and Transitional Provisions) Bill 2020

Dear Mr Ted O'Brien and Committee Members,

Thank you for the opportunity to contribute to the parliamentary inquiry into the Climate Change Act.

We write on behalf of Veterinarians for Climate Action (VfCA), a national, not-for-profit, registered charity that advocates for action on climate change within and beyond our profession, on behalf of animals. The veterinary profession cares for animal health and welfare and public health; and delivers knowledge and practical support to those who own and look after animals, whether pets, livestock or wildlife. Veterinarians are scientists, accustomed to making evidence-based decisions and relying on published scientific findings; and understand that the science of climate change clearly indicates that this problem is anthropogenic, severe and urgent. Equally, veterinarians understand the importance of legislation in achieving outcomes: the work of many veterinarians in monitoring and sustaining the health and welfare of animals relies on good legislation. Climate change (global warming) is a demonstrable major threat to animal health and welfare as well as public health; therefore as veterinarians we are duty-bound to take whatever action new can to help limit it.

The impact of climate change on animals, people and the environment in Australia is already highly visible and well documented. Australia's climate has already warmed significantly since national records began in 1910, leading to an increase in the frequency of extreme heat events [1] as well as more severe drought, bushfire, and severe storms; and changing infectious disease patterns. VfCA strongly supports the Climate Change Act because Australia urgently needs practical and evidence-based legislation that offers a good chance of success in limiting climate change and its effects on our animals and people, and the Climate Change Act offers this.

Impacts of Climate Change on Animal Health

Climate change has a negative impact on the health and welfare of animals in various ways [2].

The direct stress of heat can seriously affect animals, with examples ranging from pets in inner cities to racehorses training on hot days to wildlife. As just one example, an extreme heatwave in far north Queensland, when temperatures were over 42°C, killed more than 23,000 spectacled flying foxes, equating to almost one in every three individual animals in the population [3].

The occurrence of any disease is determined, among other things, by climate conditions. Global warming will change those conditions leading to a change in the distribution pattern of diseases. Diseases carried and transmitted by vectors (for example mosquitoes, sandflies and ticks) are likely to be most affected [4]. One example in Australia is cattle tick and the diseases carried by these ticks. As the temperature increases the cattle tick's breeding range will extend further south leaving more cattle producers vulnerable to outbreaks in their herds. As another example, bats and flying foxes have long been regarded as significant hosts of emergent diseases [5], including COVID-19. These diseases often emerge as a result of habitat or ecosystem disruption, leading to increased contact between humans and animal reservoirs of pathogens. Experts in their field agree that climate change is a major factor in the loss of animal habitat around the world. The emergence of Hendra virus had a huge impact in Queensland and northern NSW, affecting horses as well as people.

Australia has always experienced bushfires regardless of climate change; but what is now well understood is that climate change sets the background conditions so that when fires occur, they are more severe and more difficult to control. This was well documented in the recent Emergency Leaders for Climate Action Australian Bushfire & Climate Plan, and the report of The Royal Commission into National Natural Disaster Arrangements. Approximately three billion vertebrate wild animals – mammals, reptiles, birds, and frogs – were killed or displaced, and an additional 80-100,000 livestock were killed, by the 2019-20 bushfires in Australia [6]. At least thirty-four people lost their lives. Climate change increased the risk of extreme weather that made the 2019-20 bushfires more likely by at least 30% and possibly more [7]

Likewise, droughts and floods are accepted in Australia as recurring events but more severe incidents of both are becoming more common in Australia. However, in the three years from January 2017 to the end of 2019, rainfall for much of Australia was greatly reduced, most severely in the northern Murray–Darling Basin. During a severe drought, livestock losses are inevitable. An increased frequency and severity of droughts can be expected as a consequence of climate change [8]. Conversely, in February 2019 an estimated 500,000 cattle were killed by widespread flooding in northern Queensland. This severe loss of animal life was accompanied by impacts on people and property in the area. The IPCC have reported that increased flood events can be expected as a consequence of climate change [8]

The Climate Change Act, by setting a net zero emissions target and practical measures to achieve that target, will ensure that Australia contributes a fair share to world efforts preventing further global warming with its catastrophic impact on the health of people and animals.

Impacts of Climate Change on Farming and Livestock Specifically

World population, currently at 7.8 billion, is estimated to grow to 10.9 billion over the next 80 years [10], and it is farmers who will be relied on in all countries to produce food and avoid widespread starvation and famines. The Australian Government and National Farmers Federation have a united vision for the agricultural industry in this country to exceed \$100 billion farm gate output by 2030 [11]. Farmers deserve strong government respect and support; but they are at the forefront of climate change impacts and measures like drought relief packages are only temporary bandages. Genuine government respect and support for farmers would entail serious efforts to address the root cause of cause of these problems – climate change. To date, our Federal Government has lacked a cohesive plan for limiting the severity of climate change, and the Climate Change Act would help greatly to address this.

