



Public Health Association of Australia:

Policy-at-a-glance – Safe Climate Policy

- Key message:**
1. Action to ensure a safe climate is a critical and urgent public health priority requiring advocacy along with 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, although some of the responses may include traditional public health actions.
 3. Response measures have to aim for both mitigation and adaptation.
 4. A broad suite of policy measures are required urgently; these include promoting energy efficiency, reducing energy demand, pricing carbon and supporting renewable energy.
 5. Many actions to promote a safe climate have additional benefits for health and well-being, including greater physical activity, improved community amenity and healthier diets.

Summary: A safe environment and climate are 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, business leaders and the general public.

Responsibility: PHAA's Ecology and Environment Special Interest Group (SIG)

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SAFE CLIMATE POLICY

This policy should be read in conjunction with existing PHAA policies on: Health Effects of Fossil Fuels, Environmental Health Justice, Ecological Sustainable Development, Nanotechnology, Sustainable Population for Australia, Nuclear Industry, Preparing for Peak Oil, Low Emissions and Active 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)
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 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 inherent rights for existence beyond any 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 are essential to current and future human health and wellbeing (2).

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).

7. 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)
8. While the figure of a two degree centigrade ¹ 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).
9. However emissions and rates of emissions are increasing (6). The probability of passing the 2 degree guardrail is high (7).
10. A carbon budget gives a method for understanding the effects of atmospheric greenhouse gas (GHG) levels on global warming and climate since it is the cumulative stock of GHGs in the atmosphere that forces total warming. Models estimate that to have a 50 per cent probability of not exceeding 2 degrees C, humanity can only emit 1,440 Gt of CO₂ between 2000 and 2050. A 75 per cent probability budget is 1000Gt. Emissions in the first decade of this century were 234Gt (8). Including other GHGs reduces volumes of CO₂. At current emission trajectories it is likely we will pass 2 degrees in the 2040s (8).
11. Australia’s warming is documented in the CSIRO 2007 Technical Report (9) updated in 2010 (10). Already, since 1910 Australian mean surface air temperature has risen 0.9°C. Of this, 0.7°C has occurred since 1960. In more arid regions, increases of up to 1.5 to 2°C have occurred. There have been more hot nights (>20°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. One significant consequence of increasing heat is changes to fire dynamics. There were significant fire events Victoria 2003, 2006, 2009 in which two thirds of the Crown forests have burned.
12. Changes to rainfall amount and seasonality are likely to be detrimental to agriculture and water supply for residential use 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 ² (11).

¹ Unless otherwise specified, all degrees in this paper are centigrade.

² El Nino Southern Oscillation, Indian Ocean Dipole, Southern Annular Mode interactions.

13. Globally, average sea level has risen since 1870 by about 200mm. During 1990 to 2007 sea level rise has been 2.2 to 4.3mm per year in the south and east of Australia and 3.0 to 9.5mm per year in the north and west (9).
14. The future forecast in the CSIRO report, suggests average temperate increases for Australia by 2050 of at least 1.5°C in eastern coastal regions and 2°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), which increases the frequency of heat stress events.
15. Although many of the future impacts on health and society are uncertain, many are also predictable. They may be considered as direct and indirect impacts. Direct impacts include those from more frequent extreme weather including heat waves, ocean acidification and eutrophication, 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 may have larger effects than direct ones.
16. Cumulatively the direct and indirect health effects on health and wellbeing are likely to be detrimental. The adverse effects in Australia are likely to include increased heat related deaths and illness (12, 13). Without rapid mitigation the number of heat related deaths according to some estimates may rise to 8,000 to 15,000 annually by 2100, compared to about 1,100 now, or 4,000 to 8,000 with strong emission controls (12).
17. In the longer term it 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 limitations on agriculture, livestock and the ecosystem on which human habitation and industrial society is predicated are recognised but have not been quantified (7, 14, 15). The significance of such scenarios for human survival is profound.
18. The Paleoclimate record indicates that the planet with levels of greenhouse gas (GHG) similar to those we approach will have temperatures and sea levels that are outside human experience (16, 17).
19. In addition to warming, increased CO₂ is causing ocean acidification (3) and hypoxia (18) with effects on marine physics, chemistry (calcium metabolism) and biology, affecting ocean food chains, reduced plant nutrition and increased levels of plant toxins (19, 20).
20. Changes in vector- borne diseases are anticipated (12), although the magnitude and direction of these changes are unclear (21).
21. Mitigation and adaptation measures have the potential for unintended health consequences that will need to be avoided where possible; for instance there may be and increased risk of dengue fever with more use of water tanks (22).

22. Uncertainties exist about some possible health impacts. Further research is needed to advise policy development.
23. Mental health will be adversely affected in many parts of Australia, particularly in rural and remote areas (23). The adverse impact on Indigenous communities is also likely to be more severe than on the mainstream (24). In the longer term having to move settlement to avoid rising sea levels is likely to be distressing.
24. Regionally, as countries in south Asia suffer impacts of global warming, climate displaced persons may increase, as well as immigrants from low lying Pacific and Indian Ocean island states (12). Consequences of ecosystem disruption will lead to loss of agricultural productivity, changes or collapse to fisheries, compounding psychosocial distress. Within Australia, migration from hotter to cooler regions may occur. Ultimately these changes present severe challenges for national economies.

