

# Submission to the South Australian Government

## On Developing a New Climate Change Strategy for South Australia,

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67 Payneham Road  
College Park SA 5069  
P 0422 974 857  
E [admin@dea.org.au](mailto:admin@dea.org.au)  
W [www.dea.org.au](http://www.dea.org.au)

Healthy planet, healthy people.

#### **DEA Scientific Committee**

Prof Bob Douglas AO  
Prof David de Kretser AC  
Prof Robyn McDermott  
Prof Hugh Possingham  
Dr Rosemary Stanton OAM

Prof Stephen Boyden AM  
Prof Dave Griggs  
Prof Stephen Leeder AO  
Prof Peter Newman AO  
Prof Lawrie Powell AC  
Dr Norman Swan

Prof Peter Doherty AC  
Prof Michael Kidd AM  
Prof Ian Lowe AO  
Prof Emeritus Sir Gustav Nossal AC  
Prof Fiona Stanley AC  
Prof David Yencken AO

# Recommendations

Doctors for the Environment Australia recommends that;-

- 1. the omission of health be urgently rectified by a health adaptation consultation paper and that the Minister and Department of Health be responsible.**
- 2. in a milieu of improving discourse between the SA and federal governments, SA, through COAG, uses its good record on reduction of greenhouse emissions to request national guidelines for adaptation, which should include health.**
- 3. the SA government develop financial guidelines for the implementation of climate adaptation action that are inviolate from the vagaries of annual budgets.**
- 4. the SA government develop a public health strategy for climate change inclusion in most government decisions and policies.**
- 5. planning and implementation to commence immediately with involvement of all SA local government sectors.**
- 6. educational material be introduced for all employers and workers and for all government departments.**

## Introduction

Doctors for the Environment Australia (DEA) is a voluntary organisation of medical doctors in all states and territories of Australia. DEA recognises that the environment, human health, and the economy are inextricably linked. With the backing of a learned and influential Scientific Committee DEA relies on scientific evidence in its briefings and submissions.

Climate change is a priority issue for DEA for, as the 1<sup>st</sup> Lancet Commission on Climate Change and Health stated in 2009, "climate change is the greatest threat to human health of the 21<sup>st</sup> century. While continuing to emphasise this threat to human health, the 2015 Lancet Commission on Climate Change stated that "tackling climate change could be the greatest global health opportunity of the 21st century".

DEA submitted to the previous SA review in 2011.

[http://dea.org.au/images/uploads/submissions/SA\\_Climate\\_Act\\_Review\\_submission\\_9-11-11.pdf](http://dea.org.au/images/uploads/submissions/SA_Climate_Act_Review_submission_9-11-11.pdf)

and to the Public Health Plan 2013.

[http://dea.org.au/images/uploads/submissions/SA\\_Public\\_Health\\_Plan\\_Submission\\_03-13.pdf](http://dea.org.au/images/uploads/submissions/SA_Public_Health_Plan_Submission_03-13.pdf)

The consultation papers for "Developing a New Climate Change Strategy for SA" make very little reference to health: one mention in the "Reduce" paper, and in the "Adapt" paper there are references to "vulnerable citizens" on pages nine and eleven.

It seemed possible that we had failed to locate the SA government's climate change and health plans and so we carried out a Google search for "SA Health climate change plans" and also consulted other government documents such as Country Health SA Strategy for Planning (2008). The results were meagre. (Appendix 1)

DEA believes health is central to any strategy around climate change as affirmed by the Lancet publications cited above. Our foremost recommendation is to prepare this consultative document urgently

## **Summary of the Health Impacts of Climate Change.**

The health impacts of climate change arise directly from the consequences of a rise in greenhouse gases since the industrial revolution commenced (CO<sub>2</sub> is now at 400ppm) causing global warming due to the emissions from mining, transport and consumption of fossil fuels, and from deforestation.

