

Submission  
No 459

**INQUIRY INTO HEALTH OUTCOMES AND ACCESS TO  
HEALTH AND HOSPITAL SERVICES IN RURAL,  
REGIONAL AND REMOTE NEW SOUTH WALES**

**Organisation:** Doctors for the Environment Australia

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# Submission to Legislative Council Inquiry - Health outcomes and access to health and hospital services in rural, regional and remote New South Wales

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Doctors for the Environment (DEA) is a non-profit national organisation of Australian doctors and medical students with an emphasis on preserving health and wellbeing with respect to the environment. It is our stance that human health is indivisible from environmental health.

As we write in January 2021, we can reflect on the events of recent years to see that the interaction between the environment and people has a more critical health impact than ever. In this submission we will describe the environmental determinants of the health of rural, regional and remote New South Wales residents.

## Climate Change

The Earth's climate is changed due to the effect of anthropogenic greenhouse gas emissions over the last two centuries. The extent and projections for future climate change have been extensively reported over the last 3 decades by the Intergovernmental Panel on Climate Change<sup>1</sup>. The most up to date evidence on the health impacts of climate change have been documented in the Lancet Countdown Report which was published in January 2021<sup>2</sup>.

All ongoing greenhouse gas emissions increase the rate and severity of climate change impacts on the living environment and human health.

**Recommendation 1:** *The New South Wales State Government should urgently act to reduce the exposure of all residents to rising greenhouse gas emissions from Scope 1, 2 and 3 sources.*

Specific effects of climate change with respect to the health of regional New South Wales residents are considered below.

### a. Temperature

Rising surface temperatures create conditions that increase mortality on a population level, with the human body less able to continue essential functions as the temperature rises. Population studies have noted a correlation between rising temperatures and mortality<sup>3</sup>. These effects are more significant in people over the age of 65 and those who may be experiencing other conditions such as dehydration or severe infection. Higher rates of acute kidney failure resulting from these heat conditions are anticipated. The effect of heat stress will become more significant as more very hot days are to be expected with overall increases in global temperatures.

Residents of regional New South Wales may find themselves vulnerable to heat events for multiple reasons compared to their urban counterparts. To some extent, there is the meteorological effect of the varying climates within the state, however vulnerability to heat wave also depends on the ability of residents to access cool infrastructure. In addition, there are occupational factors that must be considered in regional and rural residents, such as the impact of heat waves on the health and safety of agricultural workers. Occupational heat strain is a recognised risk factor for chronic disease including chronic kidney injury<sup>4</sup>.

Chronic disease affected by heatwaves will be exaggerated in the regional population due to the background difficulties in accessing health services, as well as specific risks in populations such as Aboriginal communities that experience high rates of chronic kidney disease.

A potential model for addressing health needs related to heat waves can be seen in the “Heat Health Plan for Victoria” developed by the Victorian Department of Health and Human Services<sup>5</sup>.

**Recommendation 2:** *In conjunction with local councils, the New South Wales State Government should develop and implement a Heat Wave Management Plan addressing local health needs during a heat wave at the local level, across the state.*

#### **b. Natural disaster**

The likelihood of extreme weather events and natural disasters such as bushfires, cyclones are increased by current patterns of climate change. Events previously unknown to NSW such as tornados may occur due to shifting climate patterns. These events have direct health risks due to the danger of death and injury from the initial disaster, but also have public health consequences such as respiratory and cardiac disease following a bushfire due to air pollution, infectious disease following floods, and disrupted access for routine health care needs in the wake of a disaster<sup>6</sup>. As we have ample evidence in recent years, bushfires can have a disastrous impact on air quality with corresponding increases in morbidity and mortality<sup>7</sup>.

The relative size of health services in rural Australia mean that there is limited capacity to deal with disasters and associated acute surges for health needs. They are indeed vulnerable to health services being destroyed themselves in disaster, and there may not be an alternative service where one is damaged. In addition, if a health service depends on retrieval to an urban centre or advanced telecommunication support to deliver health services, there may be critical service delays if those chains of physical or digital communication are disrupted by disaster. All these system issues must be considered when contemplating the relative impact of natural disasters on regional NSW.

In addition to the physical health effects of natural disasters, there are significant mental health needs in regions affected by natural disasters<sup>8</sup>. In rural and regional areas that have pre-existing service issues when it comes to accessing mental health care, these psychological consequences are accentuated.

**Recommendation 3:** *Health service disaster management plans should reflect the most current understanding of risks posed by climate change and be regularly reviewed.*

**Recommendation 4:** *The psychological impacts of climate change and associated events must be included in health service planning and provision.*

#### **c. Healthcare services**

The physical infrastructure of hospital and health services buildings to cope with and respond to climate change must be considered.

Many regional hospital buildings in New South Wales are close to two hundred years old and built in a traditional European style that is inappropriate for the twenty first century Australian climate.

The design of these buildings makes it difficult for them to maintain patient and staff safety and comfort during events such as heatwaves, particularly if prolonged for more than a few days. More than comfort increased ambient temperature in health settings is associated with increased morbidity. These buildings were not designed for modern air conditioning and may be difficult to cool effectively.

These difficulties also make these buildings extremely inefficient from an energy perspective (with a correlating electricity bill), and one must consider that unless energy has been acquired from renewable sources, there proves a vicious circle of a direct contribution to greenhouse gas emissions. DEA are advocates for healthcare sustainability<sup>9</sup>: the principle of creating a health system that does not add to the human illness caused by climate breakdown.

Ensuring that health services can be provided in facilities that reflect the needs of the community from a service perspective as well as an energy and sustainability perspective is critical.

**Recommendation 5:** *Rural, regional, and remote NSW Health facilities are audited for energy efficiency and heat wave resilience, and retrofits supported where appropriate.*

**Recommendation 6:** *All new NSW Health facilities are designed with regards to energy, water, and waste sustainability.*

## Conclusion:

The interaction between humans and the environment has myriad implications for the health of Australians and health service delivery in New South Wales. It is vital that these be considered in the scope of this inquiry to minimise the negative health effects that rural, regional, and remote residents can expect due to climate change now and in the future.

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