



Public Health Association
AUSTRALIA

Public Health Association of Australia
Submission to the
Senate inquiry into Direct Action Plan and
related climate policy

Christine McDonald

Secretary

Environment and Communications

Legislation Committee

PO Box 6100

Parliament House Canberra ACT 2600

Email: ec.sen@aph.gov.au

Contact for PHAA

Michael Moore

CEO

10 January 2014

***PHAA submission to Senate inquiry into Direct Action Plan and
related climate policy***

Contents

Introduction	3
Public Health	3
The Public Health Association of Australia	3
Advocacy and capacity building	3
Ecology and Environment Special Interest Group of PHAA	3
Direct Action Plan and related climate policy submission summary	4
1. The relevance to health	4
2. Scientific basis for urgency	6
3. Addressing the term of reference	7
Required features: addressing ToR viii	7
Health and Economic Co-benefits from action	8
Additional factors: ToR v, xii, xiii, xiv	9
4. Cross-parliamentary support	9
Conclusion	10
References	11

PHAA submission to Senate inquiry into Direct Action Plan and related climate policy

Introduction

The Public Health Association of Australia Incorporated (PHAA) is recognised as the principal non-government organisation for public health in Australia and works to promote the health and well-being of all Australians. The Association seeks better population health outcomes based on prevention, the social determinants of health and equity principles.

Public Health

Public health includes, but goes beyond the treatment of individuals to encompass health promotion, prevention of disease and disability, recovery and rehabilitation, and disability support. This framework, together with attention to the environmental, social and economic determinants of health, provides particular relevance to, and expertly informs the Association's role.

The Public Health Association of Australia

PHAA is a national organisation comprising around 1900 individual members and representing over 40 professional groups concerned with the promotion of health at a population level.

Key roles of the organisation include capacity building, advocacy and the development of policy. Core to our work is an evidence base drawn from a wide range of members working in public health practice, research, administration and related fields who volunteer their time to inform policy, support advocacy and assist in capacity building within the sector. PHAA has been a key proponent of a preventive approach for better population health outcomes championing such policies and providing strong support for the Australian Government and for the Preventative Health Taskforce and National Health and Medical Research Council (NHMRC) in their efforts to develop and strengthen research and actions in this area across Australia.

PHAA has Branches in every State and Territory and a wide range of Special Interest Groups. The Branches work with the National Office in providing policy advice, in organising seminars and public events and in mentoring public health professionals. This work is based on the agreed policies of the PHAA. Our Special Interest Groups provide specific expertise, peer review and professionalism in assisting the National Organisation to respond to issues and challenges as well as a close involvement in the development of policies. In addition to these groups the Australian and New Zealand Journal of Public Health (ANZJPH) draws on individuals from within PHAA who provide editorial advice, and review and edit the Journal.

Advocacy and capacity building

In recent years PHAA has further developed its role in advocacy to achieve the best possible health outcomes for the community, both through working with all levels of Government and agencies, and promoting key policies and advocacy goals through the media, public events and other means.

Ecology and Environment Special Interest Group of PHAA

The Ecology and Environment SIG is an active part of the PHAA on several topics. Overall activity focuses on promoting an ecologically sustainable human society as a foundation for long term

PHAA submission to Senate inquiry into Direct Action Plan and related climate policy

human health. Acting for a safe climate by advocating for a rapid, ordered transition from fossil fuels to renewables; opposing expansion of the nuclear industry and supporting sensible discussion on wind turbines as an energy source are priorities. Environmental chemical, including lead, exposures is an emerging topic.

We work with the Climate and Health Alliance on several projects, including the Energy Choices and Health Collaboration. This project assesses the potential impacts on health of all the major energy sources, with a particular focus on fossil fuel extraction and use. Immediate, direct and longer term global health effects are equally important. We also educate about the wider health and implications of greenhouse gas emissions.