DEA has a policy on the health impacts of climate change written by the late Tony McMichael, author for the health sections of the Inter-governmental Panel on Climate Change (IPCC) reports.

[http://dea.org.au/images/general/DEA\\_Climate\\_Change\\_and\\_Health\\_Policy\\_05-13.pdf](http://dea.org.au/images/general/DEA_Climate_Change_and_Health_Policy_05-13.pdf)

And in DEA's position statement on climate change, all the points are relevant to this submission.

[http://dea.org.au/images/general/DEA\\_Position\\_Statement\\_Climate\\_Change\\_and\\_Health\\_05-13.pdf](http://dea.org.au/images/general/DEA_Position_Statement_Climate_Change_and_Health_05-13.pdf)

In summary the following are the main considerations for SA:-

### ***Heat Waves***

An Australian Academy of Science report found that 374 excess deaths occurred during the 2009 heatwave in Victoria in addition to the 173 deaths which resulted from the bushfires. The frequency and severity of bushfires is increasing in line with global warming and leads to smoke inhalation related illness, injury, death, loss of livelihood and long term stress.

<https://www.science.org.au/publications/scienceofclimatechange...impacts>

### ***Drought***

It is anticipated that Southern Australia will continue to get hotter and drier (Bureau of Meteorology climate change impacts in Australia resulting in more heatwaves, issues of water quality and supply, impacts on agricultural output and diminished flows into the lower Murray/Coorong system. Rural communities in particular will bear the brunt of this with negative health effects resulting. Storms, flash floods and other extreme weather events are expected to become more frequent

### ***Infectious diseases***

Infectious disease patterns may change as disease vectors such as mosquitoes change their range in response to climate change. Infections such as *Salmonella* and *Campylobacter* gastroenteritis are likely to become more common with climate change, as is diarrheal disease from various causes in children.

### ***Food and water security***

Agricultural impacts are complex due to the combined effects of rising temperatures, pollution causing reduced photosynthesis, water scarcity and contamination, and poor agricultural practices in some areas. Crop yields are already declining in many parts of the world. In the journal *Global Change Biology* it is reported that "average growing season temperatures of +2 degrees C in the main wheat growing regions of Australia can cause reductions in grain production of up to 50%.

<http://onlinelibrary.wiley.com/doi/10.1111/j.1365-486.2010.02262.x/abstract>

England's prestigious Royal Society concluded that a 4 degree Celsius rise could make half of the world's farmland unsuitable for agriculture. South Australia will feel the international impact of these events for food shortages contribute to conflicts and mass movement of climate refugees. Australia will be expected to do more in this regard. In detailed reports the US military have indicated that the surge in refugees from the Middle East are partly due to food and water conflict in a drying climate as are those in the Sahel.

### ***Social Dynamics***

The impacts of climate change on health will vary depending on age, gender, health status, socio-economic status, and public health infrastructure. The elderly are more vulnerable to the effects of heat waves. Children are particularly vulnerable: as Professor Fiona Stanley has indicated in our DEA report (No Time for Games) "gastro-intestinal diseases, respiratory and heat related illnesses, and the physical and mental health impacts of floods, bushfires and droughts are all expected to rise". We have witnessed before that suicide rates in farming communities rise during long droughts because of despair and financial distress. Those living in coal mining/coal power communities will suffer the effects of pollution and when the world turns away from coal they will be subjected to job insecurity if transition is not properly handled.

### ***Air Pollution***

Although fossil fuels are largely the cause of climate change, the air pollution and resulting health impacts they cause are important mitigation issues and must be considered in adaptation.

Obviously the continued replacement of fossil fuels with renewable energy is an adaptation strategy for it offers a significant health co-benefit. However it is also important that demands fossil fuel closures are balanced by attention being given replacement jobs, for unemployment itself is a social and health scourge.

In Australia 3,000 deaths each year are attributable to outdoor air pollution. Coal combustion alone is responsible for a proportion of this figure and transport and industrial emissions the remainder.

