



Framework for a National Strategy on Climate, Health and Well-being for Australia

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The development and implementation of this Strategy is supported by the organisations whose logos appear below:



Contents

Foreword	3
Overview (Summary)	3
Why we need a National Strategy on Climate, Health and Well-being for Australia	6
Introduction	6
The Policy Gap	6
A Shared Agenda	7
The Health Imperative: ‘Right to Health’ and Health Opportunities	8
The Climate Imperative	11
The Economic Imperative	12
A Policy Framework for a National Strategy on Climate, Health and Well-being for Australia	14
Vision	14
Principles	14
Application	15
Roles and Responsibilities for Government	15
Areas of Policy Action	17
Health-Promoting and Emissions-Reducing Policies	17
Supporting Healthy Communities	19
Education and Capacity Building	22
Inter and Intra Governmental Collaboration	23
Emergency and Disaster-preparedness	23
A Sustainable and Climate-resilient Health Care Sector	24
Research	26
Implementing the Strategy	27
Governance	28
Stakeholder Engagement	29
Evaluation, Monitoring and Reporting	29
	1

A Pictorial Explanation of the National Strategy on Climate, Health and Well-being	30
References	30

Foreword

This section will contain a message from a leading expert with commentary on the need for and value of a National Strategy on Climate, Health and Well-being for Australia.

Overview (Summary)

The framework for a National Strategy on Climate, Health and Well-being outlines the policy actions that must be taken at the Federal, State/Territory and local level to support Australia in meeting its national interest in protecting population health from the impacts of climate change and meeting its international obligations in relation to the Paris Agreement. This framework has been developed following extensive consultation with health care and policy stakeholders and draws on the findings from previous work, including response to the *Discussion Paper: Towards a National Strategy on Climate, Health and Well-being*, published by the Climate and Health Alliance in 2016. This paper identified the health impacts of climate change in Australia, and called on the Federal Government to take a leadership role in ensuring Australia is adequately prepared to both manage these risks and meet its Paris Agreement commitments through the development and implementation of a National Strategy on Climate Health and Well-being. This report is available at <http://www.caha.org.au/national-strategy-climate-health-wellbeing>:

While there is an expectation that the Federal Government provide leadership across climate change and health, consultation with stakeholders highlighted the need for a whole of government approach, with shared responsibility for implementation across multiple levels, sectors and jurisdictions. Political will and bipartisan support will be essential in developing and maintaining the necessary governance, funding, policy, infrastructure and resources required to achieve a shared vision for ***a fair and environmentally (ecologically) sustainable national policy framework that recognises, manages and addresses the health risks of climate change and promotes health through climate change action.***

The overall purpose of the framework for a National Strategy on Climate, Health and Well-being is to:

- Present a high-level framework to guide government policy and decision-making processes in addressing climate change and health risks
- Enable the Federal Government to take a leadership role in protecting the health and well-being of Australian communities from the impacts of climate

change

- Increase awareness and understanding of the health impacts of climate change in Australia and ensure these issues are included in the development and implementation of policies addressing climate change and emissions reduction
- Assist the Federal Government in fulfilling its international obligations under the United Nations Framework Convention on Climate Change (UNFCCC), the Paris Agreement, and its commitments to the Sustainable Development Goals (SDGs)
- Enhance both collaboration vertically (involving national, state and local governments) and horizontally (across multiple sectors and within the health sector itself), to support healthy, sustainable, low carbon, climate-resilient communities and health care services
- Ensure the strong economic imperative for action on climate change is reflected in the adoption of “win-win” climate change mitigation and adaptation strategies, which both reduce greenhouse gas emissions and the social and economic burden of ill-health in the population

The Strategy covers seven areas of policy action:

- 1 Health-Promoting and Emissions-Reducing Policies** – policies that reduce the risks to people’s health and well-being while reducing greenhouse gas emissions
- 2 Supporting Healthy Communities** – enhancing the capacities of communities to anticipate their climate risks and reduce impacts on health and well-being
- 3 Education and Capacity Building** – educating and raising awareness of the health impacts of climate change among Australian communities and the health workforce
- 4 Inter and Intra Governmental Collaboration** – establishing effective governance arrangements which facilitate horizontal and vertical collaboration in implementing climate change and health objectives, projects and initiatives
- 5 Emergency and Disaster-preparedness** - supporting the health care sector in identifying vulnerable populations and infrastructure and in preparing for the impacts of climate change

6

A Sustainable and Climate-resilient Health Care Sector – a low/zero carbon, environmentally sustainable, climate-resilient health care sector which can effectively respond to the health impacts of climate change

7

Research – supporting Australia’s health and climate research capacity to evaluate Australia’s specific health threats, priority needs and to monitor trends and opportunities for maximising multi sector benefits

This framework for a National Strategy on Climate, Health and Well-being is presented in three sections:

1. *Why we need a National Strategy on Climate, Health and Well-being for Australia*, which highlights the climate, health and economic imperatives for action;
2. *The Policy Framework for a National Strategy on Climate, Health and Well-being for Australia*, which details the vision, principles, and areas of policy action needed to achieve the desired outcomes of the Strategy;
3. *Implementing the Strategy*, which details the governance arrangements and mechanisms for evaluation, monitoring and reporting on the Strategy’s progress.

Why we need a National Strategy on Climate, Health and Well-being for Australia

“Climate change is the defining health issue of the 21st Century.” WHO Director General, Dr. Margaret Chan

Introduction

A coordinated national effort is required to ensure that the Australian health care sector is resilient and well prepared to protect the health and well-being of Australian communities from the impacts of climate change.

This Strategy will provide a framework for government at all levels to work collaboratively with the health care sector to both ensure the health and well-being of present and future generations is protected and the health co-benefits of climate change action are captured.