Direct Action Plan and related climate policy submission summary

The PHAA brings expertise on the health effects of greenhouse gas (GHG) emissions and consequent global warming to the attention to this Inquiry to frame the urgency and inform the deliberations of the Committee. This submission, similarly to our previous submission to this Committee in November 2013, argues that strong, rapid and urgent action to mitigate greenhouse gas emissions is required to protect human health and wellbeing now and into the immediate and longer term future. It bases this argument on the evidence about climate change in the most recent Intergovernmental Panel on Climate Change Fifth Assessment Report and on the serious potential for adverse effects on human health and consequently well-being from global warming and climate change. This is an urgent situation with the science suggesting there is great urgency to significantly reduce GHG emission rates. We suggest a broad, flexible, multidimensional set of direct action and complementary policy and program initiatives is required, along with cross-parliamentary collaboration which is commensurate with the urgency of the national and global problem.

1. The relevance to health

- 1.1. Greenhouse gas emissions, derived from the energy choices we have made to fuel our economy and current material prosperity, cause a range of effects (see Figure 1). These include ocean acidification and deoxygenation events; global warming and its sequelae - sea level rise and climate change.

PHAA submission to Senate inquiry into Direct Action Plan and related climate policy

- 1.2. It is important that the whole gamut of GHG effects are taken into account when formulating a national policy response, as they are all important in synergistically affecting human health and wellbeing.

GHG Emission Effects

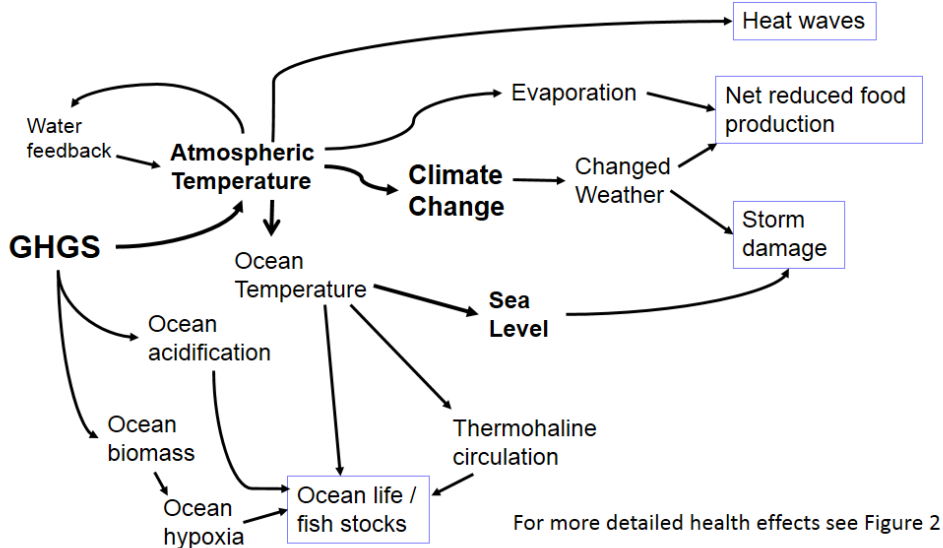


Fig 1 Summary of greenhouse gas emissions mechanisms to affect health

- 1.3. Effects on individual and societal health and wellbeing occur directly, indirectly, and via economic and social disruption. These are well documented. These include an amplification of a host of existing issues (Figure 2)(1,2). First shown are the direct effects, such as: increased injuries and deaths from more severe or frequent weather events including heat waves, and storms compounded by sea level rise and population shifts. Next are the secondary, indirect effects from ecosystem changes in natural cycles and functions. These include the changed range and timing of infectious diseases; changed temperature, rainfall and evaporation effects on plants additional to those from increased atmospheric CO₂ concentrations; sequelae from changes in micro-biota influencing soil fertility; and changed insect ecology that will effect crop fertilisation and pest prevalence and behaviour. All of these are likely to synergistically reduce agricultural output and quality resulting in food insecurity. The economic and social consequences of these and other systemic effects will reduce both capacity to respond, including health system capacity, and psychosocial wellbeing (3-11).