25. Australia’s greenhouse gas emissions in 2012 stood at 543.6 Mt CO₂-e (558.8 Mt CO₂-e if land use change is included). Table 1 shows 2012 and 2011 emissions by sector compared to the 1990 base year. (25) Excluding land use change, this is 23.7 tonnes of CO₂-e per person in 2012, putting Australia among the top per capita emitters. In 2005 the average OECD country emissions were 14 t CO₂-e and non-OECD 7t CO₂-e (26).

Table 1:	Emissions by sector		
	2012	2011	1990
Stationery	283.2	282.6	194.6
Transport	90.2	88.5	60.3
Fugitive	39.9	38.9	31.9
Energy ST	413.4	409.9	286.7
Industry	31.2	34.1	24.7
Waste	11.7	13.0	17.0
Agriculture	87.4	84.6	86.5
Total	543.6	541.5	415.0

26. 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 its impact and established a plan to reduce it (27). 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).
27. The causes of environmental degradation, economic inequity, poor health and the actions to ameliorate these are related.. 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 (2, 28-35).
28. Population size and consumption are key drivers of impacts on the environment. GDP generating activity is directly related to GHG emissions³, 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

³ Identified in economics as the Kaya Identity: CO₂ emissions = global population x global per-capita GDP x energy intensity of world GDP x emission intensity of energy, which underpins the IPCC SRES.

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.

29. Adaptation to global warming effects 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 (29, 36, 37).
30. Global warming effects are highly interconnected with agricultural productivity and therefore long term food security.
31. The Climate Change Authority recommends that a fair share for Australia to contribute to global greenhouse gas emissions reduction would be a 19% (15% plus the 4% Kyoto period credit) reduction by 2020 in relation to 2000 levels. (38)

The Public Health Association of Australia affirms the following principles:

1. Action to ensure a safe environment and climate is a critical and urgent public health priority.
2. Ensuring a safe climate is requires 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, and therefore public health action beyond the more traditional approaches may be required.
4. Response 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 socially and environmentally harmful should be deployed rapidly while development of more sustainable technologies 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, and to motivate behaviour change by individuals and corporations.
8. As a general principle, the cost of pollution should not be externalized to the environment or borne by the general population, but should be incurred by the producers (39).

9. A broad suite of policy measures are required urgently; these include reducing energy demand, promoting energy efficiency, pricing carbon and supporting renewable energy.

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

1. Strengthening existing carbon pricing mechanisms to signal more realistic costs of use of fossil fuels and drive use of alternative renewable energy.
2. Maintain independent scientific authorities such as the Climate Change Authority to advise government on scientifically defensible GHG emission reduction targets and trajectories.
3. The existing Clean Energy Futures legislation should be maintained until a well detailed alternative set of policies to reduce GHG emissions have been developed and publicly reviewed.
4. Maintain and increase the Renewable Energy Targets, and other measures to promote uptake of renewable energy technologies that are currently available for deployment.
5. Remove subsidies to fossil fuel energy and fossil fuel dependent transport sectors, (40).
6. Increase direct support for energy efficiency and demand reduction measures.
7. Regulate for emission limitations on all emission sources: transport, housing, industries.
8. 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.
9. Disallow construction of any new coal-fired power stations, or coal mines.
10. Recognise the health and climate harms of policies that promote fossil fuel exports
11. Protect and preserve forests and native vegetation and promote reforestation, promoting agricultural stewardship of land that includes carbon biosequestration.
12. Provide financial incentives for increasing active transport eg abolish GST on bicycles
13. Fund social marketing campaigns to explain the action to reduce global warming and climate change risks being taken, and support the behavioural changes necessary to achieve this (41).

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

1. Advocate for the uptake and implementation 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 and climate change.
2. Advocate for Australia to develop and implement a policy on refugees dislocated by climate change impacts, particularly from the Pacific small island states.
3. Advocate for development and implementation by government of policies and strategies that both promote health and reduce adverse environmental consequences from global warming.
4. Provide leadership to promote a positive vision of a viable, healthier ecologically sustainable society with an economic system that prioritises health and wellbeing.
5. Ensure that advocacy includes measures designed to raise community awareness of and commitment to implementing the necessary policy, structural and systemic, political and behavioural changes for safe climate.
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. Inform the public, health professionals and policy makers of the potential adverse health and social impacts of fossil fuel developments including unconventional gas extraction and coal mining and combustion.
8. Work with other organisations/agencies at the national, jurisdictional and local level to support these actions.

ADOPTED 2010, REVISED AND RE-ENDORSED IN 2013 AND 2014

The policy was first adopted at the 2010 Annual General Meeting of the Public Health Association of Australia. The latest revision has been undertaken as part of the 2014 policy review process.

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