The Policy Gap

Climate change poses significant immediate and long-term risks to the health of Australians. Despite the substantial body of scientific evidence highlighting these risks, and growing evidence that climate change represents a ‘health emergency’, human health has been afforded a lack of priority in Australia’s national mitigation and adaptation policy and strategy actions.

In ratifying the Paris Agreement in November of 2016, the Australian Government formally agreed to consider the ‘right to health’ of citizens in the context of the nation’s climate change response, and to recognise the health co-benefits in developing mitigation strategies. In addition, the National Climate Resilience and Adaptation Strategy, published by the Commonwealth Government, highlights that all levels of government share responsibility in responding to the challenge that climate change presents to health and well-being, while acknowledging that there are no national programs specifically targeting this area. While there are examples of adaptation and mitigation actions being undertaken at the State, Territory and local levels that focus on climate change and health impacts, this is occurring in the absence of an overarching policy directive at the Federal level.

Several other nations have taken policy action to address the risks to health presented by climate change. The United States Centers for Disease Control and

Prevention (CDC) is a Federal agency and leading national public health institute that outlines 11 different policy actions for climate and health. The CDC also actively promotes climate change and health research, along with supporting efforts to enhance preparedness and management of the health risks from climate change. In 2015, the CDC published the Building Resilience Against Climate Effects (BRACE) framework, specifically designed to guide the health sector in developing strategies and programs to assist communities in preparing for the health impacts of climate change.

The European Union (EU) has provided a guiding framework for member states on protecting the health of their communities in an environment increasingly shaped by climate change, and several EU members have identified health as a priority area in national climate adaptation strategies. The UK has also taken sector-specific action in implementing a Sustainable Development Strategy for the National Health Service (NHS). This policy includes both mitigation and adaptation strategies, with the objective of reducing the environmental impact of the health sector, building capacity to respond to the health impacts of climate change and extreme weather events and improving the sector's economic, social and environmental sustainability.

The efforts of nations around the world, along with those of State, Territory and local governments, provide key insights into how policies can be developed to address the health risks posed by climate change and better protect the health and well-being of communities. This framework is designed to help the federal government identify key opportunities for policy action that will support Australia in meeting its national interest in protecting population health from the impacts of climate change while simultaneously meeting its international obligations in relation to the Paris Agreement.

A Shared Agenda

Consultation with health care stakeholders highlighted a clear expectation that governments at all levels work together and take steps to ensure that there is ongoing stakeholder engagement on climate and health policy in Australia. In particular, there is an expectation that the Federal Government provide leadership across climate change and health and work together with the health care community to take action to protect and promote people's health.

This Strategy will provide a shared agenda to assist in achieving the vision of a fair and environmentally (ecologically) sustainable national policy framework that recognises, manages and addresses the health risks of climate change and that promotes the health benefits of climate action.

This Strategy will help to guide governments and the health care sector in considering the health impacts of climate change and applying a health lens to the decision-making process.

A whole of government approach is needed, with shared responsibility across multiple levels, sectors and jurisdictions. Political will and bipartisan support will be essential in formalising this approach and developing and maintaining the necessary governance, funding, policy, infrastructure and resources required to address climate change and its impacts on the health and well-being of the Australian community.

The Health Imperative: 'Right to Health' and Health Opportunities

There is growing recognition in international covenants of the links between climate change and the human right to health.¹ This is recognised in the text of the United Nations Framework Convention on Climate Change (UNFCCC) as well as the recent Paris Agreement.

Article 1 of the UNFCCC defines the adverse effects of climate change as “changes to the physical environment resulting from climate change that have significant deleterious effects on human health and welfare”. Article 3 calls upon Parties to the Convention to take measures to minimize the causes of climate change and minimize its adverse effects, including on health. Article 4 further calls for Parties to minimize the public health implications of mitigation and adaptation projects and measures they undertake, using relevant tools such as impact assessments.

The Paris Agreement of the United Nations Framework Convention on Climate Change (UNFCCC), obliges parties to that agreement to consider their citizens “right to health” in their climate change response, and to recognise the health co-benefits in choices made in relation to mitigation action.

¹ https://unfccc.int/files/parties_observers/submissions_from_observers/application/pdf/676.pdf