PHAA submission to Senate inquiry into Direct Action Plan and related climate policy

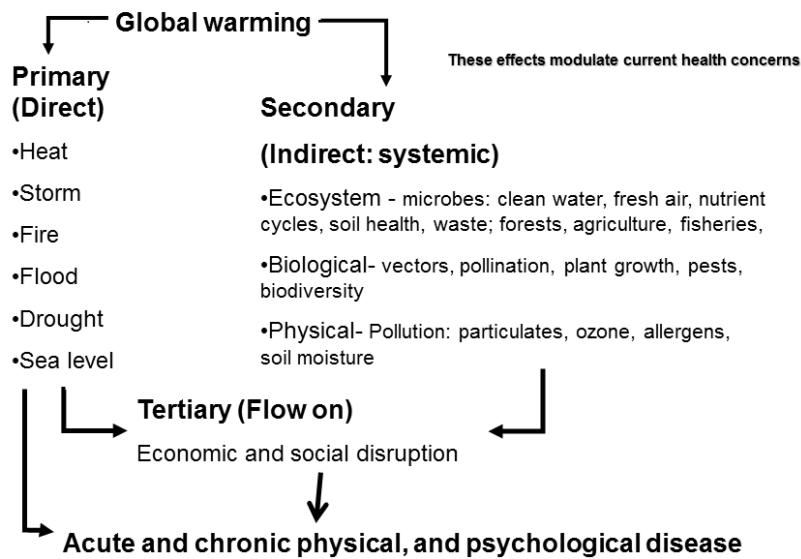


Fig 2 Summary of health consequences of greenhouse gas emissions

- 1.4. Additional to these effects, as poorer developing nations, particularly ones which will be affected by rising sea levels within a decade or so, become more affected by the consequences of greenhouse gas emissions, global population displacement raises legitimate humanitarian issues which include forced migration and health impacts.
- 1.5. Carbon emitting energy sources have local and direct adverse impacts on people's health besides the global indirect effects from global warming. These effects include the effects of on respiratory and cardiac health from particulates, on heavy metal toxicity, and the effects from volatile organic compounds (12,13,14,15). Action to reduce greenhouse gas emissions from energy generation and transport will also reduce these effects.
- 1.6. Based in the public health principle that to prevent or minimise these health related consequences as much as possible is better, and ultimately less costly, than having to manage them, it is therefore in society's interests to protect the health of people in this and subsequent generations, by taking action to rapidly reduce greenhouse gas emissions.

2. Scientific basis for urgency

- 2.1. At Copenhagen in 2009, the scientific consensus was that to avoid dangerous climate change, the mean global temperature should not increase by more than two degrees centigrade above the pre-industrial level (16).
- 2.2. The most recent Intergovernmental Panel on Climate Change (IPCC) report estimates that, to have a 50 per cent probability of not exceeding a 2°C increase relative to 1861-80, humanity can emit less than 1,210 gigatonnes of carbon (GtC). For a better probability of not exceeding a 2°C increase - a 2 to 1 chance (66% probability) - the budget is 1000 GtC. Emissions to 2011 were 531 (446 – 616) GtC. If non-CO₂ forcings are included, the numbers are 840 and 800 GtC (17). At current emission trajectories it is likely we will exceed a 2°C

PHAA submission to Senate inquiry into Direct Action Plan and related climate policy

increase in the 2040s (18). Further, emissions and rates of emissions are increasing (19) so the probability of passing the 2 degree guardrail is high (20).

- 2.3. The IPCC AR5 confirms the need to rapidly implement programs to achieve substantial, sustained reductions in greenhouse gas emissions to halt warming (17).

3. Addressing the term of reference

Health is not specifically mentioned in the terms of reference and as the PHAA has not the expertise in the fiscal, economic and other areas required to address the terms of reference, we will make general comments on what we think is required of a set of policies to address GHG emissions. We make these comments noting the Climate Change Authority's draft report, *Reducing Australia's Greenhouse Gas Emissions – Targets and Progress Review*. Additionally we make comments that address some terms of reference in a general manner.