However, business, including the food industry is now recognising that lack of action on climate change is already becoming more costly than taking action. In fact, there are significant business opportunities in working proactively on climate change. Whether legislated in Australia or not, the world economy will decarbonise. Delaying legislation on climate change causes confusion and uncertainty for our producers, but providing a clear legislative framework on this would support our growers both domestically and in the export market. Likewise, consumers will soon be expecting, if not demanding, that the production and supply of all food produce be delivered with net zero emissions. As an example, Woolworths, a major retailer of food in Australia, has committed to net-zero emissions by 2050 [12]. Our agricultural industry also depends on exports and, in the future, overseas markets are likely to demand carbon neutral produce or impose a carbon tax – disadvantaging our farmers if Australia does not bring its climate change standards in line with our trading partners.

The main cause of climate change is burning fossil fuels such as coal, gas and oil, releasing carbon dioxide (CO₂ or “carbon”), a major greenhouse gas into the air. However, another greenhouse gas, methane, produced by ruminant livestock accounts for 11% of total national greenhouse gas emissions in Australia [13]. Research into food additives or supplements to reduce methane emissions is underway in Australia [13] and elsewhere and must continue.

Although agriculture is a significant (although by far not the largest) contributor to greenhouse gas emissions, it is also a potential champion carbon champion. Carbon sequestration in the soil has huge potential to offset fossil fuel emissions. Soil carbon storage occurs naturally through photosynthesis of vegetation. The process can be enhanced by sustainable and regenerative agricultural practices such as low or no tillage, erosion control, composting and cover crops [14]. On a livestock farm, ruminants contribute manure as compost. The Australian Government should support the development of these practices across the country through awareness and education.

The Climate Change Act, requiring climate risk assessment and innovation, will open up the opportunity for Australian farmers to lead the world in the production of carbon neutral and even carbon negative food.

Supporting people in managing their carbon footprint

Through training and awareness, VfCA is enabling veterinarians to conduct their work more sustainably. Veterinarians, like all people, can look at their own carbon footprint and how to reduce it. However, climate change is such a pervasive and urgent problem that it should not be left to individual citizens to shoulder the burden. Governments must encourage and support this.

For example, recycling requires more controls over packaging materials and more efficient recycling procedures. Individual householders and businesses can install solar panels on the roof and introduce energy saving measures; but the government must support innovative technology, and production and distribution for all forms of renewable energy.

Transport is another major contributor to greenhouse gas emissions and there is much room for improvement in this area. In Australia, the media has reported that electric cars are still only 0.6% of new car sales (August 2020). In contrast, the United Kingdom is set to ban the sale of new diesel and petrol cars from 2030. The Australian government must lead the introduction of electric vehicles into this country and encourage their use through appropriate price incentives and widespread access to recharge points. Farm vehicles, tractors and all-terrain vehicles must be included with recharge points

on all farms. This is technically feasible without loss of function and should be actively encouraged by leaders.

Conclusion

There is every reason for the Australian Government to step up its action on climate change. Australia has already committed to climate action under the Climate Change Convention, Kyoto Protocol and Paris Agreement. United States President-Elect Joe Biden has said that he intends to rally the rest of the world to increase their climate targets and take further action to stop climate change. According to a recent poll [15], 80% of Australians are concerned about climate change, 83% support the closure of coal-fired power stations and 71% now think Australia should be a world leader on climate action. The technology to achieve this is feasible now, and the cost of transitioning is less than the cost of climate change. A transition to emissions reduction and a net-zero economy comes with great opportunities for Australian. Attention to justice in transitions is required, but the time for delay is over.

The Climate Change Act, by mandating emissions budgets, climate change risk assessments and the development of adaptation plans, will ensure the Australian Government, on behalf of this nation, becomes a leader in managing climate change and saving the lives of people and animals.

The Climate Change Act is essential.

We thank the Committee for your attention and would be happy to discuss any of these matters further.

Sincerely,

Veterinarians for Climate Action

References

1. CSIRO *State of the climate 2020*
2. Lacetera N (2019) *Impact of climate change on animal health and welfare*. Animal Frontiers 9:26–31. doi:10.1093/af/vfy030.
3. The Lab of Animal Ecology, *The Flying-Fox Heat Stress Forecaster*
4. Campbell-Lendrum, Diarmid et al. “Climate change and vector-borne diseases: what are the implications for public health research and policy?.” *Philosophical transactions of the Royal Society of London. Series B, Biological sciences* vol. 370,1665 (2015): 20130552. doi:10.1098/rstb.2013.0552
5. Calisher, Charles H et al. “Bats: important reservoir hosts of emerging viruses.” *Clinical microbiology reviews* vol. 19,3 (2006): 531-45. doi:10.1128/CMR.00017-06
6. WWF report 3 billion animals impacted by Australia’s bushfire crisis
7. van Oldenborgh et al, 2020, Attribution of the Australian bushfire risk to anthropogenic climate change (waiting publication by the journal NHESS)
8. IPCC <https://www.ipcc.ch/>
9. United Nations *Impacts of climate change on coral reefs and the marine environment*.
10. United Nations Population Division Report of 2019
11. National Farmers Federation Roadmap for \$100 billion output

12. Woolworths Group Media release Friday, 25 September 2020
13. Government of Western Australia Government, Department of Primary Industries and Regional Development Carbon Farming: reducing methane emissions from cattle using feed additives.
14. Ontl, T. A. & Schulte, L. A. (2012) Soil Carbon Storage *Nature Education Knowledge* 3(10):35
15. Ipsos Australians overwhelmingly support Government commitments to emissions reductions