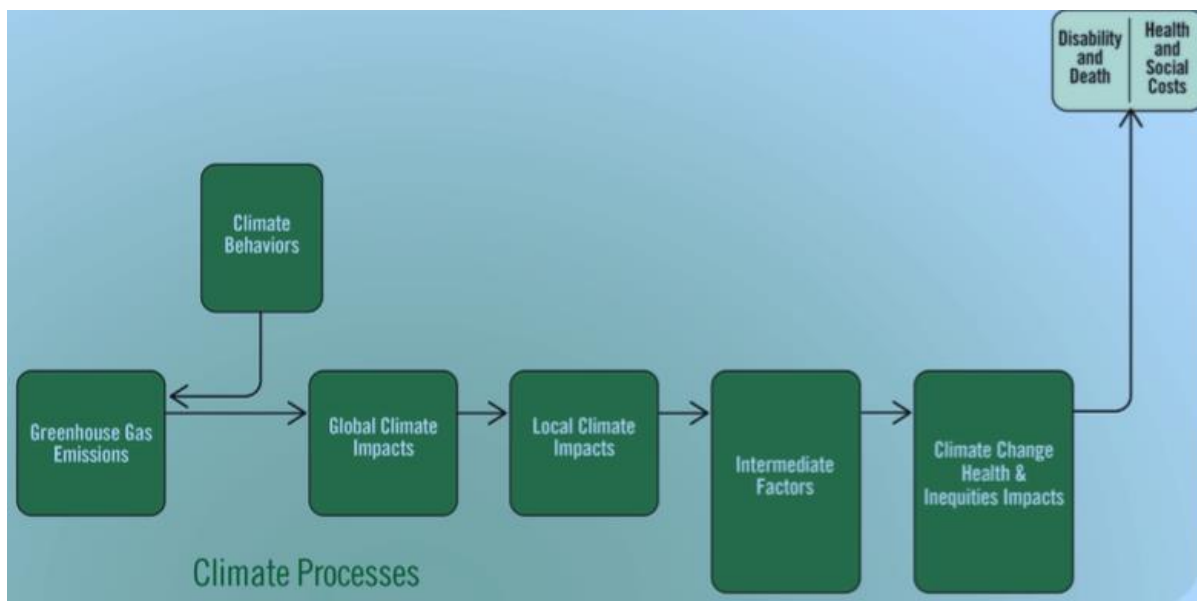



IMAGE: Climate Change, Health, and Equity: Opportunities for Action, March 2015







The Health Impacts on Climate Change in Australia

Rising global temperatures due to climate change have been linked with both direct and indirect impacts on human health, and addressing these impacts is of vital importance to protecting the health of Australian communities.

For example, anthropogenic climate change is contributing to record-breaking temperatures and has increased the likelihood that Australians will be exposed to extreme weather events, such as dramatic flooding in Queensland and Victoria in 2010/11, and severe heatwaves experienced across Australia in the summers of 2009/10, 2012/13, 2013/14, and 2016/17.

The current and projected impacts of climate change on public health in Australia include:

<p>EXTREME WEATHER EVENTS</p> 	<p>Increased intensity, duration and frequency of extreme weather events such as floods, storms and heatwaves, placing increasing pressure on health services and putting more Australians at risk of illness</p>
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<p>INFECTIOUS DISEASES</p> 	<p>A warmer climate and changing rainfall patterns will increase the range and prevalence of food, water and vector-borne diseases such as E. coli and dengue fever, which is expected to spread as far south as northern NSW by 2100</p>
<p>FOOD AND WATER SECURITY</p> 	<p>Changes in prevailing weather patterns may threaten water sources and the productivity of major agricultural regions such as Western Australia and Victoria, with implications for ensuring food and water security for a growing population</p>
<p>Occupational health impacts</p> 	<p>Hotter temperatures place outdoor and manual labourers at increased risk of heat-related illnesses, cardiac arrest and work accidents, while the increased incidence of extreme weather events increases occupational hazard for emergency services</p>
<p>Mental illness and stress</p> 	<p>Ongoing environmental change and more frequent and severe weather events, combined with the social and economic impacts of climate change, increase the risk that Australians will experience mental illness and stress</p>
<p>Aeroallergens and air pollution</p> 	<p>Increases in atmospheric temperatures may lengthen the pollen season and alter chemical reactions of some air pollutants such as ozone and particulate matter, increasing exposure to aeroallergens and aggravating respiratory diseases such as asthma and allergic rhinitis, while increasing cardiovascular mortality</p>
<p>Vulnerable populations</p> 	<p>Vulnerable populations will suffer disproportionately the adverse health impacts of climate change on Australia, with elderly, young, disabled, socioeconomically disadvantaged and indigenous Australians identified as being particularly vulnerable</p>

The Opportunity for a Healthier Nation

A substantial and growing body of scientific evidence is highlighting that the public health risks posed by climate change represent a ‘health emergency’. In light of this, the current lack of priority afforded to the impacts of climate change on human health by the Federal Government is placing Australian communities at unnecessary and avoidable risk.

With Australia's signing of the Paris Agreement and the associated obligation to consider citizen's "right to health" in the national climate change response, there is both an imperative and opportunity to ensure the Australian community and the health sector are better prepared to protect Australians from the immediate and long-term health risks posed by climate change.

This Strategy will assist Australia in meeting its obligations under the Paris Agreement, while ensuring action is taken towards achieving a better health service and a more sustainable, inclusive and resilient health system for all.

The Climate Imperative

Our climate is changing. Driven by atmospheric concentrations of carbon dioxide, methane and nitrous oxide unprecedented in at least the last 800,000 years, average global temperatures have risen by roughly 0.85°C since the pre-industrial era, with the 20 hottest years on record having occurred since 1981. This warming trend continued in 2016, the hottest year on record, which surpassed the previous record set in 2015, which had in turn surpassed the record set in 2014. The rate of this temperature increase is impacting on natural and human ecosystems across the planet, the health and stability of which we rely on for clean water, food, safety and security, and which enable us to live long and healthy lives.

The effects of climate change impact all Australians. From our unique ecosystems to our agriculture, infrastructure and communities, our interaction with and reliance on the environment means that changes to our climate will affect all our lives. Climate-mediated events such as the 'Angry Summer' of 2013/2014, which saw over 150 temperature records broken nationwide, and the unprecedented coral bleaching across the Great Barrier Reef in 2016 have clear implications for our environment, tourism and the economy, and the health and safety of our communities.

Climate change is not simply an environmental issue, but an economic and societal issue as well. Australia's changing climate represents a major challenge for individuals, communities, governments, business, industry and the environment. Decisions made today about emissions energy, infrastructure, water management, agriculture, biodiversity and health will have lasting consequences for all Australians, and climate change action is therefore an important tool for protecting our health and prosperity. Effective adaptation and mitigation activities taken today are an opportunity to protect our unique environment and the health and well-being of our communities for generations to come, while also ensuring the continued economic prosperity of the nation.