It is of concern to us that despite its mitigation successes SA considers more fossil fuel development in Unconventional Gas which has risks for agriculture, and human health and indeed will increase Australia's greenhouse emissions. The same applies to coal gasification methods.

## **Adaptation in South Australia**

### **Preamble**

In SA we are fortunate that the state has recognised the importance of mitigation of climate change and has supported the development of renewable energy and probably has therefore suffered less cardio-respiratory illness than some other states. Nevertheless the state has been expedient to financial considerations in its policies, examples being special pollution deals for fossil fuel users and the present support for unconventional gas which, like coal, needs to be left in the ground if international carbon targets are to be met.

Nevertheless we must recognise a 25 year delay in acting on climate change, due to political decisions has resulted in little national planning and progress on either mitigation and adaptation, a delay relative to the most active countries, which is likely to have future economic implications for Australia with our competitors.

It is important to recognise that action on mitigation is largely determined nationally, whereas adaption is largely a state responsibility. This is not to say that a state in its own interest cannot reduce its emissions, as SA has done to its advantage with renewable energy.

### **The public health scenario**

To reiterate the views of the Lancet ("climate change is the greatest threat to human health of the 21<sup>st</sup> century" and "tackling climate change could be the greatest global health opportunity of the 21st century") we must ask what have governments and this state done in the long journey to adaptation? What is the strategy and where is the planning? We have been unable to determine any comprehensive plan or report by the SA health department when searching the SA Health website.

Commonwealth responsibilities in such public health matters have, over time, been devolved to the states, whereas some other countries such as the US, though late to climate action also because of political chicanery can now move ahead because of the national Environmental Protection Agency (EPA) enacting rules which states have to follow. Thus in the case of Australia we are left with the states and territories each reinventing the wheel – or not bothering, whereas the Commonwealth should at least be in the position of offering common advice and guidelines. Whilst there are many differences in how each state may be impacted by climate change there are also many commonalities.

Therefore one of our recommendations in this submission is to ask the state to promote through the COAG agreement the development of Commonwealth guidelines and strategy.

To turn now to the responsibilities of the state government of SA; these are the need to act now for financial reasons, overall strategy, and measures for implementation;-

## **The financial necessity**

There are now many learned economic studies which indicate that spending on both mitigation and adaption will escalate the longer delayed; quite simply this is because budgets can be ravaged from mitigation spending when adaption measures still require funding.

We know from many countries that storm and tempest events have severely eroded budgets so much so that health services are gravely affected. This is common in some developing countries as was the case in the Philippines. However the costs of Hurricanes Katrina and Sandy in the eastern US states in 2005 and 2012 respectively was massive with great impact on ongoing budgets in the US.

This effect is discernable in Australia. The Queensland floods and cyclones in December 2010 and February 2011 required 501 clinical staff to be deployed to assist 10,000 affected people. Over 17,000 tetanus/diphtheria vaccines were also distributed to reduce the risk of disease and Queensland Health information line answered 54,881 calls from flood-affected areas (Queensland Health, 2011a).

Floods can also cause inundation or isolation of services, potentially affecting power supply, or access to medicines;-

In our report on the health of children

[http://dea.org.au/images/general/Children\\_and\\_climate\\_change\\_report%3A\\_No\\_Time\\_for\\_Games\\_web.pdf](http://dea.org.au/images/general/Children_and_climate_change_report%3A_No_Time_for_Games_web.pdf) we note "Floodwaters surrounding Wesley

Hospital in Auchenflower, Brisbane, in January 2011 cut all vehicle access, including ambulances, to and from the hospital for nearly two days. Ambulance officers had to transfer emergency patients across the railway station overpass bridge on foot. Linen, pharmacy and food supplies had to be carried or pushed over the bridge by staff. Patients who could be discharged safely were advised to leave before the hospital became isolated, while all elective, non-emergency services was cancelled for the remainder of the week. At one point, the electricity supply to the hospital was at risk of being cut, threatening to necessitate the evacuation of patients (QFCI, 2012)".