Required features: addressing ToR viii

- 3.1. It is unclear to PHAA how the current Direct Action policy and additional programs will be able to reduce GHG emissions in Australia sufficiently for Australia to pay a fair role in global GHG emission reductions so as to avoid dangerous anthropogenic effects on the climate, and the other GHG effects on prosperity, health and wellbeing listed above.
- 3.2. Any plan to reduce greenhouse gas (GHG) emission to a level consistent with that which the science suggests is needed, will have to be ambitious, in the order of 25% or more by 2030 and more rapidly thereafter, and flexible to respond to evolving circumstances (21).
- 3.3. PHAA recognises that action to reduce GHG emissions is complex. Our expertise in health provides us with a set of skills which we can apply to looking at the system transition that will be required. Accordingly we anticipate that multiple simultaneous strategies will be required, and that a mix of policies will be necessary across different sectors of the economy (Figure 3).

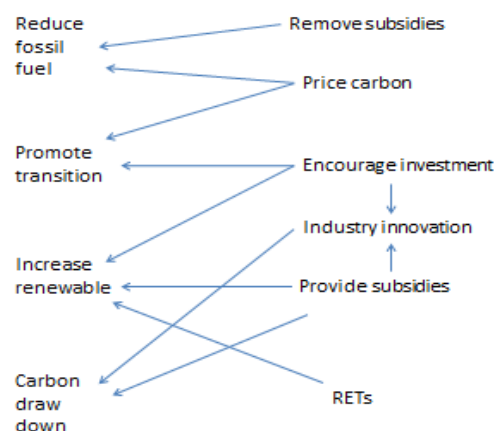


Fig 3 Schema summarising examples of types of policy / program action to reduce greenhouse gas emissions

PHAA submission to Senate inquiry into Direct Action Plan and related climate policy

- 3.4. Four broad domains of action are required (left hand column). These are in turn under the influence of a set of broad possible policy elements which can affect several domains. In essence it is introducing both policy guidance and price signals to foster changes in social behaviour and drive industry innovation and increasing investment in research and development in technology and systems.
- 3.5. It is beyond our expertise to go into further depth; the point is to outline that the approach to mitigating greenhouse emissions requires a broad and integrated set of responses. This is the kind of approach that we would anticipate a government may propose to replace the set of measures that currently exist.
- 3.6. Given the urgency and likely severity for society of global warming, we would prefer to see a complete alternative package of measures developed and publically discussed before repeal of the existing legislative package beyond the carbon price occurs.
- 3.7. That said, we recognise that economic theory suggests that a carbon price is an important driver of behaviour to reduce the use of fossil fuels.
- 3.8. Climate-change mitigation and adaptation must work together. Poorly considered responses to the anticipated increasing frequency and severity of weather-related emergencies, may drive further increases in GHG emissions. Examples include widespread burning off to reduce the impact of bushfires, air-conditioner ownership and usage in response to increasing temperatures and heatwaves, and sea-water desalination based on fossil-fuel energy sources. PHAA believes that it is critical that all plans for climate change adaptation consider mitigation.

Health Co-benefits from action

- 3.9. Health and emergency response planning experience suggests that rising to the challenge presented by global warming sooner rather than later will minimise the costs both economically and socially.
- 3.10. We would draw the Committee's attention to the list of health and economic co-benefits of action to reduce GHG emissions outlined in our previous submission to the Inquiry on Repeal of the Clean Energy Futures package and related legislation.
- 3.11. The health sector knows that action to reduce greenhouse emission and adapt to warming can have benefits for health. For instance,
 - 3.11.1. consuming less red meat reduces risk of heart disease and colon cancer;
 - 3.11.2. better designed cities reduce motor vehicle use and improve opportunity for physical activity and social connectedness, and can make them cooler and more comfortable places to live.
- 3.12. Planned, calm reformation of the economy will be better for people's mental health than change driven by crisis and disasters.

PHAA submission to Senate inquiry into Direct Action Plan and related climate policy

Additional factors: ToR v, xii, xiii, xiv.