The Economic Imperative

Tackling climate change has been described as potentially the greatest global health opportunity of the 21st century. Many climate change mitigation and adaptation policies offer significant co-benefits that will result in reduced rates of obesity, diabetes, cardiovascular and respiratory disease, improved life expectancy and reduced burden on health care systems. These additional co-benefits serve as further evidence that climate change action should not be viewed as a cost, but rather as an opportunity to reduce the social and economic burden of ill-health while making accelerated progress towards climate goals.

Countries such as the United States and member nations of the EU are already harnessing these co-benefits. The European Commission estimates that reduced air pollution from climate change mitigation policies could deliver health benefits of up to €38 billion per year by 2030, while the US EPA estimates that the health benefits from implementing the Clean Power Plan could result in a total of 3600 fewer premature deaths and 90,000 fewer paediatric asthma attacks in 2030 alone, resulting in an annual economic saving of up to \$54 billion. Far from representing an economic burden, the human health benefits associated with air quality improvements from these policies can offset the cost of implementation by up to 10x, even before the inclusion of other economic benefits such as avoided damage to agriculture or public buildings and infrastructure from corrosive pollutants.

Australia is recognised as one of the developed nations most vulnerable to the impacts of climate change. As such, the co-benefits of climate change adaptation and mitigation activities represent a crucial health opportunity for the nation. Extreme heat and weather events already present major risks to Australian society, and with climate change expected to increase the incidence and severity of both these scenarios, actions to mitigate and adapt to their impacts are a particularly strong source of co-benefits. Absenteeism and reduced work performance due to extreme heat days already represents an economic burden of roughly USD\$6.2 billion annually, while the economic costs associated with the health and social impacts of the Black Saturday bushfires and 2011 Queensland floods totalled \$3.9 and \$10.2 billion respectively, sums greater than the economic costs from infrastructure damage.

Significant action is underway globally to recognise, quantify and capture the social, environmental and health co-benefits of climate change action. In particular, the cost savings of the health co-benefits achieved by policies to reduce greenhouse gas emissions are potentially large, and offer not only an opportunity to protect the health

and well-being of Australians, but also to prevent health impacts which could result in significant additional health expenditure from government and personal finances.

A Policy Framework for a National Strategy on Climate, Health and Well-being for Australia

Vision

“A fair and environmentally (ecologically) sustainable national policy framework that recognises, manages and addresses the health risks of climate change and promotes health through climate change action.”

Principles

1. **The right to health** - to fulfil the right to health, action must be taken to protect the environment and achieve sustainable development that meets the needs of present and future generations.
2. **Environmental protection as a foundation for health and well-being** - the dependence of human population health on a healthy functioning natural environment is recognised in many international treaties and must be core to policy development on climate change and health. ²
3. **Intragenerational and intergenerational equity** - this refers to the obligation to ensure those most vulnerable to the impacts of climate change are protected, as well as to ensure the rights of all people and communities to access societal and environmental conditions for optimum health and well-being, now and for future generations.
4. **Minimising and managing risk** - the lack of attention by Australian governments to the health impacts of climate change is placing Australians at unnecessary and avoidable risk. Reducing and managing current risks and evaluating future risk to health from climate change must be a key element of policy development, and is a statutory duty for directors under the Corporations Act in Australia.
5. **Indigenous recognition and reconciliation** - the unique perspectives of Australia’s Indigenous people and their enduring struggle for reconciliation must be recognised in the development of climate mitigation and adaptation policies

² Article 1 of the Legal Principles for Environmental Protection and Sustainable Development, adopted by the Expert Group of the Brundtland Commission; Rio Declaration;

6. **Community safety and resilience** - the safety and protection of the community must be paramount in policy development, along with the goal of creating the conditions to ensure communities are prepared for and able to respond to the impacts of climate change
7. **Citizen engagement** - all policy development must occur in consultation with, and accounting for the stated needs and priorities of, affected communities and stakeholders

Application

This framework is targeted at the federal level as it requires national leadership and coordination. However, it is intended that the National Strategy facilitate both horizontal and vertical intergovernmental collaboration within the health sector and across multiple sectors. Thus, it should be applicable to national, state/territory, and local government, as well as across all national government departments and agencies, including transport, energy, environment, agriculture, and infrastructure.

Roles and Responsibilities for Government

The consultation process which informed the development of this Strategy identified key responsibilities for the federal government in providing leadership across climate change and health and facilitating a whole of government approach to protect the health and well-being of the community. The Federal Government has an overall responsibility in developing and providing oversight for a National Strategy on Climate, Health and Well-being to provide a clear roadmap or plan of action detailing the policies, actions targets and responsibilities required at multiple levels and sectors of government to address the health impacts of climate change. This includes the establishment of appropriate governance arrangements and securing funding to facilitate the necessary partnerships for shared action and enhance capacity, coordination and leadership on climate change and health.

A crucial role for the Federal Government in maximising health outcomes for communities will be in building Australia's health and climate research capacity. The Federal Government has a responsibility to ensure policy development is informed by a deep understanding of the specific health threats climate change poses for Australian communities. Supporting the establishment of world class climate and health research capacity will help to identify priority needs and key vulnerabilities, while also ensuring the ongoing development and monitoring of the Strategy and associated policy actions is informed by robust, Australia centric research.

The Federal Government and federal and State Departments of Health also have a

responsibility to support the creation of a climate resilient health sector. This involves developing policies that increase the sustainability of the health care sector itself and appropriate policies and procedures to ensure the resilience of the sector so that it can operate effectively in a changing climate and protect Australian communities from the health impacts of climate change. Engagement and education across all levels of the health care sector is necessary to facilitate the participation, research and responsibility across multiple levels and jurisdictions needed for successful action in this area.