In the IBIS report on the economic impact of the Queensland floods with estimates at \$10B, the costs of health impacts including deaths were not mentioned. Impacts were studied on construction, tourism, transport, mining and agriculture. There are methods of assessing the cost to the community of death and injury however they are not being used in calculating present economic impacts of extreme weather events, in effect existing health and social services absorb these costs.

The Queensland and federal governments provided \$18.1 million to repair damage to health facilities from the 2010/2011 floods, and \$37.8 million was marked to fund the Queensland Mental Health Natural Disaster Recovery Plan from 2011-2013 (Queensland Health). However many costs were included in

subsequent budgets without being readily identifiable. We know these costs are still occurring for the health needs of traumatised communities.

South Australia has experience of catastrophic bushfires with the stress on health services and the cost recognised. The intensity of these is expected to increase. Intermittent major flooding will also occur.

SA will share in the increased burden of disease in Australia requiring attention from general practitioners and hospitals due to injury or psychological trauma from extreme weather events, infections such as gastroenteritis and illness due to ozone and bushfire air pollution. Economist Professor Ross Garnaut estimates that under a high greenhouse gas emissions scenario, climate change will lead to an estimated 335,000 new cases of bacterial gastroenteritis across all age groups in Australia by 2050, with over 92.3 million dollars in health and surveillance costs.

Whilst DEA has made a study of the impacts of climate change on our children there is no comprehensive study on the implications for the elderly resulting from their inability to withstand heat and their immobility. We recognise that SA understands these problems for telephone checking of the elderly in heat waves is already in operation. However much remains to be done for living conditions security and respite care.

## **Strategy**

It is not necessary to reinvent the wheel for much has been done by those ahead of us in other countries. As one example we recommend "Adaptation in Action: Grantee Success Stories" from CDC's Climate and Health Program [http://climateforhealth.org/join?utm\\_source=partners&utm\\_medium=webpage-feature&utm\\_campaign=apha-201507](http://climateforhealth.org/join?utm_source=partners&utm_medium=webpage-feature&utm_campaign=apha-201507) The American Public Health Association details how communities across the nation are taking action to reduce the effects of climate change on health ([https://www.apha.org/~media/files/pdf/topics/environment/adapt\\_in\\_action.ashx](https://www.apha.org/~media/files/pdf/topics/environment/adapt_in_action.ashx)).

To guide the nation's public health workforce in preparing for climate change, CDC has developed a unique framework known as BRACE, or Building Resilience Against Climate Effects. BRACE is a process that allows public health departments to put complex atmospheric science and climate projections into their planning and response activities.

BRACE's five steps are: 1) forecasting climate impacts and assessing vulnerabilities; 2) projecting the future rates of disease and injury; 3) assessing and identifying suitable health interventions; 4) creating and implementing climate and health adaptation plans; and 5) evaluating the impact and continually improving the quality of adaptation activities. By following the BRACE framework, public health practitioners are better equipped to plan customized actions that will protect the communities they serve.

This is but one example of the experience of others which should be utilised for a strategy for SA.

In particular we recommend a White House approach where the state of SA leads from the front on strategy and education.

[http://thinkprogress.org/climate/2015/04/07/3643682/white-house-climate-health-initiatives/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=cp\\_top3](http://thinkprogress.org/climate/2015/04/07/3643682/white-house-climate-health-initiatives/?utm_source=newsletter&utm_medium=email&utm_campaign=cp_top3)

Also on strategy we recommend information from the UN

<http://newsroom.unfccc.int/unfccc-newsroom/climate-change-agreement-is-public-health-agreement/> and from the "Challenges and Opportunities for Inter-sectoral Work on Health and Climate Change"

