Public Health Association of Australia:

Policy-at-a-glance – Safe Climate Policy

Key message:

1. Action to ensure a safe environment is a critical and urgent public health priority. PHAA asserts the urgency of ensuring a safe climate as a priority along with parallel action on ensuring a safe environment and a just, equitable and ecologically sustainable society.
2. PHAA notes that global environmental change and global warming and its effects are a novel, complex and existential problem, different to previous public health issues.
3. Measures have to aim for both mitigation and adaptation.
4. Starting action is urgent and pricing carbon is a necessary first step.

Summary: A safe environment is one of the core determinants of human health along with the socioeconomic and political structure of our society, and the multitude of individual and organisational factors affecting health and health services. This policy seeks to outline a series of principles and tangible actions designed to achieve a safe climate.

Audience: Australian, State and Territory Governments, policy makers and program managers.

Responsibility: PHAA's Environmental Health Special Interest Group (SIG)

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SAFE CLIMATE POLICY

This policy should be read in conjunction with existing PHAA policies on: Environmental Health Justice, Ecological Sustainable Development, Nanotechnology, Sustainable Population for Australia, Nuclear Industry, Preparing for Peak Oil, Low Greenhouse Emissions Transport and Health Inequities.

The Public Health Association of Australia notes:

1. A safe environment is one of the core determinants of human health along with the socioeconomic and political structure of our society, and the complex of individual and organisational factors affecting health and health services.

2. A safe environment is one that will provide a habitat to support Homo sapiens and an ecologically sustainable complex industrial society.

3. Components of a safe environment are: a safe climate; an intact biophysical natural environment featuring complex biodiversity; functioning ecosystems which include those providing clean air, fresh water, soil and forests; intact protective features such as the tropospheric ozone. Prerequisites for maintaining a safe environment are to minimise adverse human impact on the environment by developing and maintaining a sustainable social and economic system. (1 p.1798)

4. A sustainable human society is one that provides food, settlement, energy, transport and leisure within the ecological boundaries of the planet for present and allowing for future generations. Factors that assist doing so include a population within the carrying capacity of the planet and practices that do not disrupt or overload the capacity of the planet's chemical and ecosystem cycles.

5. Human activity including additional greenhouse gases is driving ecosystem and biodiversity changes. Human existence and well-being depends on the living and non-living environment, which may have fundamental rights outside of the benefits and services provided to humanity.

6. The importance of global warming and its effects on climate, ocean levels, land and sea ice (the cryosphere), biodiversity and other planetary systems eco-services essential to current and future human health and wellbeing (2).

7. Global warming and consequent climate change as a result of human industrial and changed land use activity is established at the highest level of scientific certainty beyond any reasonable doubt (3). [i, ii]

[i] Global warming and climate change are used synonymously except where the context suggests otherwise.

8. The United Nations Framework Convention on Climate Change (UNFCCC) has as its objective the "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner." (4, p. 9)

9. While the figure of a two degree centigrade [iii] warming has become commonly used as a 'guardrail' level below which warming will prevent "dangerous anthropogenic interference", more commonly referred to as dangerous climate change, the Conference of the Parties at Copenhagen recognised "the scientific view that the increase in global temperature should be below 2 degrees Celsius" (5, p5).

10. Australia's warming is documented in the CSIRO 2007 Technical Report (6) updated in 2010 (7). Already since 1910 Australian mean surface air temperature has risen 0.9^{o}C, 0.7^{o}C since 1960, up to 1.5 to 2^{o}C in some regions. There have been more hot nights (>20^{o}C) and hot days, and fewer cold days and nights. Hot nights are significant for heat wave effects. The period 2000 to 2009 is the hottest decade on record. There were significant fire events Victoria 2003, 2006, 2009 in which two thirds of the Crown forests have burned.

11. Changes to rainfall amount and seasonality are likely to be detrimental to agriculture and water supply for drinking and industry. Rainfall has reduced in southwest Western Australia and generally in the eastern states. These are consistent with, but larger than, climate changes forecast by modeling in the IPCC Fourth Assessment Report (AR4) not explicable by influence from ocean drivers [iv] (8).

12. Sea levels have risen since 1870 by about 200mm. During 1993 to 2009 sea level rise has been 1.5 to 3mm per year in the south and east of Australia and 7 to 10mm per year in the north and west.

13. The future forecast in the CSIRO report, suggest average temperate increases in 2050 of at least 1.5^{o}C in eastern coastal regions and 2^{o}C inland. Average number of warm nights are likely to increase, relative to 2000, for both moderate and high scenarios by 30 to 40% (15, p62), which increases the frequency of heat stress events.