At the community level, the development of policies which resource and support communities in anticipating and adapting to climate risks is essential to protecting health and well-being. Federal, State and local governments have a responsibility in ensuring ongoing engagement and education efforts are made to enhance understanding of specific community vulnerabilities and opportunities for action to avoid health risks and improve health outcomes.

International obligations

The implementation of the National Strategy on Climate, Health and Well-being will assist Australia in meeting its obligations under the following international conventions, agreements, and obligations, including:

- o **United Nations Framework Convention on Climate Change (UNFCCC)** - this international treaty obliges parties to stabilise 'greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous interference with the climate system'. As a party to the Convention, Australia is obliged to make national commitments consistent with its object and purpose, and to develop national plans to mitigate climate change, reduce and prevent greenhouse gas emissions.
- o **Paris Agreement** of the United Nations Framework Convention on Climate Change (UNFCCC), obliges Australia as a party to that agreement to consider its citizens' "right to health" in its national climate change response, and to recognise the health co-benefits in choices made in relation to mitigation action.
- o **Sustainable Development Goals (SDGs)** - of particular relevance to this strategy are SDG Goals 1. Good Health and Well-being and 13. Climate Action. Australia has adopted the SDGs, and as such the federal government is expected to take ownership and establish national frameworks for the achievement of the 17 Goals, and for follow-up and review of the progress made in implementing the Goals.

Areas of Policy Action

Policy recommendations will focus on areas where there is an identified lack of consideration for the health impacts of climate change and/or opportunities for capturing co-benefits of climate action and improving the resilience and health outcomes for Australian communities.

The seven areas of policy action

The Strategy is structured around seven key areas of policy action. These have been identified through research and thorough consultation with health professionals, health leaders, decision makers and experts in climate change and health.

- 1) Health-Promoting and Emissions-Reducing Policies
- 2) Supporting Healthy Communities
- 3) Education and Capacity Building
- 4) Inter and Intra Governmental Collaboration
- 5) Emergency and Disaster-preparedness
- 6) A Sustainable and Climate-resilient Health Care Sector
- 7) Research

Under each of these areas of policy action, the desired outcome is identified, along with an overarching policy direction and specific policy recommendations for achieving this outcome.

Health-Promoting and Emissions-Reducing Policies

Policies that reduce risks to people's health and well-being while reducing greenhouse gas emissions are win-win options. Fortunately, many carefully designed climate mitigation policies (particularly in the areas of energy, transport, buildings, and food/agriculture) can achieve both these goals.

Outcome:

Cleaner air, healthier people: reduced morbidity and mortality associated with pollution from fossil fuel based energy sources for electricity (coal, gas, diesel) and transport (oil, diesel and gas).

Policy direction 1:

Rapid transition towards renewable energy resources for energy and transport to reduce incidence of cardiovascular, respiratory and other illnesses related to air pollution associated with fossil fuel combustion.

Policy recommendations:

- Establishment of national emissions reduction targets consistent with the recommendations of the Climate Change Authority and based on Australia's fair share of the global task to reduce emissions
- A rapid phase out of coal-fired power for electricity
- Reform of the national electricity grid to allow for a greater proportion of distributed generation from renewable energy sources such as wind and solar
- Removal of incentives (subsidies) currently available to fossil fuel based energy industries
- Application of financial disincentives to discourage investment in and utilisation of fossil fuel based resources and technologies (ie carbon pricing)
- Financial incentives to reduce energy consumption and improved energy efficiency and fuel switching (to non fossil fuel-based resources)
- Programs and incentives to encourage utilisation of active (walking and cycling) and public forms of transport (bus, tram, train, and car sharing)
- Investment in low or zero emissions transport infrastructure (eg passenger/freight rail, bicycle paths)
- Establishment of national emissions standards for motor vehicles in line with World Health Organisations recommendations
- Development of incentives to encourage take-up of electric vehicles and expansion of associated infrastructure

Outcome:

Healthy natural environments in both urban and rural settings support the health and well-being of the community.

Policy direction 2:

Program and initiatives that ensure the environmental conditions that favour healthy people are at the centre of planning and infrastructure policy decisions.

Policy recommendations:

- Government incentives to encourage low- and zero-carbon, climate resilient buildings and infrastructure (including in the health sector)
- Amendment to building codes to obligate developers to incorporate climate resilience measures in construction
- Obligatory health impact assessments in evaluation of application for land use and land use change
- Development of incentives to protect and restore biodiversity as a planning

priority in both urban and rural areas

Policy direction 3:

A healthy low emissions food system that contributes to environmental values and optimises health and well-being.

Policy recommendations:

- Incentives for farmers to invest in low emissions resources, technologies and food production
- Provision of public funding for education programs to promote healthy, low emissions diets and lifestyles

Policy direction 4:

Application of a health lens to policies addressing climate change and emissions reduction

Policy recommendations:

- Independent health impact assessments to be mandatory for all energy and transport infrastructure projects
- Evaluation of the health costs and benefits associated with all proposed energy and transport infrastructure projects to be part of all cost-benefit analysis

Policy direction 5:

Application of a climate lens to public health policies

Policy recommendations:

- All policy development (federal, state and municipal levels) to include evaluation of climate risks - to health infrastructure, population and community health, the health workforce, emergency and disaster preparedness, and safety and quality of care
- Decisions about health care procurement to include life cycle analysis and evaluation of embodied carbon accompanied by incentives for low and zero-carbon purchasing decisions

Supporting Healthy Communities

Policies that enhance the capacities of communities to anticipate their climate risks, reduce the impacts of climate change events on health and well-being, and develop

the resources to facilitate adaptation over the short, medium and long term.

Outcome:

Healthy, resilient communities with the capacity to respond to the impacts of climate change, and who are informed and engaged with regards to development of policies addressing climate change and health.