<http://www.phi.org/uploads/application/files/h7fjouo1i38v3tu427p9s9kcmhs3oxsi7tsg1fovh3yesd5hxu.pdf>

## **Measures for implementation**

Many factors affect the health of communities; however, few are as far-reaching as the environment. A healthy environment is vital to building a healthy community. Yet protecting public health is more than preserving environmental resources like clean air and water. Protecting public health requires equipping communities with the knowledge and resources to successfully adapt to environmental changes and weather events. It is here that the State must act in partnership with local councils, through a "climate change in all policies approach". Worryingly the words climate change do not appear in The South Australian approach to Health in All Policies: background and practical guide 2011 and the South Australian Health in All Policies Initiative 2013 Case Study.

Our perception is that the South Australian government has not seen climate change as an issue that requires a "whole of government response", and in particular a focused health response. We form this opinion as on two occasions we have attempted, unsuccessfully, to meet with the current health Minister to discuss the importance of human health and climate change. More recently, when requesting a meeting with the Premier to discuss the same issues, our organisation (Doctors for the Environment Australia) was referred to the Minister for the Environment and not the Minister for Health for a response!

To protect human health and well-being, we indicate that climate change adaption must be included in all policies with emphasis on planning, greening urban environments and public transport which has huge health co-benefits.

In terms of health services themselves our report on children and climate change identifies;-

### **1 Health and emergency services**

These are largely federally funded services delivered by the states. With children's health a priority we need plans responding to climate change including:

- immunization programs and infectious disease surveillance
- adequate water safety and sanitation infrastructure preparations for extreme weather

- heat wave and UV warnings
- early warning systems for bushfires/cyclones and air quality indices and advice
- identifying and protecting vulnerable individuals such as children within practices or communities
- ensuring adequate emergency department and inpatient capacity and the establishment of post-disaster counselling and support for children
- education of health professionals, and the wider community.

## **2 Infrastructure and risk reduction**

Protecting children's health also requires risk reduction in sectors other than health such as housing, agriculture, urban planning and transportation. Improvement in urban and regional planning design such as relocation away from areas at risk from natural disasters or sea-level rise, or better housing design to reduce heat impacts, are examples of reducing the risk of climate health impacts to children.

Reducing socioeconomic disadvantage in children and improving baseline health, food security and education are fundamentally the best form of climate change adaptation due to their role in making children and families more resilient and better prepared for the environmental risks brought by climate change.

Similar plans are needed for the aging, for the disabled and for industries

## **Some conclusions**

The World Health Organisation's Director-General Margaret Chan stated "The real bottom line of climate change is its risk to human health and quality of life". As global emissions continue to rise and because of the time lapse between emissions and climate change it is expected that the effects of climate change will only get worse. The Low Carbon Investment Plan for SA suggests some commendable initiatives (see case studies and Appendix 1). However, health is mentioned only in passing.

## **Stakeholder Questions (Section 5)**

1. DEA asks will the government at all times take into account the health implications of policy on climate change? For example, Repowering Port Augusta is not just a question of return on investment: Concentrated Solar Thermal power provides the community with cleaner air and employment opportunities while at the same time contributing to a reduction in greenhouse gases. Likewise, urban planning for climate change not only reduces emissions but brings co-benefits to health, reducing the economic burden of disease in coming years.
2. The Health Sector must be factored into long term planning, anticipating the health outcomes from a changing climate ("Adaptation") but, also by reducing the large carbon footprint of this sector ("Mitigation").
3. DEA has advocated on many occasions for strong mitigation efforts at all levels of government. Driving down emissions must be viewed as a health issue for all Australians, particularly an intergenerational health issue.
4. South Australia has expertise in medical research and public health. All communities and levels of government can draw on that expertise. DEA can offer expert advice to all these groups and will continue strong advocacy for action on climate change.