14. Specific future impacts on health and society are uncertain in degree but generally forecastable. They divide into direct and indirect effects. Direct impacts include temperature effects (heat waves), more frequent extreme weather, ocean changes and sea level rise. Indirect impacts include ecological disruption, social, economic and consequent psychological changes that effect human wellbeing and health. Effects are interdependent and synergistic. The indirect impacts will have larger effects than direct ones.

15. Cumulatively the direct and indirect health effects on health and wellbeing are likely to be detrimental. The adverse effects for Australia are likely to be from increased heat related deaths (10, 11, p.3). Without rapid mitigation the number of heat related deaths may rise to 8,000 to 15,000 annually, compared to about 1,100 now, or 4,000 to 8,000 with strong emission controls (10, pp. 21-23).

[iii] Unless otherwise specified, all degrees in this paper are centigrade.
[iv] El Nino Southern Oscillation, Indian Ocean Dipole, Southern Annular Mode interactions.

16. In the longer term is is possible that that up to fifty per cent of the planet would be outside the range of temperature habitable by humans by 2300. Similar effects on agriculture, livestock and the ecosystem on which human habitation and industrial society is predicated have been recognised but not fully estimated (12). The significance of such scenarios for human survival is profound.

17. The Paleoclimate record indicates that the planet with levels of GHG similar to those we approach, will have temperatures and sea levels that are outside human experience (Hansen, J, Sato, M, Kharecha, P, et al. 2008; Pagani, M, Liu, ZH, LaRiviere, J, et al. 2010).

18. In addition to warming, increased CO2 will cause ocean acidification (IPCC 2007, p.14) and hypoxia (Oschlies, A, Schulz, KG, Riebesell, U, et al. 2008) with effects on marine ecosystems, reduced plant nutrition and increased toxicity (13, 14).

19. Changes in vector born diseases are anticipated (10), although the topic is incompletely studied and assumptions contested (16).

20. Mitigation and adaptation measures have the potential for unintended health consequences that will need to be avoided where possible; for instance there is increased risk of dengue fever with more use of water tanks (15)

21. Uncertainties exist about some possible health impacts such as deaths and injuries from storms and floods. Further work is needed to advise policy development.

22. Mental health will be adversely affected in many parts of Australia, particularly in rural and remote areas. Although this has not been directly studied, the recent drought has provided some indication of what may come (17). The adverse impact on Indigenous communities is also likely to be more severe than on the mainstream (18). In the longer term having to move settlement to avoid rising sea levels is likely to be distressing.

23. Regionally, as countries in south Asia suffer impacts of climate change, climate refugees may increase, as well as immigrants from low lying Pacific and Indian Ocean island states (10, p.23). Within Australia movement from northern to southern areas is likely, and from remote / rural areas to towns and cities. Consequences of ecosystem disruption will lead to loss of agricultural productivity, changes or collapse to fisheries, compounding psychosocial distress. Ultimately the consequent collapse of the economy has to be contemplated.
24. Australia's greenhouse gas emissions peaked in 2008 at 550 Mt CO_2-e. In 2009, consequent to the financial crisis, emissions have dipped to 537 Mt CO_2-e. In 1999 they were 485 Mt CO_2-e (19, p.3). This is about 24 tonnes of CO_2-e per person, putting Australia among the top few emitters. In 2005 the average OECD country emissions were 14 t CO_2-e and non-OECD 7t CO_2-e (20, p.154).

25. The health system itself contributes significantly to GHG emissions in transport, operation of facilities and in the carbon footprint of the equipment and consumables used. Recently the UK NHS assessed their impact and established a plan to reduce it (21). Work is being undertaken in Australia by the Doctors for the Environment Australia (DEA) on Green Hospitals and Green Clinics for general practice (DEA 2010).

26. The causes of environmental degradation, economic inequity, poor health and the actions to ameliorate these are related. The current Western socio-economic paradigm underpins the

problem and reform of this paradigm underlies the solution. Issues of power relationships exercised through the unregulated market supported by advertising are drivers of the problem and barriers to the solution. Strategic reform of the institutions of power and democracy are required. A positive vision of alternative futures is required (25, 26, p.i) (27, p 42-43) (Legge, D 2009) (27-30) (2, pp.31-33) (28, 31) (32).

27. The number of people and their economic prosperity are key drivers of impacts on the environment. GDP generating activity is directly related to GHG emissions [v], as is graphically illustrated by emissions in China and the fall in emissions during the financial crisis. Population discussion is outside the ambit of this paper except to note that education and socioeconomic empowerment of women and promotion of access to the full range of reproductive health services are fundamental to support global population management.