Policy direction 1:

Enable the preparation and adaptation of community based health and social service organisations to deal with climate change related emergencies (for example, extreme weather events, infectious disease outbreaks).

Policy recommendations:

- Resourcing and supporting the community based health and social service provider organisations to develop their understanding of climate risks to service delivery and the population groups they serve, especially populations with the least resources eg low income.
- Resourcing and supporting the community based health and social service provider organisations to identify the risks from extreme weather to their service (organisation and service recipients) and prepare disaster management and service continuity plans that enhance resilience of their organisation and community,^{3 4}
- Adaptation of service delivery contracts to fund community based health and social service organisations for their contributions to emergency planning, response and recovery operations

Outcome: People in local communities are better able to survive, cope with and recover from extreme weather emergencies, and a national network of organisations working within a consistent framework to enhance this resilience.

Policy direction 2: Effectively integrate community based health and social service organisations into emergency planning at all levels of government.

Policy recommendations:

- Effective inclusion of community based health and social service provider organisations in planning processes (national bodies at the national level,

³ ACROSS has developed a toolkit to assist organisations working to develop organizational can community resilience that could be part of such an initiative. See: <http://resilience.acoss.org.au/>

⁴ The most substantial body of evidence on resilience in disaster readiness can be found in: Norris FH et al (2007) Community Resilience as a Metaphor, Theory, Set of Capacities, and Strategy for Disaster Readiness. American Journal of Community Psychology, Vol 41(1-2): 127-150.

state bodies at state level and relevant service providers at local government level) with a focus on health and well-being outcomes for communities.

- Collection and distribution of planning data relevant to community health and well-being needs at the relevant levels (for example, national and state levels communication media used and needed by vulnerable populations; at the local level, common vulnerabilities of people in the locality).

Outcome:

Better health and well-being outcomes from emergency response and recovery facilitated by the coordination and engagement of the service sector.

Policy direction 3:

Explore a Health in all Policies approach⁵ to addressing the social determinants of climate change impacts on community health and well-being at national, state and local government levels.

Policy recommendations:

- Identifying the policy areas contributing significantly to climate change impacts on communities and population groups most at risk (e.g. housing, food security, energy and others)
- Examining the policy options to reduce climate change impacts in the relevant sectors.

Outcome:

Enhanced community resilience through the implementation of policy options that address the social determinants of climate change impacts on communities and vulnerable population groups.

Policy direction 4:

Establishing a national health promotion program

Policy recommendations:

- Establishing a national health promotion program promoting climate change mitigation and adaptation action at multiple levels.

⁵ Health in all Policies (HiAP) is an established approach to working on the social determinants of health across relevant areas of government. It is used to address complex issues such as health inequities, social determinants of health, and climate change for example. It has been used in South Australia for many years. A summary of the SA approach to the SDH can be found at: <http://sydney.edu.au/health-policy-network/images/content/pdfs/wildgooseludford270712.pdf>

Outcome:

Greater community awareness of, and action to address, climate change at home, in organisations and communities.

Education and Capacity Building

While most Australians recognise that climate change is occurring, policies that educate and raise awareness of the health impacts of climate change help to build resilience in the Australian community as well as within the health workforce. Processes and mechanisms for targeted communication and engagement are needed help to overcome issues of psychological distancing, motivational issues, perverse incentives and information asymmetry to enhance adoption of energy efficient, lower emissions and climate resilience lifestyles and behaviours.

Outcome:

The general public and health workforce is more educated and aware of the health risks of climate change, and better prepared to recognise and react to these risks.

Policy direction 1:

Educating and training the current health workforce on the health impacts of climate change.

Policy recommendations:

- Establish a national education and training program for health workers on recognising, preparing and responding to the health impacts of climate change. This program also has the potential to be extended to other policy sectors

Policy direction 2:

Enhancing the climate change and health literacy of the general public

Policy recommendations:

- Develop a national educational campaign to inform communities about the health risks of climate change, health-protective adaptation strategies and the health benefits of reducing emissions and transitioning to a low-carbon future
- Include specific strategies to engage all sections of the community, including those who may be difficult to reach with traditional education campaigns (eg. low income and disadvantaged people, culturally and linguistically diverse communities, children and young people)
- Development of certification and labelling for products to communicate

embodied carbon to guide consumer behaviour towards low carbon choices

Inter and Intra Governmental Collaboration

The success of a National Strategy on Climate, Health and Well-being will be dependent on the successful facilitation of collaboration both vertical (involving national, state and local governments) and horizontal (across multiple sectors and within the health sector itself). Policies that promote collaboration will enhance the effectiveness of the overall strategy and ensure the health and well-being of Australians is protected in the most efficient and informed manner.

Outcome: Effective governance arrangements which facilitate horizontal and vertical collaboration in implementing the National Strategy's objectives, projects and initiatives, and which ensure that health and climate considerations are thoroughly integrated in government-wide strategies.

Policy direction:

Establishing effective governance arrangements to support a National Strategy for Climate, Health and Well-being

Policy recommendations:

- The nomination or establishment of an intergovernmental principal committee on climate change and health to advise the Australian Health Ministers Advisory Council (AHMAC) and to be responsible for oversight and reporting to AHMAC on the implementation of the Strategy
- The establishment of climate change and health as a theme for which the COAG Health Council has responsibility for considering the advice and recommendations of the AHMAC principal committee on climate change and health
- The nomination or establishment of a National Agency (liaising with and supported by the Department of Health) with responsibility for evaluation, monitoring and reporting on the outcomes and effectiveness of the programs and initiatives arising from the Strategy

Emergency and Disaster-preparedness

Climate change is predicted to increase both the incidence and severity of extreme events such as storms, flooding and heatwaves for Australia. Protecting the health and well-being of communities from the impacts of these events requires building the capacity of health and emergency services to identify vulnerabilities and to prepare

for and respond to disasters. Policies to support this also increase the ability of health and emergency services to respond to challenging or novel events, such as thunderstorm asthma, which may present themselves in a changing climate.