- 3.13. We think an independent body such as the Climate Change Authority is extremely important to monitor and advise on greenhouse emission targets and trajectories. Such expertise removes this sensitive issue from political influence in the same way that financial advice is removed from the political domain by the Reserve Bank. (ToR xii)
- 3.14. We consider that the evidence we have seen concerning the Clean Energy Finance Corporation leveraging investment in renewable and alternative energy production suggests that it has a role in supporting a Direct Action policy program. (ToR v)
- 3.15. Similarly we would suggest that the Australian Renewable Energy Agency would also fit into a direct action policy frame, for promoting and assisting the deployment of renewable energy, to help with the required transformation away from high GHG producing energy. (ToR xiii)
- 3.16. (ToR xiv) Developing and implementing adaptation strategies is required in parallel to mitigation efforts, so Australia can build resilience to accommodate to the warming that current GHGs have already loaded into the system. Thus climate policy has to include adaptation research and development. Adaptation relating to health is needed in the three areas of health effects:
- 3.12.1. Improved emergency response systems, that include heat wave warning and response systems in addition to better fire and flood response capacity
 - 3.12.2. Inclusion of global warming effects into health care curricula
 - 3.12.3. Requiring new health infrastructure including health hardware such as housing and basic public health services such as water, sewerage and drainage, as well as hospitals, clinics and practices to be designed and built with climate change in mind; a program of retro-fitting existing infrastructure may be required.
 - 3.12.4. Recognising the contribution made to GHG emissions by the health care system and the financial saving able to be made by more energy efficient and less wasteful health care, PHAA suggests establishing a section within the Health Department similar to the Sustainable Development Unit in the UK. In fact such a unit within finance might apply the principles of cost reduction with an ecological sustainability approach across the whole of government.

4. Cross-parliamentary support

The politicised nature of the current discussion about this subject in Australia is seriously impeding a rational and reasoned response. The PHAA considers that this pressing policy challenge requires a cross-parliamentary approach to match the urgency of this serious common threat to Australian prosperity and health. We want public involvement in the discussion about solutions, and a reliable, politically independent, cutting edge source of information to guide us.

Such an approach will give certainty to business and to the general public and this will lead to greater understanding and support for the required changes to our economy.

PHAA submission to Senate inquiry into Direct Action Plan and related climate policy

Conclusion

PHAA supports urgent, strong, rapid yet planned reductions in greenhouse emissions to protect the health and wellbeing of Australians and other at risk populations. We are particularly keen that the following points are highlighted:

- The effects of unmitigated greenhouse gas emissions pose a substantial threat to health now and into the immediate and long term future.
- The scientific understanding of the situation as reflected in the Fifth IPCC Assessment Report suggests rapid action is required to move away from carbon emitting, fossil fuel based energy sources to minimise the degree of warming.
- An integrated, systematic policy and program approach is needed to reduce greenhouse gas emissions from all sectors.
- Health and economic co-benefits arise from proactive, coordinated action to reduce greenhouse gas emissions across multiple sectors.
- A suite of policy and program measures will be required to address GHG emissions, and these will be a mix of direct actions which will be assisted by a price on carbon emissions.
- The government needs an independent source of advice on targets and trajectories and so the Climate Change Authority should be maintained.
- The Clean Energy Finance Corporation is one example of a direct action program which is investing in the transformation of our energy systems and our economy.
- The Renewable Energy Agency should also be retained.
- Mitigation action needs to be complemented by adaptation planning to build business and community resilience. Action particularly focused on emergency response and the wider health system is required to prepare for anticipated changes.
- A cross parliamentary approach that recognises the urgency of the situation and permits clear government leadership is necessary to address greenhouse gas emission reductions in a way that supports people through the changes that will be necessary so to minimise adverse psychological health effects.

The PHAA appreciates the opportunity to make this submission and would welcome the opportunity to present to an inquiry if this arises.

Please do not hesitate to contact PHAA should you require additional information or have any queries in relation to this submission.

Michael Moore BA, Dip Ed, MPH
Chief Executive Officer
Public Health Association of Australia

Dr Peter Tait, FRACGP, MClmChng,
Convener, Environment and Ecology SIG
Public Health Association of Australia

10 January 2014

PHAA submission to Senate inquiry into Direct Action Plan and related climate policy