28. Adaptation to global warming incorporates many actions in industry, urban design, transport, energy sourcing, land use and agriculture that should be taken in any case to improve human social and economic wellbeing and health. Such co-benefits for health and the environment must be centrally incorporated in planning (26, pp.63-68, 33 http://www.thelancet.com, 34).

29. Environmental change, particularly global warming, is especially important for agriculture, food productions and food security (35). Conversely agricultural operations, food production and processing have impacts on both global warming and on health.

The Public Health Association of Australia affirms the following principles:

1. Action to ensure a safe environment is a critical and urgent public health priority.

2. PHAA asserts the urgency of ensuring a safe climate as a priority along with parallel action on ensuring a safe environment and a just, equitable and ecologically sustainable society.

3. PHAA notes that global environmental change and global warming and its effects are a novel, complex and existential problem, different to previous public health issues.

4. Measures have to aim for both mitigation and adaptation; avoiding adaptation measures that increase emissions.

5. Measures should aim to achieve co-benefits for development, mitigation, adaptation and wellbeing and health.

6. Currently available low emission technologies, which are not themselves socially and environmentally harmful should be deployed immediately while development of others is proceeding.

7. When society-wide change is urgently necessary for the common good, government's role is to lead, inform, regulate, monitor and enforce, to motivate behaviour change by individuals and corporations.

8. Producers of pollution should pay the costs of cleanup (36).

9. Starting action is urgent and pricing carbon is a necessary first step.

[v] Identified in economics as the Kaya Identity: CO_2 emissions = global population x global per-capita GDP x energy intensity of world GDP x emission intensity of energy, which underpins the IPCC SRES.

The Public Health Association of Australia believes that the following steps should be undertaken:

Immediate Australian Action on Global Warming can include:

1. Introducing an interim tax on carbon emissions to begin the process of change.

2. Establishing a Central Carbon Bank (Garnaut 2007) to regulate carbon prices, and set strong scientifically defensible reduction targets and trajectory.

3. Use of a range of taxes, revenue from which to support other changes to lower carbon.

4. Removal of subsidies to fossil fuel energy and fossil fuel dependent transport sectors, including provision of specific infrastructure.

5. Increase direct support for energy efficiency and demand reduction measures.

6. Increase the RET, with emphasis on deploying off the shelf technologies.

7. Abolish GST on public transport and bicycles.

8. Feed in tariffs to support renewable installation and drive production efficiencies of existing technologies.

9. Regulate for emission limitations on all emission sources: transport, housing, industries.

10. Support and assist workers (and their communities) from jobs in industries being phased out in the transition from a fossil fuel economy into jobs that support renewable technology development, production and deployment.

11. Implementation of the ClimateWorks Low Carbon Growth Plan (37).

12. Ban outright particularly dirty / polluting processes e.g. refuse construction permits for new coal fired power stations.

13. Protect forests and woodlands both as mitigation and promote reforestation as a rehabilitation measure not as carbon offsetting (unless as part of a draw down and sequester mechanism).

14. Promote agricultural stewardship of land that includes biosequestration.

15. Limited focus on carbon trading and that only as an adjunct to these other measures with auctioning of permits, rapid incremental reductions in permits, and removal of the factors which undermine carbon reduction.

16. Well resourced social marketing campaigns to explain the action being taken and support the behavioural changes necessary to achieve this (38).

The Public Health Association of Australia resolves to undertake the following actions:

1. Develop and implement a range of advocacy activities designed to promote the uptake and implementation by the relevant levels of government and private sector entities of policies and measures for urgent action to reduce greenhouse gas emissions domestically and internationally and for action to adapt to the inevitable changes to society and the environment consequent to global warming.

2. Advocate for Australia to develop and implement a policy on environmental / global warming refugees particularly from the Pacific small island states.

3. Advocate for development and implementation by government of policies and measures that promote action across all economic sectors that both promote health and reduce adverse environmental consequences.

4. Provide vision and leadership to create and promote a positive vision of a viable, healthier ecologically sustainable society, that reframes current political debates, challenges the current paradigm of the primacy of an unregulated market economy and continued economic growth as being important for human wellbeing and happiness, and promotes instead an economic system that serves wellbeing and healthy social and environmental ends.

5. Ensure that advocacy activities include measures designed specifically to raise broader community awareness of and commitment to implementing the necessary policy, structural and systemic, political and behavioural changes at both macro and micro levels.

6. Encourage members and others to reduce fossil fuel consumption, and to use their influence to extend this behaviour more broadly (e.g. within their workplaces and homes)

7. Work with other organisations/agencies at the national, jurisdictional and local level to suppport these actions.

8. Collaborate with other organisations to expose the adverse health and social impacts of coal mining and use.

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