Outcome:

Climate-resilient health and emergency services which are adequately prepared for and able to respond to the health threats posed by extreme weather events.

Policy direction:

Improving the overall preparedness and ability of the health sector at all levels to respond to climate threats to health, including from extreme weather events.

Policy recommendations:

- Establish a process for surveillance and monitoring of health risks associated with climate change, both at the population level and for vulnerable/high risk groups
- Establish early warning systems to identify potential threats to health and enable rapid response to mitigate the health impacts of extreme events on Australian communities
- Vulnerability mapping programs to identify and map vulnerable populations and infrastructure to inform adaptation strategies and the development of emergency response plans
- Incorporate responding to climate-health risks (e.g. heatwaves, extreme weather events, outbreaks of disease, thunderstorm asthma) in national health performance standards for disaster management planning for hospitals and emergency services, including surges in service demand, destruction of infrastructure and equipment, interruptions to supply chain
- Mandate education for health professionals and climate preparedness in national health performance standards as a safety and quality issue

A Sustainable and Climate-resilient Health Care Sector

Outcome: Australia would have a leading health care system which delivers high-quality care in financially and environmentally sustainable ways and which successfully manages climate risks.

The evidence demonstrates that environmentally sustainable health care would deliver demonstrable financial, social and environmental benefits: the ‘triple bottom line’.

Policy direction 1:

A low / zero carbon, climate-resilient, environmentally sustainable health care sector in Australia.

Policy recommendations:

- Establishment of a national sustainable health care unit within the Commonwealth Department of Health to support the health sector to implement sustainability initiatives through the provision of tools, resources and guidance, to provide leadership and direction to state and territory initiatives, and to collect and report national data on health care sustainability performance.
- Establishment of state and territory health care sustainability units tasked with: 1) Establishing appropriate metrics, 2) Measuring the carbon and environmental footprint of health services, and 3) Supporting health organisations within their jurisdiction to reduce and monitor their carbon emissions and environmental impacts.
- Establish connections between health organisations, as well as international partners and non-health sector institutions, to support the development of innovative, low-carbon models of care. Areas of work may include: the judicious use of resources and reducing clinical waste, information communication technology, broadening primary and community care, and the use of social capital.

Policy direction 2:

A climate-resilient health care sector which is able to operate effectively in a changing climate and respond to the health impacts of climate change.

Policy recommendations:

- Establishing partnerships and institutional arrangements for disease monitoring and surveillance systems to include climate-related issues
- Integrating sustainable and resilient design solutions for health infrastructure that ensures continuity of health care delivery
- Prioritising health infrastructure resilience to direct and indirect climate risks with mandatory standards and obligations for health facility design, construction and on-going management of both new and ageing facilities
- Investing in secure technological innovations and knowledge management systems for health care that can withstand power interruption in the event of disasters
- Building resilience of the interdependent agencies and critical infrastructure to

- avoid disruptions to health sector services
- Identification of public health adaptation and mitigation responses

Research

Australia's climate is unique, noted for having the world's most variable rainfall patterns, and being 11°C hotter than the global average. Global warming is already increasing our baseline heat and heat extremes, and increasing rainfall variability. The associated impacts on human health and Australian society therefore differ to other countries. An Australian centric understanding is required to respond to the challenges, and this needs Australian research.

Outcome:

The National Strategy on Climate, Health and Wellbeing is informed by robust Australian generated research on climate change health threats and the mechanism of health impact, identification of vulnerable communities and health policy including co-benefits.

Policy direction:

Establishment of a world class climate and health research and health intelligence capacity that evaluates Australia's specific health threats, identifies priority needs and encompasses a rigorous process of monitoring trends and opportunities to maximize multi sector benefits.

Policy recommendations:

Support Australia's health and climate research capacity through the establishment of an ongoing climate change and health funding stream via the NHMRC, plus additional funding streams that support the investigation of localized state- and regionally based climate health challenges that include:

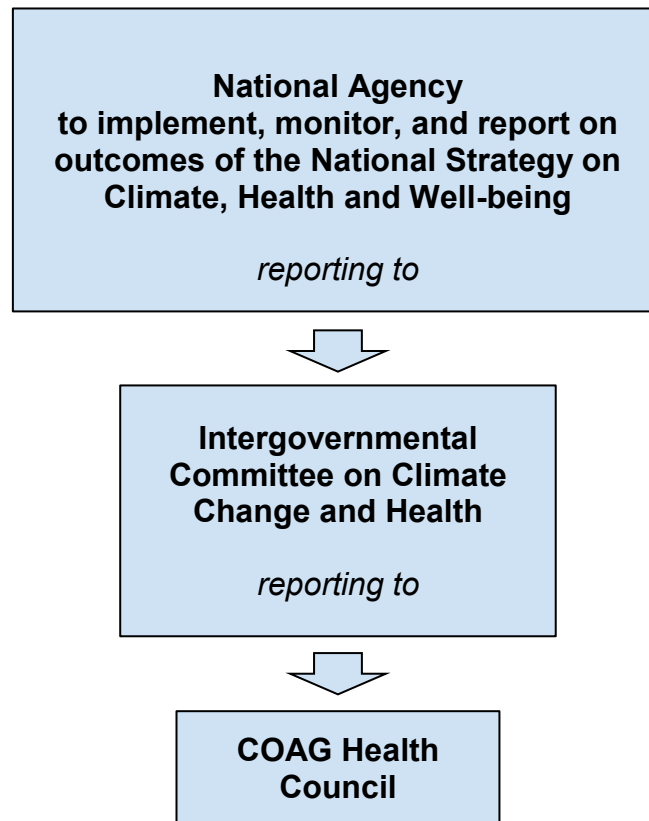
- Identifying near and long term health threats, and the development and evaluation of health protecting adaptation strategies
- Assessment and forecasting of climate change health impacts across Australia's climatic zones
- Surveillance, monitoring and assessment of appropriate indicators to evaluate climate health risks among vulnerable groups, and track progress
- Establishment of an intersectoral group to identify relationships between human health and urban design, energy and water security, transport and others, and identify potential solutions.
- Assessment of health-related economic benefits to be gained from pro-health climate change adaptation strategies that include building community

resilience, emission reductions, fuel switching, low/zero carbon transport options, and other co-benefits