## **Appendix 1**

### **Google search for “SA Health climate change plans”;- State Public Health Plan South Australia: a better place to live 2013.**

Summary report available from:

<https://www.lga.sa.gov.au/webdata/resources/files/SA%20Public%20Health%20Plan%20summary%20version%20FINAL.pdf>

Preparing for climate change mentioned on p6 and 7

Full report available from:

[https://www.lga.sa.gov.au/webdata/resources/files/State%20Public%20Health%20Plan\\_Final.pdf](https://www.lga.sa.gov.au/webdata/resources/files/State%20Public%20Health%20Plan_Final.pdf)

Climate change noted on p 6, 11, 13, 18, 52 and in particular pp71-3.

Summary:

1. focus is almost entirely on adaptation with little/no mention of mitigation
2. while responsibility is stated to be a partnership between State and local government, the tone suggests a shifting of responsibility from State to local government through the development of regional health plans. While there is great value in local government being actively involved in responding to climate change, leadership at the State level, particularly in SA Health is needed to complement this local government involvement.

### **SA Public Health Council Meeting summaries**

Most recent Minutes (April 2015) available from

<http://www.sahealth.sa.gov.au/wps/wcm/connect/0876fe8048ad714d89e4fd7577aa6b46/20-SAPHC+Meeting+Summary+I+20+April+2015+I+Signed+and+Published.pdf?MOD=AJPERES&CACHEID=0876fe8048ad714d89e4fd7577aa6b46>

Of note (page 1): 31 Regional Public Health Plans in various stages of development (12 metro and 19 rural). See comment above on shift of responsibilities to local government.

### **Chief Public Health Officer’s Report Protect, Prevent, Improve. The Chief Public Health Officer’s Report, June 2012-Jun 2014.**

Full Report available from

[https://www.sahealth.sa.gov.au/wps/wcm/connect/028a258041b390ffbcf2fd539804eb45/Final+CPHO+Report+2012\\_WEB+Secure.pdf?MOD=AJPERES&CACHEID=028a258041b390ffbcf2fd539804eb45](https://www.sahealth.sa.gov.au/wps/wcm/connect/028a258041b390ffbcf2fd539804eb45/Final+CPHO+Report+2012_WEB+Secure.pdf?MOD=AJPERES&CACHEID=028a258041b390ffbcf2fd539804eb45)

Summary:

In this 193 page report the words “climate change” are mentioned 3 times (pages 28, 178, 183). There is nothing in the report to suggest that SA

Health is doing anything to the extent required to address the importance of climate change in relation to health.

### **Additional notes:**

**Country Health SA Strategy for Planning (2008)** (interesting to note that this short paragraph was written in 2008 – nothing to suggest any concrete actions taken since then!)

Available from:

<https://www.sahealth.sa.gov.au/wps/wcm/connect/5d4ee70042b613788aa0aa30a4818ec3/StrategyforPlanningCountryHealthServicesinSA-SharedResource-20091116.pdf?MOD=AJPERES&CACHEID=5d4ee70042b613788aa0aa30a4818ec3>

Impact of climate change and seasonal and economic changes (page 17)

There is growing evidence of the impact of climate change, both globally and locally, that must be taken into consideration across country communities. This includes potential long-term changes to agriculture, infrastructure, biodiversity and ecosystems along with potential health and social implications.

Country communities are impacted by seasonal events, such as floods and bushfires, which place additional economic and psychological stresses on rural communities.

Large swings in population numbers are associated with holiday visitors, rural festivals and variations in seasonal employment opportunities that place extra demands on rural health services in many towns. As a result, country hospitals and health services must have the capacity to adapt swiftly and effectively to these unique challenges.

### **Extreme Heat**

SA Health can be affirmed for research and practical application of measures to address extreme heat, particularly among vulnerable populations – but again, this is an adaptation approach with prevention (mitigation) not in focus.

<http://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/protecting+public+health/emergency+management/extreme+heat>  
<http://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/about+us/health+and+medical+research/heat+related+research+papers>