References

1. McMichael AJ. Climate Change in Australia: Risks to Human Wellbeing and Health, Austral Special Report 09-03S. Melbourne, Australia: The Nautilus Institute, RMIT2009.
2. Butler C, Harley D. Primary, secondary and tertiary effects of eco-climatic change: the medical response. *Postgraduate Medical Journal*. 2010;86:230-4.
3. Stern N. Review Report on the Economics of Climate Change 2006. Available from: http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm.
4. Confalonieri U, Menne B, Akhtar R, Ebi K, Hauengue M, Kovats R, et al. Human health. In: Parry M, Canziani O, Palutikof J, van der Linden P, Hanson C, editors. *Climate change 2007: impacts, adaptation and vulnerability Contribution of working group II to the fourth assessment report of the intergovernmental panel on climate change*. Cambridge, UK: Cambridge University Press; 2007.
5. Costello A, Abbas M, Allen A, Ball S, Bell S, Bellamy R, et al. Managing the health effects of climate change. *The Lancet*. 2009;373:1693-733.
6. Hanna EG, Kjellstrom T, Bennett C, Dear K. Climate change and rising heat: population health implications for working people in Australia. *Asia-Pacific Journal of Public Health*. 2011;23(2 suppl):14S.
7. McMichael A, Lindgren E. Climate change: present and future risks to health, and necessary responses. *Journal of Internal Medicine*. 2011;270(5):401-13.
8. Global Humanitarian Forum. *Human Impact Report: Climate Change — The Anatomy of a Silent Crisis*. Geneva: United Nations2009.
9. Gleadow RM, Evans JR, McCaffery S, Cavagnaro TR. Growth and nutritive value of cassava (*Manihot esculenta* Cranz.) are reduced when grown in elevated CO₂. *Plant Biology*. 2009.
10. Taub DR, Miller B, Allen H. Effects of elevated CO₂ on the protein concentration of food crops: a meta-analysis. *Global Change Biology*. 2008 Mar;14(3):565-75.
11. Hughes L, McMichael T. *The Critical Decade: Climate change and health*. Canberra: Climate Commission, Commonwealth of Australia (Department of Climate Change and Energy Efficiency)2011.
12. DARA, *Climate Vulnerability Monitor, A Guide to the Cold Calculus for a Hot Planet*, 2012. Available at <http://daraint.org/climate-vulnerability-monitor/climate-vulnerability-monitor-2012/> Accessed 20 May 2013.
13. Burt, E. et al, *Scientific Evidence of Health Effects from Coal Use in Energy Generation*, Health Care Research Collaborative, School of Public Health, University of Illinois in Chicago and Health Care Without Harm, Washington, 2013. Available at http://www.noharm.org/lib/downloads/building/Health_Effects_Coal_Use_Energy_Generation.pdf Accessed 21 October 2013
14. Castleden, W, Shearman, D, Crisp, G, and Finch, P, 'The mining and burning of coal: effects on health and the environment', *Medical Journal of Australia*, 2011195, pp. 333–335.
15. Colagiuri R, Cochrane J, Girgis S, *Health and Social Harms of Coal Mining in Local Communities: Spotlight on the Hunter Region*, University of Sydney, Report prepared for Beyond Zero Emissions, Melbourne. 2012.
16. United Nations. Report of the Conference of the Parties on its fifteenth session. In: United Nations Framework Convention Climate Change, editor. Copenhagen: United Nations; 2009.
17. IPCC. *Climate Change 2013: The Physical Science Basis*, The Working Group I contribution to the IPCC Fifth Assessment Report, Summary for Policy Makers. Geneva: Intergovernmental Panel on Climate Change2013.
18. Meinshausen M, Meinshausen N, Hare W, Raper SC, Frieler K, Knutti R, et al. Greenhouse-gas emission targets for limiting global warming to 2°C. *Nature*. 2009;458.
19. Canadell JG, Le Quéré C, Raupach MR, Field CB, Buitenhuis ET, Ciais P, et al. Contributions to accelerating atmospheric CO₂ growth from economic activity, carbon intensity, and efficiency of natural sinks. *Proceedings of the National Academy of Sciences*. 2007;104(47):18866.

***PHAA submission to Senate inquiry into Direct Action Plan and
related climate policy***

20. Potsdam Institute for Climate Impact Research. Turn Down the Heat: Why a 4°C Warmer World Must be Avoided. Washington, USA: The World Bank. 2012.
21. Climate Change Authority, *Draft Report: Reducing Australia's Greenhouse Gas Emissions – Targets and Progress Review*. Australian Government. 2013