- Assessment of the health sector's contribution to Australia's total GHG emissions and support the sector's transition to low carbon facilities

Implementing the Strategy

Governance



The development and implementation of the National Strategy on Climate, Health and Well-being for Australia should be undertaken by a nominated or newly established agency, reporting to an intergovernmental principal committee on climate change and health of the Australian Health Ministers Advisory Council (AHMAC).

The intergovernmental committee should include representation of ministers from several portfolios (including Health). It would be responsible for reporting to AHMAC and via AHMAC to the COAG Health Council on the progress and outcomes from the implementation of the Strategy, which would also be detailed through the production of an annual report. These reports would also include a review of the Strategy and recommendations for amendments to ensure continued alignment with the vision, principles and desired outcomes of the Strategy.

Under the theme of climate change and health, the COAG Health Council would

have responsibility for considering the advice and recommendations of the AHMAC principal committee on climate change and health.

The National Agency (liaising with and supported by the Department of Health) would have responsibility for evaluation, monitoring and reporting on the outcomes and effectiveness of the programs and initiatives arising from the Strategy.

Stakeholder Engagement

In accordance with the principle of citizen engagement, ensuring stakeholder engagement in the development and implementation of the Strategy is essential. Governments at all levels must take steps to facilitate ongoing engagement and collaboration with the health care sector (e.g. health professionals, health care organisations and service providers), academic and research institutions, and the wider community to ensure the priorities and concerns of these groups are considered and the policies and initiatives outlined in the Strategy maximise health outcomes.

The Commonwealth, States, and Territories should put in place arrangements to formally and regularly engage with the health care sector in the development of climate and health policy in Australia. Ministers on the intergovernmental committee with responsibility for oversight of the Strategy should hold a biannual national summit with health care stakeholders to coincide with the release of the annual report, with the potential for further forums on specific topics to be held as the implementation of the Strategy progresses.

Evaluation, Monitoring and Reporting

Monitoring and reporting progress on the implementation of and outcomes associated with the Strategy will be vital to ensure that the objectives are being met and that the health and well-being of Australian communities is being protected from the impacts of climate change. It is therefore recommended that the responsible agency produce an annual report on the actions taken under the Strategy to document progress made towards a set of chosen indicators based on the areas of policy action.

This report should be publicly available, and provide insight into the implementation and progress of the National Strategy, associated health and climate outcomes, stakeholder and community engagement, areas of concern as well as proposed

future directions.

These indicators should be developed in consultation with the health care community and experts from across sectors. However, the indicators below, developed for the *Lancet* Countdown, may serve as a useful guide for how cross-sectoral progress on climate change and health can be tracked at a national, state and local level.

An example of possible indicators (from *The Lancet* Countdown) that could be used to evaluate the effectiveness of key elements of the National Strategy on Climate, Health and Well-being appears below:

1. Health Impacts of Climate Hazards	2. Health resilience and adaptation	3. Health co-benefits of climate change mitigation	4. Economics and finance	5. Political and broader engagement
<p>1.1 Exposure to temperature change</p> <p>1.2 Exposure to heatwaves</p> <p>1.3 Changes in labour productivity Exposure to flood</p> <p>1.4 Exposure to drought</p> <p>1.5 Changes in the incidence and geographical range of climate-sensitive infectious diseases across sentinel sites</p> <p>1.6 Food security and undernutrition</p>	<p>2.1 Integration of health into national adaptation plans Climate services for health</p> <p>2.2 Adaptation of finance for health</p>	<p>3.1 Coal phase-out</p> <p>3.2 Growth in renewable energy</p> <p>3.3 Access to clean energy</p> <p>3.4 Energy access for health facilities</p> <p>3.5 Exposure to ambient air pollution</p> <p>3.6 Deployment of low-emission vehicles and access to public transport</p> <p>3.7 Active travel infrastructure and uptake</p> <p>3.8 Greenhouse gas emissions from the food system and healthy diets</p> <p>3.9 Greenhouse gas emissions of health-care systems</p>	<p>4.1 Change in annual investment in renewable energy</p> <p>4.2 Change in annual investment in energy efficiency</p> <p>4.3 Low-carbon technology patent generation and innovation</p> <p>4.4 Valuing the health co-benefits of climate change mitigation</p> <p>4.5 Direct and indirect fossil fuel subsidies</p> <p>4.6 Coverage and strength of carbon pricing</p> <p>4.7 Equity of the low-carbon transition</p>	<p>5.1 Public engagement with health and climate change</p> <p>5.2 Academic publications on health and climate change</p> <p>5.3 Inclusion of health and climate change within medical and public health curricula</p> <p>5.4 Health and climate change in high-level statements of the UNFCCC and UNGA</p> <p>5.5 Implementation and estimated health benefits of the nationally determined contributions (NDCs)</p>

A Pictorial Explanation of the National Strategy on Climate, Health and Well-being

References